Chronic Pain FOR DUMMIES®

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**by Stuart S. Kassan, MD, FACP,
Charles J. Vierck, Jr., PhD, and
Elizabeth Vierck, MS**

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Dr. Kassan has received numerous awards and honors for his work, most recently from the *Denver Business Journal* for excellence in patient care. He is on the national board of the Arthritis Foundation and is president of the Rocky Mountain chapter of the Arthritis Foundation.

Charles J. Vierck, Jr., PhD: Dr. Vierck has spent 40-plus years conducting leading edge research to better understand how our bodies feel pain. He is currently working with colleagues to develop new tools for diagnosing and treating fibromyalgia, a painful and debilitating disease that affects primarily women.

Now Professor Emeritus at the University of Florida School of Medicine, Dr. Vierck is the former director of the Center for Neurobiological Sciences in the University of Florida's McKnight Brain Institute. He has won numerous awards for his research and teaching, including the Javitz Neuroscience Investigator Award, a national prize for scientists. His articles appear regularly in *Pain* and *The Journal of Pain.* Dr. Vierck is coauthor of *Medical Neuroscience* (Saunders).

Elizabeth Vierck, MS: Dr. Vierck's sister is a well-known information specialist and writer on health and aging. She writes extensively and frequently about arthritis (all forms), inflammation, aging, and other diseases that involve chronic pain. Ms. Vierck is a Denver-based consultant and writes for many national aging and health organizations.

Ms. Vierck is a widely published author with 17 books and numerous other publications to her credit, including the *Complete Idiot's Guide to the Anti-Inflammation Diet* (with Dr. Christopher Cannon, Penguin), *Health Smart* (Simon & Schuster), *Aging* (two volumes, Greenwood), and *Keys to Understanding Arthritis* (Barrons). Ms. Vierck worked for the U.S. Senate for more than a decade, including the Special Committee on Aging and Labor and Human Resources Committee.

Ms. Vierck lives with chronic pain resulting from an aggressive form of osteoarthritis. She is long-time treasurer of the board of the Rocky Mountain chapter of the Arthritis Foundation.

Dedication

To our magnificent and patient spouses: Gail, Cheryl, and Craig. To the one in three Americans who live with chronic pain.

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Contents at a Glance

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Introduction

Chronic pain is pain that lasts for more than three months. It's stunningly common: One in three people have this type of pain.

If you have chronic pain, you're all too familiar with the constant intrusions it can make into your everyday life. However, you don't need to suffer. We wrote this book to give you tools to tame this unwelcome trespasser.

You can — and will — feel a lot better when you educate yourself about your condition, track your pain triggers, and use sound medical, complementary, and lifestyle approaches to control your chronic pain. These approaches work for many people, returning them to vitality and health. They can work for you, too.

About This Book

Our goals in writing this book are to help you understand and conquer your chronic pain. We give you the perspectives of a compassionate doctor, an avid researcher, and an informed chronic pain patient.

Conventions Used in This Book

The following conventions are used in this book:

- When this book was printed, some Web addresses may have needed to break across two lines of text. If that happened, rest assured that we haven't put in any extra characters (such as hyphens) to indicate the break. So, when using one of these Web addresses, just type in exactly what you see in this book, pretending as though the line break doesn't exist.
- New terms we're defining appear in *italics*.
- Sidebars — the text in grey boxes — include interesting asides, but you don't need to read them to understand the section in which they appear.

Foolish Assumptions

In writing this book, we assumed that you or a loved one has chronic pain. We also assume that you believe that knowledge is power and that you want to be armed with this power in order to conquer your pain.

How This Book Is Organized

Chronic Pain For Dummies is organized into six convenient parts.

Part I: Getting the Lowdown on Chronic Pain

In Part I, we paint the big picture of pain. We give you an overview of chronic pain and explain how it can be a disease all its own.

Because understanding the basics about the physical processes of pain can help you understand and adapt to your situation, in Chapters 2 and 3 we look at how pain develops inside your body. We also cover two important lifestyle consequences of chronic pain — chronic pain behavior cycles and caregiver stress. The first affects the person with chronic pain, and the second affects the loved one taking care of her.

Part II: Detailing Some Causes of Chronic Pain

Part II is where we describe the major diseases and injuries that can lead to chronic pain, as well as how these causes are diagnosed and treated. We provide details on the most common conditions that cause pain. But, remember: Just because you hurt all the time doesn't mean that you have one of these conditions!

Part III: Managing Your Pain Medically

In Part III, we cover the medical management of pain — from building your health-care team to considering surgery. Along the way, we give you the details about the benefits and side effects of a wide range of drugs used against chronic

pain. We also give you guidelines for evaluating the effectiveness and legitimacy of complementary and alternative approaches to treating pain.

Part IV: Managing Your Pain with Lifestyle

Part IV gives you important suggestions for managing your chronic pain with your lifestyle. You should use these techniques in conjunction with the medical management of your condition. We also discuss how weight control and good nutrition directly affect your level of chronic pain and how to avoid a physical state known as *deconditioning*. We also cover the major sleep problems that can occur when you're in constant pain and what you can do about them. We present tools you can use to turn negative thoughts around and reduce your pain. Finally, we know that living with chronic pain means having to deal with the daily stress it creates. So, we provide information about techniques you can use to ease your stress levels.

Part V: Understanding Pain Throughout the Life Cycle

Part V presents helpful information about chronic pain at three important points in the life cycle: in children, the elderly, and at the end of life. Pain during each of these stages of life manifests itself in its own way and requires different solutions than during adulthood. So, we give you practical advice on detecting and managing pain during these critical times.

Part VI: The Part of Tens

This part covers helpful tips in lists of ten. We provide information on phony products and services that claim to cure chronic pain, sexuality and chronic pain, important sources of pain help, and ten things to avoid when you have chronic pain.

Icons Used in This Book

The icons we use in each chapter provide helpful information about the sentences or paragraphs that they appear next to.

The tip icon gives practical suggestions that you can use to manage your chronic pain.

This icon marks information that it is important for you to pay attention to and remember.

This warning icon warns you against something that could be harmful.

This icon marks a section that you can skip if you want to! It includes medical jargon that you don't really have to know to understand a topic.

Where to Go from Here

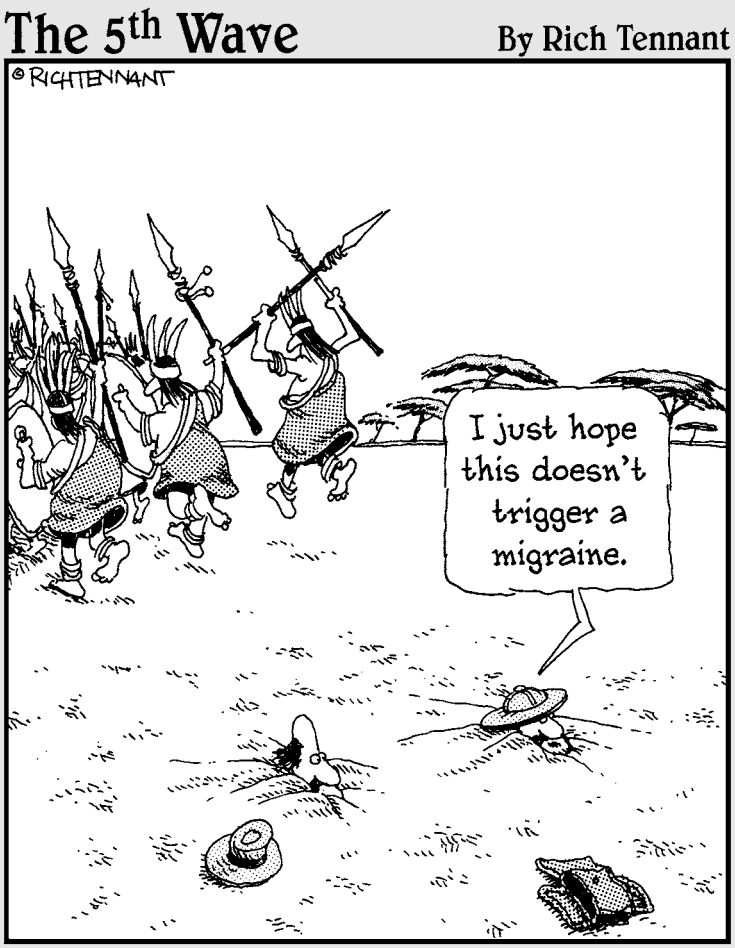
Chronic Pain For Dummies is a reference book. You don't have to read every page in order from the front to the back. And you don't have to remember anything from an earlier section to understand a later section.

However, you may want to read the first couple of chapters to get a basic understanding of chronic pain and then read the chapters or sections that apply to your specific chronic pain condition. (For example, if your problem is endometriosis, be sure to read Chapter 10. If your pain is caused by cancer, be sure to read Chapter 12.) Then use the Table of Contents or Index to find the chapters or topics most relevant to you.

For example, if you find that your current medications just aren't cutting the pain, go to Chapter 14 and look up the other options now available. Or would you like to know where to find a chronic pain support group? If so, go to Chapter 28, which gives you a handy list of resources. Or maybe you have a child with chronic pain and you want to know how to monitor her pain levels. Be sure to check out Chapter 23. One final note: Because the field of pain management is advancing very quickly, we also suggest that you use the extensive resources that we have listed in this book to find out about and stay on top of any new discoveries, techniques, and services that can help you tame your chronic pain.

Part I

Getting the Lowdown on Chronic Pain



In this part . . .

When you have chronic pain, your sensations can range from a small constant ache to excruciating and unrelenting pain. And these symptoms can be persistent, resistant, and insistent! The pain is always with you on some level, and it's often isolating.

In this part, we paint the big picture of chronic pain and how such annoying and nasty symptoms occur. We also celebrate the advances that have been made in the last couple of decades in managing chronic pain.

Because understanding the basics about the physical processes of pain can help you adapt to your situation, we describe pain pathways and other aspects of how pain works inside your body. We also describe the different types of chronic pain and cover two important lifestyle consequences of the problem: chronic pain behavior cycles and caregiver stress.

Chapter 1

Hurting That Doesn't Go Away

In This Chapter

- Understanding the solitude of chronic pain
- Recognizing common features
- Coping with chronic pain

Chronic pain is hurting that doesn't go away. But, as crazy as it sounds, suffering from chronic pain today is much better than developing the problem even ten years ago, when many doctors were afraid to give you pain meds. And dealing with chronic pain is certainly much better than a couple of centuries ago, when you may have had your veins opened to bleed the "bad humors" out of your body.

This chapter gives you an overview of what we know today about chronic pain — how it works, what it feels like, and how to manage it. We also cover the common characteristics of chronic pain and discuss how constant pain causes its own physical problems.

Just What Is Chronic Pain?

Medical professionals categorize pain as either *acute* or *chronic.* Acute pain is your nervous system's way of alerting you to an injury or other damage to your body's tissues (see Chapter 2). Acute pain gets your attention so that you'll take care of yourself fast. In fact, the word *acute* comes from the Latin word for needle, and if you've ever stepped on a needle, you'll agree that it's a good representation of acute pain. Acute pain usually goes away as the injury heals, although it may return for short periods.

Chronic pain is persistent pain. The word *chronic* comes from the Greek word for time. In medical terms, pain is chronic when it lasts three months or more.

Pain: The fifth signal

In the past, pain was often overlooked or ignored by doctors and other health-care professionals because it couldn't be measured, and they couldn't do much about it. Doctors treated the condition causing the pain and not the pain itself. However, that approach is changing so that now *both* the condition and the pain that it causes receive equal attention.

In fact, the concept that pain is a fifth vital sign is now a mainstream idea. Four vital signs — temperature, pulse, respiration, and blood pressure — are routinely taken by medical professionals to determine how a patient is doing. Pain becomes the fifth measure of a patient's status.

When pain becomes chronic, your body's pain signals keep firing for weeks, months, or years, even though the damage that set them off may have long since healed (see Chapter 2). The pain may have been caused by an injury, and, for unknown reasons, your body never turned off its pain switch. Or the pain may have an ongoing cause, such as arthritis, cancer, or nerve damage (see Part II). You also may have multiple causes of chronic pain, which is particularly common for older adults.

One big difference between acute and chronic pain is when you have acute pain, you usually know *why* it hurts. (Some examples of acute pain are broken bones, kidney stones, and childbirth.) When you have chronic pain, you may have no idea what's causing the hurting. The bone has healed, the stone has passed, and the baby is now walking and talking, but you still have lingering problems in the areas where the acute pain occurred.

In addition, many people with chronic pain aren't even aware that an injury ever occurred in the first place. (And, indeed, maybe there was no injury to begin with!) For them, the pain appears to slam in from out of the blue, like a sudden tornado that levels a house.

Whether you know the source, chronic pain is a sensation without purpose. It has no biological function, and its usefulness as a warning system has long since passed or never existed. Ironically, while chronic pain has no purpose, it's still often difficult to treat. The medical term for this type of pain is *treatment resistant pain.* Experts at the Cleveland Clinic describe chronic pain this way: It persists, resists, and insists: It persists beyond the expected healing time, resists interventions (treatments), and it also insists upon being recognized.

Chronic Pain Is a Solitary Experience

Life with chronic pain is a solitary, and often lonely, experience. Compare this hypothetical experience to that of chronic pain:

You and your husband are hiking in the mountains and get stuck in a cold, hard rain. You have five miles to go to reach your car. Lunch was four hours ago, and in your pack is only 8 ounces of water, chewing gum, and an apple. And, oh yeah, you forgot your raincoats. (This stuff actually happens to otherwise smart people.) So you just keep going. And going. And going. And the cold hard rain never stops.

Two and a half hours later, you finally reach your car. When you arrive, you each know how the other feels. You're both exhausted, cold, wet, and hungry. And you're both very relieved that you lived through the experience and your heated cabin — the one with the hot tub — is only a mile away. Later that night, you share a good, long laugh about the experience. For years, you two enjoy telling the story of "the day we almost died on the mountain."

Chronic pain is very different from this shared experience. You're up on that mountain all alone. And when you return to your cabin, there may be no heat and no hot tub. And there's no shared laughter.

Yes, chronic pain is a solitary experience. Each person feels chronic pain differently, even people who have identical injuries or illnesses. Consider good friends Lou and Matt. They both have a nerve condition called peripheral neuropathy (see Chapter 11). Lou's symptoms are nerve pain, tingling, and numbness. Matt's symptoms are muscle cramps and frequent falls due to loss of muscle control. They both know that the other person has chronic pain from the same disease he has, but their symptoms are very different.

Because pain is so subjective, it can be difficult to diagnose and treat. There's no blood test for pain, no pain urinalysis, no pain pulse. It's up to you — in your role as a chronic pain patient — to describe your pain to doctors and other medical professionals who work to help you. The good news is that there are many effective ways to deal with chronic pain, which we cover throughout this book, but particularly in Parts III and IV where we cover managing and living with chronic pain.

Checking Out Common Characteristics of Chronic Pain

Chronic pain is a solitary experience, yet it's also a universal one. About one in three Americans suffer from chronic pain. (Read more about the numbers of people with chronic pain in Chapter 3.)

Chronic pain: Making headway every day

Scientists and the medical community are continually learning about what causes chronic pain, and we can celebrate these advances in understanding the following points:

- Scientists and the medical community have amassed tremendous knowledge about the causes of chronic pain, including new research that shows that extended periods of pain *change* the physiology of the central nervous system. This knowledge impels doctors to address pain problems swiftly and effectively when they occur so that they don't lead to chronic pain.
- Research and advances in medical treatment of pain-causing conditions have dramatically improved treatment for many painful conditions, such as rheumatoid arthritis and fibromyalgia.
- Organizations such as the American Chronic Pain Association help sufferers with the latest information on treatments, support groups, advocacy efforts, and more. (Chapter 28 includes a contact list of these resources.)
- Pain management receives much more attention in medical schools, which means newbie docs are better armed to tackle chronic pain. Some states require completion of an educational program in pain management to receive a medical license.
- Acceptance of using opiates to control severe chronic pain, when appropriate, has greatly reduced unnecessary suffering for many people.
- Many new pain treatments are on the horizon. For example, researchers are studying new classes of drugs to treat pain more effectively. They're also looking at the possibility of implanting cells that release powerful painkillers in the spinal cord. If you have severe back pain, you may be ready to sign up for this treatment now! But, unfortunately, it's not available yet. In another five to ten years, expect major breakthroughs.

How do you tell when your pain is chronic? The Cleveland Clinic and other prestigious medical institutions have identified specific characteristics of chronic pain, including the following:

- Your pain doesn't go away.
- You've had lots of medical "work-ups," and yet no cause for the pain has been identified.
- You've tried lots of different medicines to control your pain, and yet the pain doesn't go away.
- You may have undergone numerous surgeries, and yet your pain still doesn't go away.
- You've visited doctors or other health providers over and over again in an attempt to find relief, but your search for relief has been futile.

Don't worry if these symptoms don't apply to you. They don't make your chronic pain more or less real. (In fact, you should be glad. Who wants them?)

People with chronic pain also may have the following symptoms: tense, tight muscles; an inability to get around; a lack of energy/fatigue; changes in appetite; sleep problems; depression, anger and/or anxiety; and fear of further injury.

What Chronic Pain Feels Like

If you have chronic pain, at some point, you realized part of your body has been hurting way too long. Maybe you have ongoing pain in your hip, and you're beginning to limp. When you first noticed the pain, you thought it was related to that day you fell on the ice in the driveway. But that was a year ago. Your bruised hip has long since healed, and yet the pain is still with you. You go to the doctor, who takes an X-ray and discovers that you have significant arthritis in your hip, which was probably irritated by the fall, but is a problem on its own.

In another example, your daughter, age 4, comes home from a Halloween party with a crushing headache. You attribute it to a sugar overdose. You take care of her, and she recovers. But a couple of weeks later, she has another severe headache. And three weeks after that, she has yet another one. Her pediatrician eventually diagnoses your child with chronic migraine headaches.

Chronic pain is not only persistent, resistant, and insistent, but it also seems ruthless. It's always with you on some level. It either doesn't give you a break, or it gives you very brief respites, fooling you into thinking you're all better and then returning with a wallop — regardless of whether you have an important sales presentation that afternoon, it's your son's birthday, or your plane to the Caribbean is about to take off.

Sensations of chronic pain range from a small, constant ache to excruciating pain. Your chronic pain may feel like one or more of the following feelings: aching, burning, crushing pain, dull pain, electrical-like pain, flu-like symptoms, jabbing pain, mental fogginess, numbness, piercing, prickling, sharp pain, shooting pain, soreness, stiffness, stinging sensations, throbbing, tightness, tingling, or vise-like pain.

Most people with chronic pain experience more than one of these feelings. For example, many people with fibromyalgia (see Chapter 4) have flu-like pain, aching, and stiffness. And people with rheumatoid arthritis (also covered in Chapter 4) may struggle with aching, stiffness, weight loss, and *mental fogginess* (a term used to describe confusion and forgetfulness).

Educating Yourself on How Pain Works

Why are you having pain? What's happening physically? Pain is caused by an exchange of information between three major systems in your body: your peripheral nerves, spinal cord, and brain. (Chapter 2 covers these systems in more detail.)

Peripheral nerves contain fibers that bring pain impulses to the spinal cord. Many of them have ends that sense danger, such as a cut or burning. These fibers are called *nociceptors,* and you have millions of them throughout your body.

Different types of nociceptors have different jobs. For example, some, nociceptors detect heat, while others watch out for pricks of pain, and still others respond to pressure. Once they detect these qualitative sensations, nociceptors then send pain signals to your spinal cord.

Your spinal cord is home to special cells that either wave the signals on through to the brain or turn them away like a door slamming shut on a gate. Your spinal cord cells also release chemicals during this alert phase. (You can read a discussion of this whole process in Chapter 2.)

The pain signals that *are* waved through to your brain arrive at the thinking and emotion centers where your brain then decides what on earth is causing the problem, whether it's worth getting anxious about, and what, if anything, to do about it.

Sometimes this complicated pain system crashes, kind of like a malfunctioning computer, yet the electricity keeps humming because the power's still on. The result is that your nerve/spinal cord system continues to send danger signals to your brain even though the real threat has long since passed (or maybe never existed in the first place).

Of course, this section describes chronic pain in a very rudimentary way. You can read more about the inside workings of pain in Chapter 2. (You need to know some basics about the pain enemy before you can vanquish her!) Chapter 3 also covers chronic pain in general.

Constant Pain Causes Its Own Damage

Constant pain causes its own damage, and medical science is just beginning to understand just how toxic the effects are. In fact, many pain experts say that the pain has become its own disease.

What happens is that the presence of pain changes the peripheral nerve/spinal cord/brain system that we mention in the previous section, causing the pain itself to get worse. As a result, treating the pain, as well as the underlying disease or injury, is key to preventing even more pain. (You can read more about this idea in Chapter 2.)

Living with Chronic Pain

The fact that pain is subjective and complicated means that it's up to you to take charge of your own care and treatment. You should understand enough about what causes your pain so that you can be on top of the best treatments (see Part II).

You also should discover how to do as much for yourself as you can, including the following:

- Developing a great pain management team (see Chapter 13)
- Tracking and avoiding your own individual pain triggers (see Chapter 17)
- Relieving your pain with lifestyle changes, such as maintaining a nutritional diet, exercising, and minimizing stress (see Part IV)

Managing your pain medically

When you have a chronic pain condition, you need to take control and gather a team of experts to help you find relief. (See Chapter 13 to find out how to assemble this team.) You need to find medical professionals and paraprofessionals who will work with you on different aspects of your pain condition. (Think of them as your own anti-pain team.)

For example, your group may include a primary-care physician (PCP), a specialist such as a neurologist or rheumatologist, and perhaps a physical therapist and a dietician. Your team also may contain some alternative practitioners, such as an acupuncturist or massage therapist. (Read more about alternative means to alleviating your chronic pain in Chapter 15.)

Your pain management team should work with you to find the right medicines and treatments that give you pain relief. (You can read more about medications for chronic pain in Chapter 14.)

Some people with chronic pain may need surgery, which is a tough decision for anyone to make. Read Chapter 16 for advice on how to make the choice for or against surgery.

Helping yourself with lifestyle changes

Your chronic pain can be made better or worse by your lifestyle. Not eating a healthy diet, being under- or overweight, not getting adequate exercise on a regular basis, and being stressed out can all make your pain worse. Chapter 3 and other s in Part IV cover many aspects of lifestyle and its relationship to pain. Here are the key concepts:

- **Track your pain triggers and avoid them.** Pain triggers are things in your life — such as overdoing exercise or missing too many hours sleep — that can set off a pain cycle. Keeping a pain log can help you identify your particular pain triggers. When you know what your own personal pain triggers are, you can avoid them, and you'll feel better! See Chapter 17 to learn a variety of techniques for keeping track of your pain triggers.
- **Purge "empty calories" from your diet and follow sound nutritional principles.** The key principle of a healthy diet is to eat a well-balanced variety of wholesome foods so that you'll take in all the nutrients required for good health and disease prevention. A healthy diet also means only occasionally eating white rice, white bread, potatoes, white pasta (pasta made from refined flour), soda, and sweets for special occasions. Check out Chapter 18 for more information on how to follow a nutritional diet.
- **Get physical!** If you don't get adequate exercise for an extended period of time (weeks, months, or longer!), you develop a physical state called *deconditioning.* The No. 1 rule for exercise and chronic pain is to do as much as you can as often as you can. (For more on exercise and chronic pain, read Chapter 19.)
- **Develop sound sleeping habits and beat fatigue.** Sleep loss can make you much more sensitive to pain. One study found that sleep deprivation caused by continuous sleep disturbances throughout the night increased spontaneous pain and impaired the body's ability to cope with it. Chapter 20 gives you information about major sleep problems that can cause or aggravate pain and what you can do about them.
- **De-stress your life.** When you have chronic pain, every day you must deal with the stress it creates. The best approach is to curb your stress as much as you can, whenever you can. From meditation to praying, numerous techniques can help reduce both your stress and pain. Read Chapter 22 to discover other stress-reduction techniques.

- **Cope with aging demands.** Are you older than 65? Sadly, the older you get, the more likely you are to suffer from some form of chronic pain. This news doesn't mean you should just give up and park your chair permanently in front of the TV! Absolutely not! Read Chapter 24 for great ideas about how to cope with the pain that often comes with aging.
- **Help your child in pain.** Few sights are more heartbreaking than watching a child in pain. If you're a parent, you wish you could take on your child's pain yourself, but you know you can't do that. Read some helpful advice on how you can help your child in Chapter 23.

Researching what's causing your pain

If you've been diagnosed with a condition causing your pain — such as migraine headaches (see Chapter 6), fibromyalgia, or post herpetic neuralgia — it's important to find out more about the disease and the best ways that your doctor can help you treat it. This knowledge ensures that you're doing everything possible to reduce your pain. If you don't have a diagnosis of what's causing your pain, it's important to seek one.

Part II covers the most common causes of chronic pain, ranging from arthritis (4) to back pain (5) to cancer (12.). These s describe symptoms of the diseases and give you the latest information on finding the best medical specialists to assist you.

If you've suffered a serious injury or a stroke, be sure to read Chapter 7 for advice on this chronic pain problem. Is severe burn pain your problem? Check out Chapter 8.

Some people never discover the cause of their pain, which is frustrating for everyone involved, from the patient to the doctor. For example, back pain, even when it's severe, is notorious for not displaying any known cause during a physical examination by a doctor, on imaging tests such as magnetic resonance imaging (MRI) scans and X-rays, or even during surgery. The pain is real, but it's not easily detectable.

Even if you don't know the source of your pain, it's important to work with a medical team to make sure that you're maximizing your options for treatment. (See Chapter 13 to find out how to assemble your anti-pain team.)

Chapter 2

Discovering How Pain Works

In This Chapter

- Discovering the nervous system
- Tracing chronic pain in the peripheral nervous system
- Seeing chronic pain in the central nervous system
- Understanding the vocabulary used to describe the physiology of pain

If you suffer from chronic pain, you probably perceive pain as your constant enemy and may wonder what on earth has gone wrong with your body. How did pain transform itself from a friendly, early warning system into a chronic troublemaker? This chapter helps answer these questions by exploring the physical aspects of chronic pain.

Understanding the basics of how your nervous system processes pain can also help you understand and adapt to your own situation. Your pain isn't merely a bad sensation. It also motivates (or demotivates) you. It produces strong emotions and its own set of reflexes. For example, pain can wake you up from the deepest sleep if it's severe enough. These effects occur because your pain pathways commingle with all parts of your nervous system. This chapter also explores this phenomenon.

Touring the Nervous System

The first step toward understanding the physiology of pain is to consider how pain signals travel from the location of an injury to your brain, where feelings of pain are formed. This knowledge provides you with a framework to comprehend how malfunctions can occur along the route (the pain pathway) from the injury to "ouch" locations in the brain.

First, you need basic information about the route that pain pathways follow in the nervous system. The nervous system is divided into two parts:

- The brain and spinal cord, also known as the central nervous system (CNS), shown in Figure 2-1.
- All the nerves that go to and from the CNS, called the peripheral nervous system (PNS), also shown in Figure 2-1. Figure 2-2 shows a typical pain pathway.

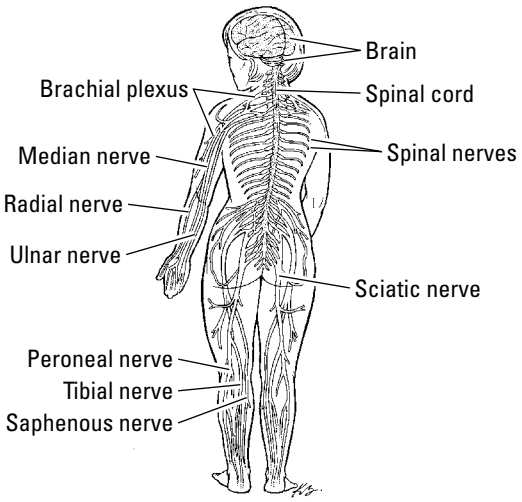


Figure 2-1: The central and peripheral nervous systems.

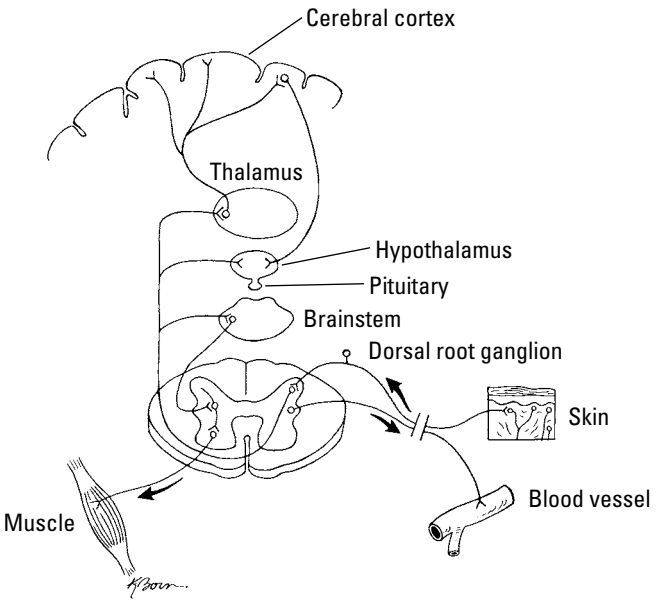


Figure 2-2: A typical pain pathway.

The PNS includes two types of neurons:

- *Efferents* send impulses *away* from the CNS. Some of the efferents go to *(innervate)* muscles and are called motor neurons, and others innervate visceral structures (autonomic neurons).
- *Afferents* send impulses to the CNS. They're also called *sensory nerves.* They affect and inform the CNS, telling your body what's going on, both inside and outside.

All neurons, including sensory neurons, are comprised of three parts:

- **Cell body,** which contains the nucleus of the cell and makes substances that keep the cell alive and running.
- **Dendritic tree,** which includes extensions of the cell body in the CNS that bring information in. Peripheral sensory neurons are unusual. Instead of having dendrites, they have a long axon that brings information from places, such as the skin, back to the cell body.
- **Axons,** which usually are located at the opposite end of the neuron from the dendrites. They carry information *away* from the cell body (see Figure 2-3.)

Cell bodies of sensory afferents are located near the spinal cord, forming a cluster of cells called the *dorsal root ganglion.* A long axon brings information from the skin or other tissues to the cell body, and a short axon enters the spinal cord (refer to Figure 2-3).

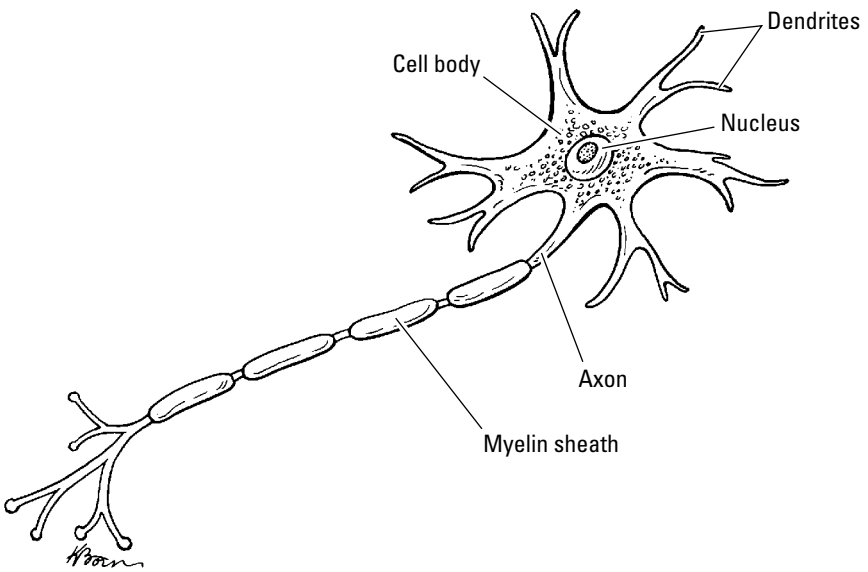


Figure 2-3: Neurons.

Some of your sensory axons receive and carry the news that you're hurt, whether the injury occurred from a car crash, a stroke, or a bee sting. Sensory nerve fibers send a pain alert to your spinal cord. Peripheral nerves (part of the PNS) that contain the long axons of afferents also contains motor axons (efferents) running from the spinal cord to your muscles. These motor axons manage your responses, such as when you swat an annoying fly or run away from a swarm of bees.

Peripheral nerves not only carry sensory and motor axons. They also are home to efferent axons from the spinal cord to body structures, such as your blood vessels or your stomach. These efferents are part of the autonomic nervous system. We talk about the sympathetic division of the autonomic nervous system because it produces stress reactions to pain.

Targeting the axons responsible for chronic pain

The peripheral endings of sensory nerves contain a variety of nerve endings called *receptors.* They transform different kinds of energy, such as touch, cold, or heat, into neural impulses (also called *action potentials*). These impulses from receptors responsive to painful stimuli (called *nociceptors*) carry messages to your pain pathways in the CNS.

The axons of sensory neurons differ by size and the degree of myelin on them. (*Myelin* is a substance that covers and protects nerves.) The largest axons are encased in a myelin sheath, which makes them big and fast. In fact, their impulses can rush forward at speeds of up to 40 miles an hour, faster than you can drive your car in a school zone. These fast and large axons are called *A-Beta fibers.*

Small axons with some myelin respond to painful stimulation. They're your warning system for acute pain. For example, they're fast enough to set off a withdrawal reflex to make you snatch your hand back from a hot burner. These axons are called *A-Delta fibers.*

The smallest axons, called C fibers, have *no* myelin, and they conduct information very slowly (about 3 miles an hour). These axons are the most plentiful, and they can reach any tissue. C fibers are responsible for the pain you feel if something touches the cornea of your eye or you have a toothache. Knowing this information, you probably aren't surprised to discover that a lot of chronic pain comes from activation of C fibers.

Electrically charged impulses

When a peripheral receptor responds to a stimulus, such as a pin prick, an electrically charged impulse rushes right through the nerve, heading toward the spinal cord. The impulse blasts through the nerve's cell body and into the spinal cord.

Your central nervous system contains

- **Your spinal cord:** When a sensory impulse has passed through axons of your peripheral nervous system and reaches your spinal cord, it communicates with cells in the dorsal horn of the spinal gray matter. (Gray matter of the CNS contains cell bodies of neurons.) The points of interaction between axons and cell bodies (or dendrites) are called *synapses.* Many synapses live on each spinal cell. The electrical signal from each sensory axon causes chemicals, called *neurotransmitters,* to be released at the synapse. These neurotransmitters attach to receptors on cells in the spinal cord, causing them to send messages along their axons. This relay race goes from cell to cell to numerous destinations in the CNS, depending upon which CNS pathway the axons travel in.
- **Your brain:** Some spinal cells receive information from the small partially myelinated neurons, the A-Delta neurons, and also from very small un-myelinated C sensory neurons sensitive to painful stimulation. These pain sensitive afferents are called nociceptors. The spinal cells with synapses from nociceptors send axons to the other side of the spinal cord, where they turn toward the brain.

The next synapse for this pain pathway is in a part of the brain called the *thalamus,* which has regions assigned to different sensory systems.

Sending pain messages to the brain

The main pain pathway from the spinal cord to the thalamus is called the *spinothalamic tract.* (That's a mouthful, and it takes plenty of neurons to help you say it!) Cells in the thalamus that receive spinothalamic input then send axons to the cerebral cortex.

The cerebral cortex tells you a lot about different aspects of pain you're experiencing. For example:

- It gives you qualitative information. (Is it cold or hot on your skin, or are you experiencing a muscle cramp or stomachache?)
- It gives you quantitative information. (How painful *is* it?)

- It tells you *where* the pain is and how big an area it involves. (For example, your entire forehead hurts intensely.)
- It assesses how much the pain bothers you. (Your pain is tolerable, or it makes you miserable.)

Responding to pain

A few more aspects of pain pathways can lead to chronic pain or effects of chronic pain. Axons of the spinal cells that receive pain signals branch out through the CNS where they perform different actions. Some actions are important to understanding pain:

- Some branches go to the brain stem located between the spinal cord and the brain (also called the cerebrum). Nuclei in the brain stem regulate sleep and wakefulness. Input to these regions arouses you and can prevent you from sleeping. Loss of sleep can be a major problem for people with chronic pain.
- The brain stem is a major player in controlling your muscular tone and coordinating reflexes that contribute to all your movements. For example, the brain stem coordinates your withdrawal from a painful stimulus in a way that prevents you from falling over. It also governs your reflexes and can inhibit them; for example, it keeps withdrawal reflexes from going off time and time again if the pain doesn't stop. Unlike the alarm on a timer, which doesn't stop until someone turns it off, your brain is smart and turns the withdrawal reflex off after awhile.
- The brain stem inhibits reflexes with axons in pathways that descend to your spinal cord. There is some spillover of inhibition to spinothalamic cells in the spinal cord. Therefore, some scientists think the brain stem may play a role in regulating pain.
- Systems within the brain regulate stress reactions. One form of stress, called *psychological stress,* activates both the hypothalamus and the pituitary gland, which in turn leads to activation of the sympathetic nervous system. The result can be increased pain.

Producing Chronic Pain in the Peripheral Nervous System

When you stub a toe, maybe you curse and grab your hurt foot, while hopping up and down on the other foot. If you reflect on what you felt, you'll find that you experienced two distinct pain sensations.

First, A-Delta fibers gave you immediate feedback that you hurt yourself once again by stubbing your toe on that same table leg that hasn't moved since the last time you bumped into it. (Maybe now is a good time to move it!) The input from these sensory nerves may even have been fast enough to help you reduce the force that you applied to the poor toe.

Second, you likely felt a later pain sensation from C fibers that didn't seem all that useful. The late C fiber pain is the one that causes you to curse the table that hurt your toe. This delayed pain from an injury tells you about the severity of the injury and motivates you to do something about it. For example, it keeps you from injuring the toe further by continuing to walk or run around while the pain is active.

Scientists have rigorously studied how injuries generate pain that persists until healing is complete. This form of pain, known as *acute pain,* is understood by most people as "par for the course" for minor injuries. How long the pain lasts depends on how much force was involved, whether or not you broke your toe, and so on.

Chronic pain is a very different story. Even if an injury appears to have healed, a variety of adaptations of the body to the injury can set in motion changes that result in chronic pain. Some of these attempts of the body to deal with injury can go wrong and are important for understanding why chronic pain can develop.

Injury to your body sets in motion your immune system, which is your body's defense system against disease and injury. In turn, your immune system mobilizes inflammation. A staggering array of inflammatory cells are released at and near the injury, and nociceptors (especially C fibers) are uniquely able to respond to these chemicals. A slight stub of a toe protected by a shoe yields a low level of inflammation that clears up quickly. A forceful stub of a bare toe in the dark turns the toe lovely shades of purple and causes swelling and sensitivity for a few days.

Here's where things get interesting. It turns out that when C fibers respond to pain, they also turn on inflammation, which itself is another source of pain. In other words, pain begets more pain. As long as you have inflammation, you have activity in nociceptors and vice versa. This process is the culprit behind some types of chronic pain, which is like a stubbed toe with endless inflammation.

The following sections describe some reasons why chronic pain can develop.

Chronic phantom pain from nerve injury

If an injury to a nerve completely interrupts the flow of information to the nervous system, common sense says you should feel nothing in the area where the damaged axons have peripheral terminals.

This thinking is true, but only to a point. If you stimulate skin in the damaged area, you may have no sensation of touch, cold, heat, or pressure. However, people who have lost their arms or legs report that *phantom* sensations occur where the limb *used* to be. For example, after amputation of a limb, most people feel or imagine that the limb is still present, sometimes in a distorted form. Then after some time, the phantom sensation actually can become painful.

Paradoxically, the healing process itself may create pain. When peripheral axons are damaged, the portion closest to the spinal cord is still connected to its cell body, and it survives, but the part close to the skin that's separated from the cell body deteriorates (degenerates). Like a plant seeking the sun, the axons attempt to grow toward their old target from the injury, and they can ordinarily reach it, make new receptors, and reestablish nearly normal sensations.

This process, called *regeneration,* works best when a nerve is crushed rather than cut across, because the nerve's coverings are preserved, providing channels for growth. However, in the worst case, when the nerve is cut and its normal target is gone, as in limb amputation, a tangle of regenerating axons, called a *neuroma,* forms. Neuromas can create the sensation of pain.

Normally, axons in sensory nerves don't conduct impulses unless their receptors are stimulated. Axons in nerves are insulated from one another, and no synapses communicate between axons or cell bodies in the dorsal root ganglion. In other words, they don't usually talk. However, this system in a neuroma goes crazy, and two things happen:

- The ends of axons in the neuroma start acting wildly, which is called *spontaneous activity.*
- The axons start talking to each other (even though, normally, they give each other the silent treatment).

Sensations generated by spontaneously active nerves are felt at (referred to) the sites where the terminals and receptors used to be (such as an amputated leg). This situation is because the brain is fooled into thinking that the damaged axons are responding to the same stimuli that *normally* activated them *before* the nerve was injured. The activity within a neuroma can even be interpreted by the brain as *feeling* like the pain of the original injury that set off this unfortunate series of events in the body.

Neuromas can form at the site of a nerve injury even if the nerve is not severed and the limb is not amputated. If this occurs, pain is felt in that nerve's *innervation territory* (where it's peripheral receptors are). And — here is the really, really important thing to understand — activity within the pain pathways produced by some abnormal source is what you're usually dealing with when you have chronic pain.

Adrenaline

Adrenaline is always present to some degree in your body. Adrenaline is usually a good thing because it mobilizes our resources to deal with dangerous and injurious situations. However, following a nerve injury, even if the nerve is not severed, it becomes very sensitive to any release of adrenaline (also known as *epinephrine*) in the surrounding area, which is the case for axons that have been cut as well as those that are damaged but still in one piece. This situation is called *sympathetically maintained pain* because release of adrenaline normally occurs with activation of the sympathetic nervous system.

Nerve entrapment

If nerves are stretched or pinched continually, axons can be damaged and can become spontaneously active. This condition is called *nerve entrapment*. For example, *sciatica* is usually caused by pressure on the sciatic nerve from osteoarthritis or disc protrusion in the lumbar spine.

Nerve entrapment is an example of how any condition that irritates a nerve can cause chronic pain. Also, diabetes can lead to pain due to constant nerve trauma caused by the disease and made worse by inflammation.

Tracking Chronic Pain in the Central Nervous System

While the PNS is the communicator of sensory news, the CNS receives the news and responds to it. Activity in the CNS in response to pain signals can amplify and extend pain, causing two issues:

- **Central reorganization:** Unlike peripheral neurons, the axon of CNS neurons typically goes in one direction. For numerous reasons, central axons don't regenerate when severed, and the cell body can eventually die. If an injury damages CNS axons that communicate between the spinal cord and the thalamus, cells in the thalamus will no longer receive normal messages. When central cells lose their normal inputs, they become spontaneously active. As a result some people develop severe chronic pain following injuries that cause damage to the spinothalamic tract. Examples are spinal cord injury and post-stroke pain.

  Here is the reason why cells become spontaneously active: Losing input is traumatic for CNS neurons. For one thing, they suffer structural damage caused by the loss of synapses that normally come from the axons that are now damaged. Also, substances that normally nurture the health of cells are lost. As a result, the cell that has lost its input *(is deafferented)* becomes sick. One good way to think of the spontaneous activity of deafferented neurons is as cries for help!

  Long tracks of axons in the CNS don't renew themselves following an injury. However, some reorganization of synaptic connections occurs for cells that lose their input. Therefore, when cells in the CNS have lost their peripheral nerve supply, it's likely that new inputs come to them over time. If the output of the cell was interpreted as pain, any new input also can trigger pain. Alternatively, the "right" inputs can get rid of the spontaneous activity and alleviate pain. Therefore, reorganization should probably be directed by training rather than left to chance.

- **Central sensitization:** Two types of inflammatory reactions in the central nervous system can contribute to chronic pain:

  - When nociceptors are doing their thing, and particularly when their activity is caused by a peripheral injury, support cells called *microglia* are attracted to the region. Microglia are the immune cells of the CNS, and they release inflammatory chemicals that sensitize spinal cells to overreact when pain messages come in from sensory nerves.
  - Another form of pain coming from inflammation is similar to nerve entrapment or diabetic trauma to a peripheral nerve. (See the section "Nerve entrapment," earlier in this chapter.) Axons in the CNS are usually myelinated for fast conduction, even though the cell body for these axons may receive input from unmyelinated nociceptors. When the myelin of these axons deteriorates for any reason, microglia come in to clean up the damage, and the axons become spontaneously active. Multiple sclerosis involving demyelination of CNS axons can be associated with such pain.

- *Glutamate* is the primary neurotransmitter for nociceptors and therefore for pain. The higher the alarm setting from the nociceptor, the more glutamate released in the spinal cord.

  Copious amounts of glutamate may seem sufficient to feel pain, but the spinal cord also has a built-in amplifier for input from the bad guys — C fibers. Unmyelinated nociceptors release a variety of transmitters. One of these transmitters, substance P, initiates a cascade of events that increases pain if the discharge from C nociceptors persists over time. (Remember Substance P by thinking "P" is for pain.) The amplification of pain by C nociceptors is called *temporal summation.*

Most chronic pain involves input from C fibers, plus temporal summation, causing double trouble. So, when someone with chronic pain stubs a toe, the pain is likely to be exaggerated. This exaggerated pain, called *hyperalgesia,* usually lasts longer than normal pain because the sensitized cells in the CNS continue to discharge after receiving input from the stubbed toe.

In addition to its role in initiating of temporal summation, substance P spreads out readily from its site of release in the spinal cord to nearby neurons not receiving input from nociceptors at the moment. ("Hey guys, we're hurting!") As a result, the areas surrounding a source of painful input become hypersensitive to stimulation. This process is called *secondary hyperalgesia.*

With some pain conditions, a light touch or mild heat can produce severe pain. A possible explanation is that some cells in the pain pathways are so sensitized that even input from the usually blah A-beta afferents set them off. Painful responses to nonpainful input are called *allodynia.*

Chapter 3

When Pain Becomes Chronic

In This Chapter

- Identifying different types of chronic pain
- Seeing the cycle of chronic pain
- Overcoming major effects of chronic pain
- Acknowledging caregiver stress

Until recently, all pain was viewed solely as a symptom of disease. The philosophy toward pain was, "Treat the health problem, and you automatically treat the pain." Today, experts report that chronic pain itself is often the villain that must be pursued and tackled. In fact, the medical term for chronic pain is *maldynia,* which means your pain has become its own disease as a result of changes in the nervous system. Even though the original cause of the pain is gone, the pain itself remains.

Unlike normal pain that can point to an untreated medical problem, in most cases, chronic pain has no useful biological function. Not only is it without purpose, but the condition often takes on its own puzzling life; for example, it may be constant or may come and go. It may be hellish on Monday and more tolerable on Tuesday. It may move around, ending up far from its source, which is sometimes known as *referred pain.*

Chronic pain may respond to medications one day, and then, the next day, little relief comes from the same treatment that worked yesterday. Your frequent pain can lead to problems with relationships, lack of sleep, depression, and more. In this chapter, we cover common problems that may occur with chronic pain and what you can do about them.

Assessing Different Types of Chronic Pain

Chronic pain is pain that recurs or persists for three months or longer *or* pain related to an injury expected to either continue or worsen. Your body's

response to injury, which may generate severe but temporary pain, may initially cause chronic pain. If these injuries don't heal properly and the pain generator *(nociceptors)* continues to be stimulated, changes can occur in your nervous system.

These changes at the molecular level can be quite dramatic and may even include genetic alterations. One of the most frustrating aspects of chronic pain is that no known cause may exist. In fact, in the case of low back pain, doctors can't identify the cause in up to 85 percent of individuals — talk about frustrating!

Chronic pain falls into different types of relentless hurting, which are described in the following list. Unfortunately, you or a loved one may have more than one type of chronic pain.

- **Somatogenic pain** is caused by physical diseases and disorders. Somatogenic pain is divided into two different types of pain:
  - *Nociceptive pain* occurs when pain-sensitive nerve endings called *nociceptors* are activated or stimulated. (See Chapter 2 for more information on nociception and nerve endings.) Most nociceptors are located in the skin, joints, muscles, and the walls of internal organs. Nociceptors are smart; they're specialized to detect different types of painful stimuli, such as heat, cold, pressure, toxic substances, sharp blows, or inflammation.
  - *Neuropathic pain* is the result of damage to or malfunction of the nervous system. It may involve the central nervous system or the peripheral nervous system or both. (See Chapter 2 for descriptions of the two types of nervous systems.) Neuropathic pain can occur after a stroke or spinal cord injury or may be caused by diabetes.
- **Psychogenic pain** occurs when psychological and emotional factors influence the intensity of the pain. You're not imagining it, and the pain is real, but the explanation for the pain is a mystery. Examples of chronic pain problems that are thought to be psychogenic are frequent headaches, low back pain, atypical facial pain, and pelvic pain of unknown origin.
- **Somatoform disorders** have some of the marks of real conditions, but the condition doesn't fully explain the individual's symptoms. In other words, these disorders completely baffle the doctors and the patient. Examples of somataform disorders are *body dysmorphic disorder* (a preoccupation with a real or imagined flaw in appearance), *conversion disorder* (neurological symptoms, such as paralysis, that aren't caused by a neurological disease), and *hypochondriasis* (obsessive worry about having a serious illness).

Looking at Behavioral Cycles

You may describe your pain with phrases such as, "Today is a bad pain day," "Today is an okay day," or "Today is a better day." Chronic pain waxes and wanes, and you may notice that as your pain intensifies, your mood goes downhill. Alternatively, if you're in an okay or a good mood, your pain may not seem so bad.

For many people, chronic pain means that their day-to-day activities become difficult (or impossible) to perform. This limitation can result in a negative cycle in which the more pain you're in, the more you limit yourself, which also creates more pain.

Whatever type of chronic pain you have, it can lead to self-defeating behavioral cycles that perpetuate *more* chronic pain. Just what you don't want!

Figure 3-1 shows how the chronic pain behavioral cycle works. The cycle is made up of the following five phases:

- **Phase 1: Inactivity.** In this phase, you're in pain, so you limit what you'd normally do. You cancel a trip to visit your mother because it means two hours in a car, which will make you even more stiff and sore. You put off carrying the laundry downstairs to the laundry room, because just thinking about it makes you tired. You don't make dates to play tennis.
- **Phase 2: Catching up.** In phase 2, you feel okay. You may hop (well okay, you move into) the car and drive to visit your mother. You do the laundry, making many trips up and down the stairs. You make a date to play tennis. Life is good.
- **Phase 3: Inactivity.** In phase 3, the day after you've visited your mother, done the laundry, and all your other catch-up activities, you wake up stiff and sore. "Ouch! I did too much," you say. You slow down. You cancel that tennis date.
- **Phase 4: Repeating the cycles.** You may repeat this scenario many times as you try to adjust to life with chronic pain. It becomes a vicious cycle: You feel better. You do more. You feel worse. You slow down.
- **Phase 5: Deconditioning.** Phase 5 refers to the deconditioning that your body suffers as you get out of shape in response to your pain. The time you spend slowing down makes you tired and weak, which is an irony of chronic pain. You try to protect yourself through slowing down, but this inactivity actually damages and weakens your body. Among other things, it causes your muscles to weaken, which gives you less stamina and makes you tired. See the sidebar "Avoiding deconditioning" for some specifics.

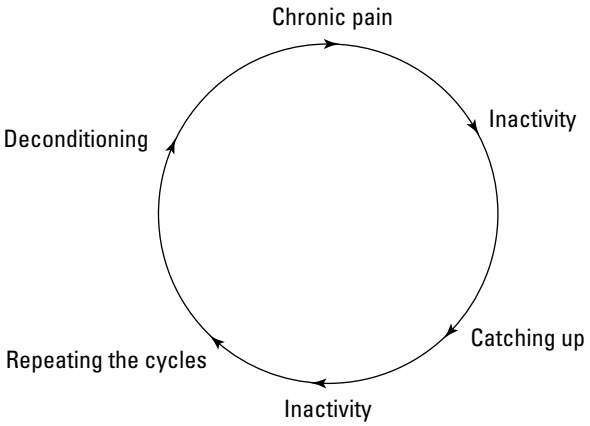


Figure 3-1: Chronic pain behavioral cycles.

A danger of the pain cycle is that you may spend more time alone. Your tennis buddies don't call anymore because you've cancelled one too many games, and they've given up on you. Your family has gotten used to doing things for you and without you. They think they're helping out by filling in for you and not forcing you to go. They don't realize that the more helpless you become, the more pain you'll experience.

Managing Flare-Ups

Chronic pain worsens, and then it improves. This waxing and waning pattern repeats, again and again. *Flare-ups* are those times when your chronic pain is most intense. For example, on a 0-to-10 pain intensity scale, a flare-up may be a time when your pain is a 7 or higher.

You're most likely to use pain medications during chronic pain flare-ups. While use of pain relievers can be the right thing, it's important to have other strategies in your anti-pain war chest. Don't rely on drugs alone.

Flare-ups are often the result of pain triggers. Two major categories of pain triggers reflect your physical and emotional states.

The first category includes activity or inactivity triggers, such as

- Staying in one position too long (such as sitting or standing for an extended period of time)
- Repetitive movements performed frequently and for long periods of time
- Movements that strain your body (lifting or pulling a heavy object)
- Bad posture, such as slumping over, and stressing painful areas

Avoiding deconditioning

If you have chronic pain, you know how easy it is to become a couch potato. Here are a few consequences of deconditioning:

- Muscle deterioration (atrophy)
- Stiff joints
- Loss of calcium from bones (leading to osteoporosis)
- Increased risk of heart disease and diabetes
- Loss of red blood cells
- Decrease in sex hormones and the production of sperm
- Decreased resistance to infection (reduced immune functions)
- Obesity
- Depression

Too negative for you? Turn this list around to consider a few *advantages* of becoming active:

- Increased joint flexibility
- Improved muscle tone
- Strong muscles
- Increased aerobic and cardiovascular fitness
- A desirable weight and fat ratio
- Release of *endorphins* (the feel good hormones that counteract depression and pain).

Sounds great doesn't it? Who wouldn't want these things? If you agree, then flip to Chapter 19 to read about exercises for people with chronic pain.

The way to avoid these triggers is obvious: Do the opposite. For example, make sure that you don't stay in one position for too long. If your job involves sitting for long periods of time, get up and move around frequently to loosen up. If you're slouched over, sit up straight.

Emotional triggers represent a second type of pain activator. It's important to minimize or prevent unnecessary emotional stress and find better ways to cope with it. (For more information, see Chapter 17.)

Another form of prevention involves heeding your own personal early warning signs. You may become aware of body sensations, such as migraine auras or a sudden inability to move your neck, that give you advance notice of flare-ups. Don't ignore these signs! Instead, try the techniques we recommend in Part III of this book.

Fighting Side Effects of Chronic Pain

You may be one of the lucky ones: You're able to manage your pain and keep it from taking over your life and the lives of your loved ones. But many people who live with chronic pain run into some major trouble. They can become

physically and emotionally overwhelmed. They may drink too many cocktails at night to "take the edge off" or run through all their painkilling drugs before the prescription can be renewed. Their lives spiral out of balance.

Chronic pain often has serious side effects, such as weight changes, depression, and problems with stress and sleep. The following sections talk about these major side effects and what you can do to fight them successfully.

Dealing with weight gain or loss

Obesity is a major problem in America, and 66 percent of adults in the United States are either overweight or obese. Deconditioning is all too frequently a consequence of chronic pain. (For more on deconditioning, see the section "Looking at Behavioral Cycles," earlier in this chapter.)

Not everyone overeats when they're in pain. Some people eat much less and lose weight. Although weight loss sounds great to most people, losing weight because you've stopped eating a healthy diet is not a good idea. Some conditions that cause chronic pain, such as gastrointestinal problems, can cause weight loss. Weight loss can be as dangerous as weight gain, but for different reasons. Underweight individuals may have poor physical stamina and a weak immune system, leaving them open to infection. If you or a loved one has unexplained weight loss, you need to see a physician for a medical diagnosis.

Maintaining a healthy weight can help you prevent weight-related diseases, such as heart disease, diabetes, arthritis, and some cancers, all of which can cause chronic pain.

Tackling depression and a negative self-image

Chronic pain can generate negative emotions, such as anger, frustration, and fear. Probably the most common emotional result is depression, and at least half of all people with chronic pain experience depression. People with weight changes (see the preceding section) may also be depressed, because eating more or less is a symptom of depression. Chronic pain may also cause physical qualities that overlap with those of depression, such as moving slowly, having trouble getting adequate rest, and feeling fatigue. A negative self-image usually accompanies depression. But the good news is that these problems are readily treatable.

If you or a loved one has symptoms of depression that linger for several months and that stay the same or worsen, you may be in the throes of a serious depression.

The first step toward beating depression is to accept that you or your loved one needs help. The good news is that depression can be treated.

Knowing when you need help

Are you unsure if you're depressed? Here's a list from the National Institute on Mental Health of common signs of depression. If you have several signs lasting more than two weeks, see your doctor.

- Persistent sad, anxious, or "empty" mood
- Feelings of hopelessness and pessimism
- Feelings of guilt, worthlessness, and helplessness
- Loss of interest or pleasure in hobbies and activities that were once enjoyed, including sex
- Decreased energy, fatigue, and feeling slowed down
- Difficulty concentrating, remembering, and making decisions
- Insomnia, early-morning awakening, or oversleeping
- Appetite and/or weight loss or overeating and weight gain
- Thoughts of death or suicide; suicide attempts
- Restlessness and irritability
- Persistent physical symptoms that do not respond to treatment, such as headaches, digestive disorders, and chronic pain

Fashioning a positive self-image

Your *self-image* is the sum of your opinions of yourself. Do you think you are smart, funny, and beautiful (or handsome)? If so, you're unusual. Most people are very critical of themselves. And, on top of that, the limitations that accompany chronic pain can damage your self-image. So work on accentuating the positive aspects of yourself rather than fixating on what's wrong with you.

Your self-image directly affects how you feel about yourself and interact with others. It also influences the way you react or respond to the stresses of life. Learning to have a positive relationship with an imperfect body is key to improving your self-image. And the better your self-image, the better you'll manage your pain.

Reinventing your view of you

Develop a healthier and more accurate view of yourself. A healthy self-image starts with learning to accept and love yourself.

The following steps are recommended by the Cleveland Clinic to foster a positive self-image, with some of our own thoughts added:

- Take a realistic self-image inventory. Focus on the positives instead of your weaknesses.
- Set realistic and measurable goals, such as losing a pound a week, rather than fixating on the 20 pounds that you need to lose.
- Confront thinking distortions, such as "I can't ever lose weight." (See Chapter 21 for more information.)
- Identify childhood labels. Did Johnny down the street laugh at your limp when you were a kid? Get over it.
- Stop comparing yourself to others. They have their weaknesses and strengths, too. Try to improve from where *you* are now.
- Develop your strengths. And play down your weaknesses.
- Learn to love yourself. Trite but true: If you love yourself with all your limitations, others will also.
- Give positive affirmations. Stop moaning and groaning or acting sick!
- Remember that you are unique.
- Learn to laugh and smile.
- Remember how far you have come. (And celebrate it.)

Reducing stress and getting some sleep

Stress and lack of sleep make chronic pain worse, although pain itself is a powerful stressor. Yes, this merry-go-round is another vicious cycle associated with chronic pain. You need to break out of the cycle if you have one or both problems. Imagine that you're locked in a small, cold and gray cell, a cell of stress. Let yourself feel bad and sad. Then imagine yourself deciding to break out. You punch out of that cell, which now has the consistency of cardboard. You're free! This imagery may help you feel empowered.

De-stressing your life

Chronic pain is nerve-wracking. Your body automatically tries to fight pain. Then, pain itself creates physical, emotional, and psychological tension. As if that wasn't bad enough, physical tension increases your muscle tension where it hurts.

Not fair, you say! We agree. And it's a big reason why reducing stress is so important for the person with chronic pain.

On top of that sorry state of affairs, your body systems, such as your central nervous system, heart, and immune system, also react to tension. Your mind and emotions respond to the whole mess with increased worry, anger, sadness, frustration, and so on. All these factors escalate your pain.

Another source of stress is the yucky consequences that chronic pain can have on your life and the lives of your loved ones. For example, chronic pain can

- Impact your ability to work and, therefore, your financial security.
- Limit family activities and social life.
- Limit the fun things you do on your own and that give you satisfaction, such as hobbies and recreational activities.
- Harm your self-esteem and feelings of self-worth.

For tips on overcoming stress, see Chapters 21 and 22. Among the things we recommend are taking advantage of proven stress-reduction techniques, such as meditation and self-hypnosis.

Solving sleep problems

Sleep problems are yet another vicious cycle: Pain causes sleep problems. These sleep difficulties lead to increased sensitivity to pain, increased stress, and so on. And this challenge can be worsened by other factors, such as medications you take for pain, some of which can reduce sleep quality; how much exercise you get; and your daily diet.

Lack of sleep makes pain worse and increases stress, yet it's very difficult to sleep when you have pain. If this cycle sounds like your situation, you're not alone. A Gallup poll found that 62 percent of people with chronic pain say that they wake too early because of pain and are unable to fall back to sleep.

A variety of sleep disturbances, including difficulty falling asleep and waking frequently during the night, are common for people who are hurting. If you or a loved one has chronic pain, your sleep may also be less restful than it would be otherwise.

Insomnia is the most common sleep problem. If you have insomnia, you have trouble falling and staying asleep. Insomnia can last for days, months, or even years. According to the National Institutes of Health, signs that you're having trouble sleeping include

- Taking a long time to fall asleep
- Waking up many times during the night
- Waking up early and being unable to fall back to sleep
- Waking up tired

Your chronic pain may be only one cause of your insomnia. Other problems, such as worrying about your health or medical bills, can contribute to sleeplessness. And sometimes insomnia is a side effect of a medication or an illness.

Insomnia may become a bad habit. Develop new behaviors that will help you get the good night's sleep your body needs. See Chapter 20 for information on how to develop these habits.

Maintaining balance

One of the costs of chronic pain is that it can throw your life out of balance. Taking care of your pain condition may take up a lot of your time and energy, which you have to factor in with all your other commitments, such as working, taking care of your family, or enjoying retirement.

After you face up to having a serious chronic pain condition, you may need to reassess your lifestyle. Take an honest look at what you do on most days. How much time do you spend working, with your family or relaxing? Are you able to devote time every day to exercise? Do you set aside time to take care of yourself and your pain-causing condition? If not, you may need to rethink your schedule.

Keeping Relationships on Track

Chronic pain impacts you physically and emotionally and also affects your relationships with others. Your pain affects everyone you love, everyone who loves you, everyone whom you work with, and everyone whom you play with in some way, whether it's because you have less time for them or they're upset by how the pain is obviously taking over your life. In most cases, they want to help! Most families and other social structures, such as work colleagues and friendship networks, experience significant stress when chronic pain hits one of their members. The following sections address issues you may encounter in your relationships, as well as ideas on how to maintain good connections.

Dealing with relationship problems

Following are just some of the common relationship problems that can occur for people who have a chronic pain condition:

- **Withdrawal:** Particularly during flare-ups, many people with chronic pain would rather be by themselves and end up isolating themselves from family and friends.
- **A short fuse, taking out frustration and anger on those around you:** Anger and frustration about your pain are natural responses. But if you take these emotions out on people you care about, it can cause serious relationship conflicts.
- **Trouble asking for and receiving help:** One of the most difficult things about being dependent is that it can be hard to ask for and receive help. This situation is also problematic for the person who's the helper. In short, the dynamic between the giver and receiver of help sometimes can be awkward and cause considerable stress in the relationship.
- **Difficulty in sexual relationships:** Some people with chronic pain develop sexual problems. Medications, pain, and fatigue can all decrease sex drive. Read Chapter 27 for ideas on how to enhance your sex life when you have chronic pain.

Maintaining communication

One of the keys to resolving relationship conflicts is to give both time and attention to problems when they crop up. Often visiting a trained therapist can help. Here are some resources:

- The **American Association for Marriage and Family Therapy** offers guidance materials and links to locate qualified therapists in local areas. Web site: `http://www.aamft.org`
- The **American Psychological Association (APA)** in Washington, D.C., is the largest scientific and professional organization representing psychology in the United States. Its membership includes more than 150,000 clinicians and other professionals. Obtain a referral to a psychologist in your area by calling 1-800-964-2000. The operator will use your zip code to locate and connect you with the referral service of the state psychological association. Web site: `www.apa.org`
- Members of the **National Association of Social Workers (NASW)** help people in their own environments by looking at different aspects of their life and culture. Search for a clinical social worker near you by entering your city, state, and/or zip code into NASW's drop-down menu on its Web site: `www.helpstartshere.org/common/Search/search.asp`

Acknowledging caregiver stress

What if you're not the one in severe pain but instead you're someone who cares about that person? For lack of a better word, you're the *caregiver,* even if the main care giving is holding the ill person's hand when she's feeling really bad. Sometimes the caregiver feels stressed, and it's important to acknowledge this fact.

Research suggests that the physical and emotional demands on caregivers put them at greater risk for health problems. These facts are from the National Institutes of Health:

- Caregivers are more at risk for infectious diseases, such as colds and flu, and chronic diseases, such as heart problems, diabetes, and cancer.
- Depression is twice as common among caregivers compared to noncaregivers.
- Caregivers supply nearly 257 billion dollars a year in services for their loved ones, such as transportation, supervision, financial management, and so on.

Caregivers juggle many roles. Besides assisting a loved one, most are married or living with a partner, have a paid job, and also care for a child or an elderly person. If you're a caregiver, you may go through the same cycles as your loved one with chronic pain. Like them, you're losing control over your daily life: Maybe your wife is no longer the confidante she used to be because she's absorbed with her pain, and consequently, you feel lonely and sad. Maybe your loved one is grumpy and takes it out on you, which can be very hard to take. You're trying to help, and your head gets bitten off! Even when you know it's the "pain" that is talking, it still hurts.

If you're a caregiver, watch for signs that this role is stressing you out too much. These common signs of caregiver stress are from the American Academy of Family Physicians (AAFP):

- Feeling sad or moody
- Crying more often than you used to
- Having a low energy level
- Feeling like you have no time for yourself
- Having trouble sleeping, or not wanting to get out of bed in the morning
- Having trouble eating, or eating too much
- Seeing friends or relatives less often than you used to

- Losing interest in your hobbies or the things you used to do with friends or family
- Feeling angry at the person you are caring for or at other people or situations

In addition, you may get little or no thanks from the person you're caring for, which can add to your feelings of stress and frustration. Realize that these feelings are perfectly natural. AAFP points out that some doctors regard caregivers as *hidden patients* because of the stress and strain on them. Talk with your doctor about your feelings. Stay in touch with your friends and family members. Ask them for help in giving care.

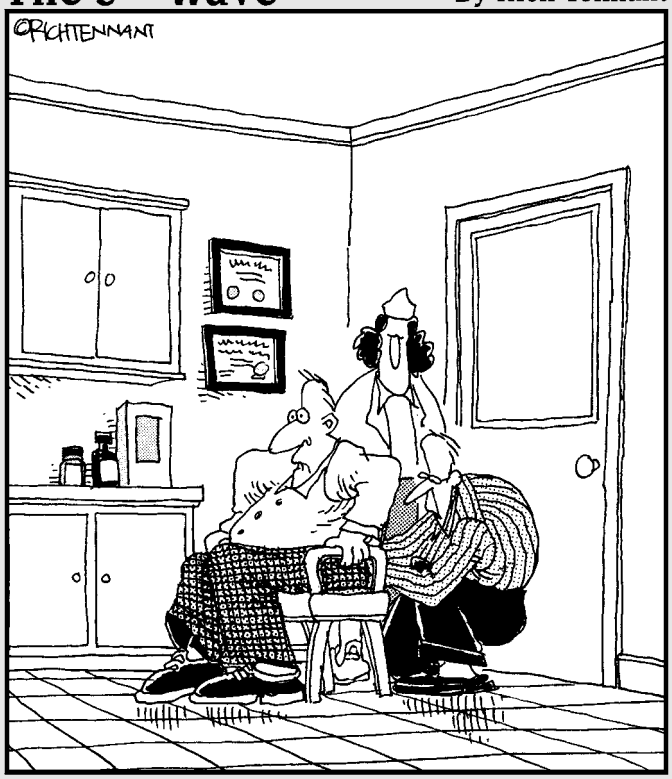
If you're a caregiver but you don't take care of yourself and stay well, you won't be able to help the people you love.

Many communities offer caregiver support groups that provide you an opportunity to share information and feel connected to others providing care, just like you. Support groups are often organized through churches, synagogues, recreation centers, and Area Agencies on Aging. Your local social services or aging office can direct you to a support group.

Part II

Detailing Some Causes of Chronic Pain

The 5th Wave By Rich Tennant



"I don't think the crackling sound coming from your lower back is as serious as you thought. Just relax, and I'll have this Rice Krispie Square out of your back pocket in no time."

In this part . . .

Part II describes the major diseases and injuries that can lead to chronic pain, as well as how these causes are diagnosed and treated. We cover the most common forms of arthritis, headaches, and cancer pain, to name just a few.

Remember that just because you hurt all the time doesn't mean that you have one of these conditions! In fact, you may have chronic pain and never know the cause. (How frustrating is that?) Or your pain may be caused by a less common condition that we didn't cover.

Chapter 4

Arthritis and Its Cohorts

In This Chapter

- Understanding arthritis
- Reviewing the major types of arthritis
- Finding out how arthritis is diagnosed
- Identifying techniques for using your body wisely

It can sneak up and strike you suddenly and without warning. You *were* okay yesterday, but today you're hurting. Or it can overtake you in small, increasingly painful steps — you noticed a sore knee a year ago, a painful shoulder about six months ago, and soreness in your wrist a month ago. None of them has gone away.

It's arthritis, the leading cause of disability in the United States. Tragically, arthritis can strike as early as infancy, although most people with arthritis are middle-aged or older adults.

This chapter includes general information about arthritis and what you can do about it. We cover the most frequently occurring form of arthritis, osteoarthritis, along with nine other common types of the disease.

Sneaking Up on You: Arthritis

Most people think of arthritis as a disease that affects the *joints* (the intersection where two bones meet). But the term *arthritis* actually is a catchall term for more than 100 medical conditions that affect not only your joints, but your muscles and bones as well. In fact, some conditions, such as rheumatoid arthritis and psoriatic arthritis, can attack the entire body.

According to the National Institutes of Health, common symptoms of arthritis are pain and stiffness in your body, trouble moving around, and swelling in your joints.

Facts about arthritis

The following facts are from the Arthritis Foundation:

- Arthritis is one of the most prevalent chronic health problems and the nation's leading cause of disability among Americans over age 15.
- Arthritis is second only to heart disease as a cause of work disability.
- Arthritis limits everyday activities, such as walking, dressing, and bathing, for more than 7 million Americans.
- Arthritis results in 39 million physician visits and more than a half million hospitalizations.
- Arthritis costs the U.S. economy $128 billion per year.
- Arthritis affects people in all age groups, including nearly 300,000 children.
- Baby boomers are at prime risk for arthritis. More than half those affected with arthritis are under age 65.
- Half of all Americans with arthritis don't think anything can be done to help them. (They're wrong.)
- Arthritis strikes women more often than men.

Treatments for arthritis vary according to the type. In other words, what works for rheumatoid arthritis doesn't work for gout. You can read about specific treatments in the upcoming sections on different types of arthritis. General treatments are used by people with all arthritis types, such as popular painkillers to treat pain and inflammation. In addition, most doctors recommend that overweight people lose weight. And everyone should exercise. (Read more about exercise in Chapter 19.)

The Most Frequent Form: Osteoarthritis

Linda, 35, says most of her osteoarthritis pain is in her knees, and it's often hard to walk. Diana, 55, says her arthritis is primarily in her back. As with Linda, Diana has trouble walking, but her problem is severe back pain caused by osteoarthritis. (Read more about back pain in Chapter 5.)

The hallmark of *osteoarthritis* (OA) is damage to one or more joints. Osteoarthritis is the most commonly occurring form of arthritis. The troublemaker in the joint is the *cartilage,* which is a rubbery, fibrous, dense connective tissue that cushions the joint. The cartilage — which usually protects joints from the wear and tear of daily walking and other activities, as well as general aging — breaks down (see Figure 4-1). The result is that the bones of the joint rub against each other, causing inflammation. As the disease progresses, joints become painful, stiff, and limited in motion.

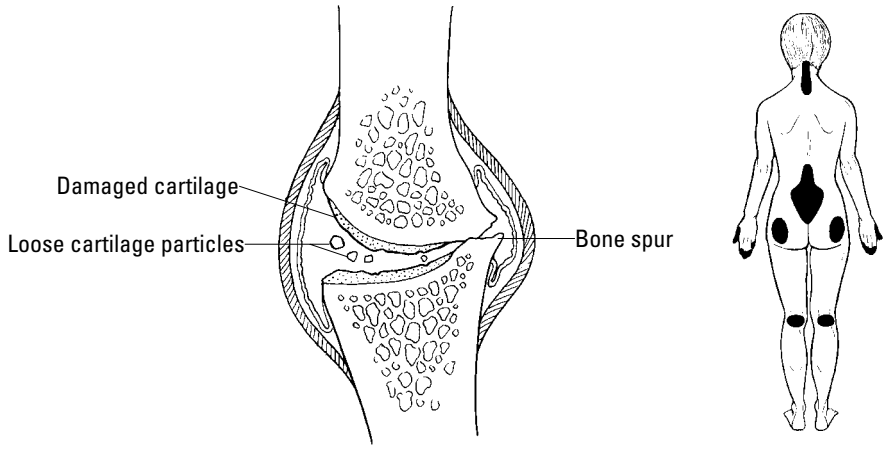


Figure 4-1: Osteoarthritis in a knee joint and common locations for OA.

Osteoarthritis is often thought of as an older person's disease. And, indeed, the line, "Live long enough, and you'll get osteoarthritis" is mostly true. However, younger people sometimes develop this form of arthritis, usually due to sports injuries or accidents. For example, football players can develop osteoarthritis in their knees, and tennis players can develop it in their shoulders. (Many people mistakenly believe *tennis elbow* is caused by osteoarthritis, but it's actually due to an injury of the muscle and tendon area around the outside of the elbow.)

What causes or triggers osteoarthritis is a mystery, but some risk factors are known. According to the National Institutes of Health, key risk factors are

- A genetic defect in joint cartilage
- Being overweight
- Getting older
- Joint injury
- Joints that are not properly formed (such as hip dysplasia)
- Stresses on the joints from certain jobs and playing sports

If you have any of these symptoms, you may have osteoarthritis:

- A crunching feeling or the sound of bone rubbing on bone
- Stiffness in a joint after getting out of bed or sitting for a long time
- Swelling or tenderness in one or more joints

If these symptoms are interfering with your daily life, talk with your doctor about them right away.

While medications for pain relief are usually necessary, the most important treatment for osteoarthritis is a joint-friendly lifestyle. Eating a healthy diet, maintaining a healthy weight, avoiding joint damage, and lessening the stress in your life are all keys to managing osteoarthritis. (For information on these topics, see Chapters 18, 19, and 21.)

Painful Joints and More: Rheumatoid Arthritis

Rheumatoid arthritis (RA) is called a systemic disease because it not only affects joints, but also muscles such as the lung and heart. It causes pain, swelling, and stiffness, and these symptoms are usually worse in the morning.

RA is known as a symmetrical disease. If one knee has rheumatoid arthritis, usually the other knee has it, too (although one knee may be worse than the other). RA can affect any joint in the body and often attacks more than one joint. People with this disease often feel sick, and they're tired. (They're also sick and tired of having rheumatoid arthritis!) Sometimes they have chronic fevers.

If you develop RA, you may have it for only a few months, or for a year or two. Or you may have times when the symptoms get worse *(flares),* and times when they get better *(remissions).* Some people develop a severe form of the disease that lasts for many years or a lifetime. This type of RA can cause serious joint damage.

The damage that occurs with RA is different from damage caused by OA, which is described in the preceding section. With RA, the synovial membrane that surrounds the joint is inflamed and swollen, and infected cells move in and attack both the vulnerable bone and cartilage (see Figure 4-2). The cartilage becomes thin, the joint space narrows, and the joint capsule is inflamed.

Anyone can develop rheumatoid arthritis, although women are more likely to suffer from it than men. RA often starts in middle age and is most common in older people. But children and young adults can also have rheumatoid arthritis (For more information on the various types of arthritis that children may develop, see Chapter 23.)

Doctors don't know exactly what causes RA, but they do know that with this form of arthritis, the person's immune system attacks its own body tissues. Possible causes include

- Genes (passed from parent to child, but don't blame Mom or Dad; if they could've stopped this gene from getting to you, they would've!)
- Lifestyle factors, such as smoking and obesity

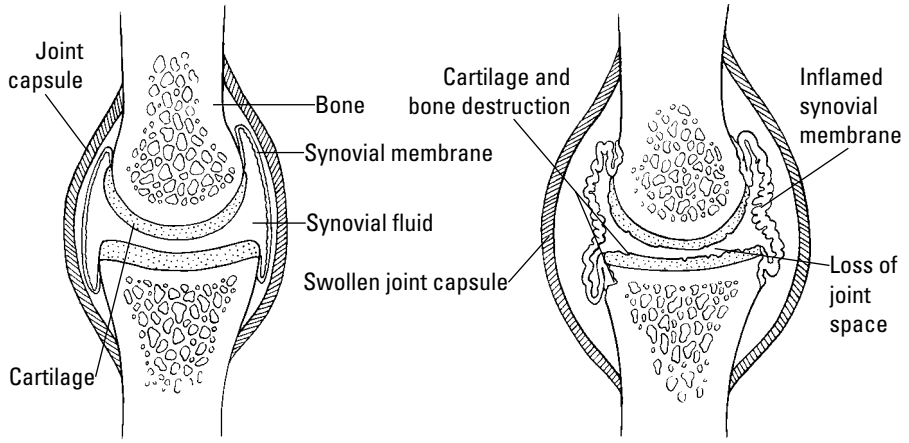


Figure 4-2: Rheumatoid arthritis: A healthy knee and a knee with inflammation in the synovial membrane.

Most people with rheumatoid arthritis take medicine on an ongoing basis to relieve pain, reduce swelling, and stop the disease from getting worse. In addition to pain relievers generally used by people with other types of arthritis, other specific types of medications, such as disease modifying antirheumatic drugs (DMARDs), provide tremendous relief for people with RA. These medications are often used alongside NSAIDs and/or prednisone to slow down joint destruction. Examples of DMARDs are methotrexate, azathioprine, chloroquine, and hydroxychloroquine.

The biological response modifier is another type of drug used to treat RA. Medications in this category inhibit proteins called cytokines, which contribute to inflammation. Examples of biological response modifiers include etanercept (Enbrel), inflixamab (Remicade), and adalimunab (Humira). Another drug used to treat rheumatoid arthritis is anakinra (Kineret). This medication blocks *interleukin 1,* a protein seen in excessive levels among patients with rheumatoid arthritis.

Sick and Tired of Fibromyalgia

Fibromyalgia is a disease that causes muscle pain and tenderness. This condition has been not-so affectionately nicknamed *fibro.* The muscle pain can be anywhere and is often characterized as whole-body. Specific places on the neck, shoulders, back, hips, arms, and legs — called *tender* points — hurt when pressure is placed on them, and the presence of these tender points is used as a diagnostic test. Figure 4-3 shows these tender points.

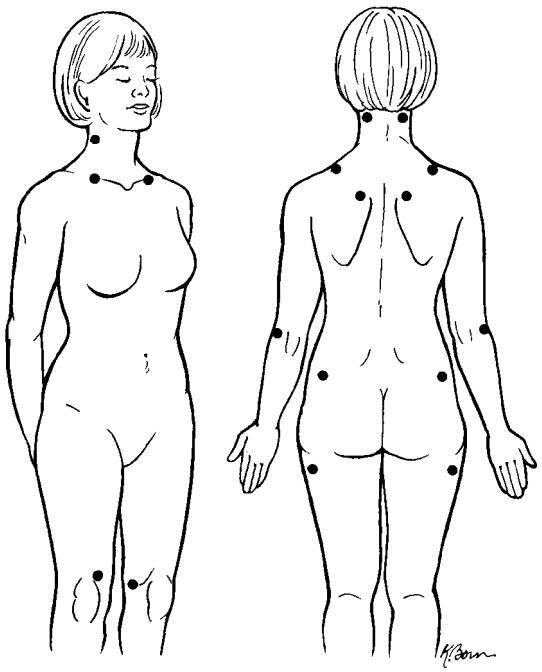


Figure 4-3: Fibromyalgia tender points.

Often, sufferers of fibromyalgia have a previous history of some other chronic pain condition, such as whiplash pain, temporomandibular pain, rheumatoid arthritis, irritable bowel syndrome, repetitive strain injury, headache, back pain, and interstitial cystitis.

Fibro affects as many as 1 in 50 Americans, but women are much more likely to have the disease than men. Also, women with a family member with fibromyalgia are more likely to have this condition.

Because people with fibromyalgia frequently score high on psychological tests of anxiety or depression, it may appear that anxiety or depression caused the muscle pain. However, pain itself generates psychological distress. The bottom line is that stress is important for understanding and dealing with fibro.

If you or a loved one has fibro, relaxation training is beneficial (see Chapter 22). Any technique that improves blood supply to muscles helps, such as exercise (see Chapter 19). Exercise is difficult to sell to people with fibro, because it hurts in the short term although it helps over the long haul. Learning to pace the exercise and adjust the amount of exercise day to day based on symptoms of fibro can be helpful. The relatively new drug Lyrica has helped some people with fibromyalgia. Opiate narcotics aren't very useful for most patients with fibromyalgia.

Chronic stress and fibromyalgia

Chronic stress, whether it's psychological stress or stress stemming from a focal pain condition, works through complex circuits in the brain to activate the hypothalamus and the sympathetic nervous system. The long name for the central organizing centers of stress is the hypothalamic-pituitary-adrenal (HPA) axis. This fight-or-flight system mobilizes you in a short-term crisis. When long-term stress and activation of the HPA axis occurs, it has widespread effects that can explain not only fibromyalgia, but also other associated conditions. Chronic stress can increase pain sensitivity anywhere in the body. Even pain from stimulation of the skin is exaggerated for some fibro patients.

Both stress and pain interrupt sleep (see Chapter 2), and sleep deprivation is a significant problem for people with fibro. Also, sleep loss is a major stressor (see Chapter 20). Sleep deprivation and stress together can cause impaired memory (called *fibro fog).*

Sympathetic activation from chronic stress reduces the blood supply to muscles *(peripheral vasoconstriction).* Females are more susceptible to this effect, contributing to the high incidence of fibro among women. Many fibro patients have *Raynaud's syndrome,* with symptoms of reduced peripheral blood supply (such as cold hands).

Long-term reduction of blood supply to the muscles (ischemia) makes the pain receptors (nociceptors) more sensitive to pressure, an important characteristic of fibro. In addition, it sensitizes a peripheral receptor responsible for muscular fatigue. A condition called *chronic fatigue syndrome* (CFS) is commonly associated with fibro. (CFS is a syndrome that involves debilitating fatigue, which makes physical exercise or mental activity very difficult.)

Input to the CNS from muscle nociceptors is a very potent source of central sensitization (see Chapter 2). This process is a vicious cycle: Any focal pain condition can eventually produce widespread muscular pain, which increases central sensitivity to both the focal pain and the widespread pain.

Overlapping Conditions: Polymyalgia Rheumatica and Temporal Arteritis

Polymyalgia rheumatica (PMR) and temporal arteritis often strike together. *Polymyalgia rheumatica* is a form of arthritis that causes low-grade pain in the large joints. When asked to describe their pain, people with PMR often point to their entire hip or shoulder rather than to specific tender points. Stiffness and muscle pain are common with the disease. Other symptoms include fatigue, night sweating, lack of appetite, a slight fever, and depression. PMR affects both sides of the body, and more than one area may be stricken.

PMR has symptoms that can be confused with fibromyalgia (see preceding section). However, fibro usually strikes women in their 30s and 40s, and PMR is more common in older adults.

Temporal arteritis is an inflammation of the lining of your arteries. (Temporal arteritis is also called giant cell arteritis.) The *temporal arteries,* which supply blood to part of the head, are most often affected. The disease is potentially very damaging and can lead to violent headaches and even blindness. PMR and giant cell arteritis overlap in many cases.

White women over age 50 have the highest risk of developing the two conditions. While people with PMR may also develop giant cell arteritis, if you're over age 50, arteritis can strike even if you don't have PMR.

Anti-inflammatory drugs and rest are used to treat PMR. Corticosteroids are used to treat both diagnosed PMR and temporal arteritis. Without treatment, these conditions can progress with devastating consequences, such as blindness and/or stroke.

TMJ Dysfunction: It's All about Your Jaw

TMJ is an abbreviation for the temporomandibular joint, the technical term for the joint between the lower jaw and the temporal bone of the skull (see Figure 4-4).

TMJ results from your jaw not functioning properly, leading to tenderness, pain, a clicking sound when you move your mouth, and/or locking of the jaw. TMJ may cause headaches, earaches, and dizziness.

People who get TMJ usually have arthritis in the joint and/or clench (or grind) their teeth, but the pain can come from the muscles used to chew and close the mouth and doesn't always involve the actual joint.

To treat TMJ, rest your jaw by eating soft foods, such as yogurt and applesauce (which are very nutritious foods). Be sure you avoid clenching or grinding your teeth and use ice packs when the condition really bothers you. If you have symptoms of TMJ, talk them over with your dentist. He may suggest using a mouth guard or refer you to an otolaryngologist (head and neck surgeon) or oral (dental) surgeon.

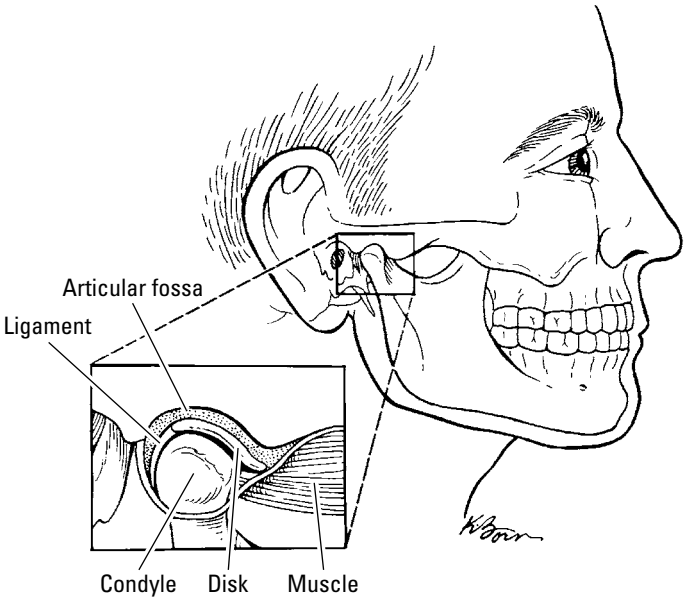


Figure 4-4: The TMJ, the joint where the lower jaw joins the temporal bone of the skull on both sides of the head.

Sniffling Over Soft Tissue Diseases

Soft tissue syndromes affect the tissues surrounding joints, causing pain, swelling, and inflammation. These syndromes can affect any area of your body, such as your shoulder, elbow, or lower back.

Soft tissue syndromes have many names, depending on where they occur in the body. One of the best-known syndromes of this type is *myofascial pain syndrome* (MPS), a chronic pain problem that may involve a single muscle or an entire muscle group. The pain may burn, stab, ache, or nag. The pain from MPS may also be *referred,* which means that it does not occur at the source, but travels to another place in your body.

Scientists aren't sure what causes MPS. The most well-known theory is that a muscle injury causes a painful tender point.

If any of these traits apply to you, you may be at risk for MPS:

- Abnormal bone or muscle structures
- Bad body posture
- Overuse or injury of a joint or muscle

MPS can also strike in association with other diseases or conditions, such as fibromyalgia, described earlier in the chapter in the section "Sick and Tired of Fibromyalgia."

The primary treatment for MPS is to stop overusing the muscle or muscle group that has been injured. Other treatment options are

- Massage therapy
- Physical therapy
- *Stretch-and-spray therapy,* which involves spraying the painful muscle with a coolant and then stretching it
- Trigger point injections of pain-relieving drugs

Lupus: When Your Immune System Attacks You

With *lupus,* something goes wrong with your immune system and attacks your healthy cells and tissues. The antibodies present in this process cause inflammation and pain. They also damage many parts of the body, such as the joints, skin, kidneys, heart, lungs, blood vessels, and brain. Inflammation is considered the primary feature of lupus.

For many people, lupus is a mild, but painful disease affecting only a few organs. For others, it may cause serious problems and can even cause death.

Lupus comes in many different types. The most common type, *systemic lupus erythematosus,* affects many parts of the body. Other types of lupus are

- **Discoid lupus erythematosus,** which causes a skin rash that doesn't go away
- **Drug-induced lupus**, which is caused by some medications such as procainamide (Pronestyl), and quinidine (Quinaglute), used to control abnormal heart rates
- **Neonatal lupus,** a rare type of lupus that affects newborns
- **Subacute cutaneous lupus erythematosus,** which causes skin sores on parts of the body exposed to sun

The Lupus Foundation of America (LFA) estimates that 1.5 to 2 million Americans have a form of lupus. More than 90 percent of people with lupus are women. Lupus usually strikes women in their childbearing years, between ages 15 to 45 years. In the United States, lupus is more common in African-Americans, Latinos, Asians, and Native Americans than Caucasians.

Many people can do well when treated for lupus. If you have lupus, getting plenty of rest and wearing sun block to protect against sun exposure are key measures to avoid flare-ups. For information on treatment and other concerns about lupus the following Web sites are great resources:

- **Lupus Foundation:** `www.lupus.com`
- **Lupus Research Institute:** `www.lupusresearchinstitute.org`

Too Dry for Too Long: Sjogren's Syndrome

Sjogren's syndrome is an autoimmune arthritic disorder that causes severe dryness in the mouth and eyes. It may also affect other organs in the body. Sjogren's comes in two types: primary and secondary. Primary Sjogren's syndrome strikes by itself. People who develop secondary Sjogren's have another disease, such as rheumatoid arthritis, and they develop dry eyes and mouth as a result of that disease. Secondary Sjogren's is usually less severe than primary Sjogren's.

Most people who get Sjogren's syndrome have passed age 40, and 9 out of 10 sufferers are women. Sjogren's syndrome is sometimes linked to rheumatoid arthritis, described in the section "Painful Joints and More: Rheumatoid Arthritis," earlier in this chapter.

According to the National Institute of Arthritis and Musculoskeletal Disease (NIAMS), treatment for the dry eyes of Sjogren's may include

- Hydroxypropyl methylcellulose (Lacriserts), a prescription drug that wets the eye surface and keeps natural tears from drying out fast. It comes in a small pellet placed in your lower eyelid. When you add eye drops, the pellet melts and forms a film over your own tears, trapping moisture.
- Artificial tears that come in different thicknesses and are available over-the-counter.
- Chewing gum or sucking on hard candy to help your glands make more saliva. Sugar-free gum and candy are best. (But be careful about chewing gum because it can cause TMJ!)
- Eye ointments, which are available over-the-counter, are thicker than artificial tears. They protect the eyes and keep them wet for several hours. They can blur vision, so you may want to use them while you sleep.
- Sipping water or a sugar-free drink often to wet your mouth.
- Surgery to shut the tear ducts that drain tears from the eye.

In addition, your doctor may prescribe pilocarpine (Salagan) tablets to treat dryness of the mouth and throat, Evoxac to treat a dry mouth, or cyclosporine ophthalmic solution (Restasis) to treat dry eyes.

An important resource for people with Sjogrens is the Sjogren's Syndrome Web site at `www.sjogrens.org`.

Giving Up Gout

Gout, also known as metabolic arthritis, is a painful condition caused by crystals of uric acid that settle into tissues of the body. *Uric acid* is a breakdown product of *purines* (organic compounds), which are present in many foods. Gout may be caused by an inherited abnormality in the body's ability to process uric acid.

Gout is known for its recurring, extremely painful attacks of joint inflammation (arthritis). Chronic gout can lead to deposits of hard lumps of uric acid in and around the joints, as well as decreased kidney function and kidney stones. Almost 20 percent of people who have gout develop kidney stones.

Gout is a menace for about 1 million people per year in the United States. Nine out of ten gout victims are men. In women with gout, the onset usually occurs after menopause. Certain characteristics are common in people who develop gout, including

- Abnormal kidney function
- Abnormal metabolism of uric acid
- Excessive weight gain
- High blood pressure
- Moderate to heavy alcohol intake
- Obesity

If NSAIDs or corticosteroids don't control gout symptoms, your doctor may consider prescribing colchicine. This drug is most effective when taken within the first 12 hours of an acute attack. For chronic gout attacks, your doctor may prescribe allopurinol (Zyloprim) to treat high levels of uric acid and reduce the frequency of sudden attacks. (See Chapter 14 for information on NSAIDs and corticosteroids.)

If you have gout, avoid high-purine foods, such as sweetbreads, liver, meat extracts such as Oxo or Bovril, herring, and scallops, which can increase uric acid levels.

Bones Silently Turning to Powder: Osteoporosis

Osteoporosis is a common and painful condition that can disfigure and disable its victims. It weakens bones and can cause spontaneous fractures. In fact, in the advanced stage, doctors sometimes say that their patient's bones have "turned to powder." The signature worst symptom of osteoporosis is fractures, primarily of the spine, hips, and wrists. Many physical characteristics commonly associated with aging — such as a stooped posture, shrinking height, and thick waist — are actually caused by osteoporosis. So it's not surprising that many people think of osteoporosis as a condition of older age. Actually, however, osteoporosis begins in the early adult years, and steps to thwart it should start then.

Osteoporosis is often called silent because bone loss occurs without symptoms. People may not know that they have osteoporosis until a sudden strain, bump, or fall causes a bone to break.

Ten million people in the United States have osteoporosis. Millions more have low bone mass, or *osteopenia* (not as bad as osteoporosis, but bad enough), placing them at increased risk for more serious bone loss and subsequent fractures

These characteristics put people at high risk for osteoporosis:

- A family history of osteoporosis
- Decreased consumption of dairy products
- Endurance athlete, including running and dancing
- A medical condition such as inflammatory small bowel disease or celiac disease
- Taking a medication that blocks calcium absorption, such as a steroid
- Heavy cigarette smoker
- Heavy consumption of alcohol
- Older age
- Partially or totally immobilized
- Physically inactive
- Poor eating habits and/or an eating disorder
- Strenuous dieter and/or faster

Osteoporosis isn't curable, but it is treatable. Two important preventive and treatment measures are a diet adequate in calories, calcium, vitamin D, and protein, and secondly, weight-bearing exercise. (See Chapters 18 and 19 for information on diet and exercise.)

Medications and other substances can prevent and treat the bone-robbing condition. They include

- Biophosphonates (Aredia and Zometa), which can increase bone density and can help in preventing osteoporsosis caused by use of corticosteroids
- Calcitonin, which reduces the risk of bone fractures
- Estrogen supplement therapy
- Selective estrogen receptor modulators (Ralozifene), which also can increase bone density
- Strontium ranelate (Protelos), popular in Europe, to treat osteoporosis
- Parathyroid hormone (Teriparatide), which can increase bone density
- Vitamin D and calcium, to help reach and keep maximum bone density

The National Osteoporosis Foundation's Web site at `www.nof.org` is a valuable resource for people with osteoporosis.

Diagnosing Arthritis

Whichever form of arthritis you have, the diagnosis and treatment requires a hands-on approach. Your doctor will examine your tender joints and muscles, move them around, and ask you to describe your symptoms.

Your doctor may also order lab tests to help diagnose the cause of your pain and other symptoms. Most lab tests are performed on your blood, which is like a script that holds many clues to what's going on throughout the body. Other tests may require urine, joint fluid, or pieces of skin or muscle. Your doctor will study your tests to confirm a diagnosis, monitor the progress of your disease, determine whether a medication is working, or look at whether any drugs you're taking are causing any problems.

Doctors also use tests to see whether your disease is getting better, flaring, or progressing. For example, tests called sed rates and C-reactive protein tests can show whether inflammation is under control.

Many people with arthritis take pain-killing and disease-modifying drugs on an ongoing basis. If this is the case for you, it's important to have regular lab tests to see whether the drugs are causing any problems. Some medication side effects aren't noticeable until they do significant damage to the liver or kidneys, so it's better to be safe than sorry.

Specific tests for arthritis

You may hear people with arthritis talk about their sed rates or CRP levels. The following tests help your doctor diagnose arthritis and show how you're doing.

- **Antibodies to CCP:** This test looks for an antibody called anticyclic citrullinated peptide, which can diagnose rheumatoid arthritis. The antibody is almost never present in people who do not have RA.
- **Antinuclear antibody (ANA):** This sensitive blood test can detect autoimmune diseases, including SLE, STU polymyositis, scleroderma, Sjogren's syndrome, and rheumatoid arthritis.
- **C-Reactive protein (CRP):** CRP is a blood test that identifies inflammation.
- **Erythrocyte sedimentation rate (ESR or sed rate):** This blood test looks for a marker of inflammation. It measures how fast red blood cells fall to the bottom of a tube of blood.
- **HLA tissue typing:** This blood test can diagnose two less common types of arthritis, ankylosing spondylitis and Reiter's syndrome.
- **Joint fluid tests:** This test is for abnormalities, such as uric acid crystals or infectious agents, in joint (synovial) fluid.
- **Rheumatoid factor (RF):** This test for RA looks at gamma globulin, a component of blood.
- **Skin biopsy:** Some forms of arthritis involve the skin. Biopsies of skin can tell the presence of lupus, psoriatic arthritis, and other conditions.
- **Uric acid:** This test looks at the levels of uric acid in the blood in order to diagnose gout.

Keep in mind that lab tests don't catch everything. You may have a disease, such as RA, but the lab tests show nothing. For example, 15 to 20 percent of people with RA never have a positive rheumatoid factor. And on the flip side, lab tests may be positive for a disease that you show no signs of (and thank goodness for that!). (See the sidebar "Specific tests for arthritis" for a description of the test for rheumatoid factor.)

In addition, no lab tests are available for some forms of arthritis, such as OA. (See the sidebar for tests for other types of arthritis.) Other tests, including X-rays and magnetic resonance imaging, are used to diagnose such diseases as well as to check on further deterioration.

Considering Surgery

Most people with arthritis never need joint surgery. But when other treatment methods don't lessen pain, or you have major difficulty moving and using your joints, surgery may be necessary. (You can read more about surgery in general in Chapter 16.)

Resources for people with arthritis

Some important resources for people with arthritis include

Arthritis Foundation (AF), P.O. Box 7669, Atlanta, GA 30357-0669; phone 1-800-568-4045; Web site www.arthritis.org. The AF is a national, voluntary health agency seeking the causes, cures, preventions, and treatments for the more than 100 forms of arthritis. AF has 150 chapters and service points nationwide.

National Institutes of Health of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), Bldg. 31, Room 4C02, 31 Center Dr. - MSC 2350, Bethesda, MD 20892-2350; phone 301-496-8190; Web site www.niams.nih.gov. Part of the National Institutes of Health, NIAMS supports research into the causes, treatment, and prevention of arthritis and provides information on research progress. Its Health Information Web pages provide valuable information for people with arthritis.

***Arthritis For Dummies*, 2nd Edition,** Barry Fox, Nadine Taylor, Jinoos Yazdany, Wiley. This book is for the millions who suffer from arthritis, as well as their family members and friends.

Types of surgery for arthritis include

- **Arthrodesis:** Surgery to fuse a vertebrae or other joint.
- **Arthroscopic surgery:** A minimally invasive procedure in which a small viewing instrument, an arthroscope, is used to look at the joint. It is usually an outpatient procedure used both for diagnosis and treatment.
- **Injections:** Rheumatologists and orthopedic surgeons inject substances such as glucocorticoids and hylauronic acid into painful joints in order to provide pain relief.
- **Joint replacement:** A major surgery in which damaged joints are removed and artificial joints are inserted in their place. Common examples are knee and hip replacements.
- **Synovectomy:** A surgical procedure to remove the lining of the joint (synovium).

Focusing on Healthy Joints

You can act to protect your joints and even prevent some forms of arthritis, such as OA, and lessen the damage from others, such as RA.

- **Maintain your ideal body weight.** The more you weigh, the more stress you put on your joints, especially your hips, knees, back, and feet. (See Chapter 18 for tips on eating a healthy diet.)

Use your body wisely

The way you carry your body largely affects how much strain you place on your joints. Proper body mechanics allow you to use your body more efficiently and conserve your energy.

- Stand up straight. Mom was right! Good posture protects joints in the neck, back, hips, and knees.
- When sitting, the proper height for a work surface is 2 inches below your bent elbow. Make sure that you have good back and foot support. Your forearms and upper legs should be level with the floor.
- If you type at a keyboard for long periods and your chair doesn't have arms, consider using wrist or forearm supports. An angled work surface for reading and writing is easier on your neck.
- When standing, the height of your work surface should enable you to work comfortably without stooping.
- Increase the height of your chair to decrease stress on your hips and knees as you get up and down.
- To pick up items from the floor, stoop by bending your knees and hips. Or sit in a chair and bend over.
- Carry heavy objects close to your chest, supporting the weight on your forearms.
- Use your big joints. When lifting or carrying, use your largest and strongest joints and muscles to avoid injury and strain on your smaller joints.
- Don't try to do a job too big for you to handle. Get another pair of hands to help.
- Don't give your joints the chance to stiffen up — keep moving. When writing or using your hands, release your grip every 10 to 15 minutes. On long car trips, get out of the car, stretch, and move around at least every hour. While watching television, get up and move around every half hour.
- Balance periods of rest and activity during the day. Work at a steady, moderate pace and avoid rushing. Rest before you become fatigued or sore. Alternate light and moderate activities throughout the day and take periodic stretch breaks.

- **Avoid pain triggers.** Find out how to tell the difference between the pain of arthritis and pain from overusing or misusing a joint. If you can identify an activity that stresses a joint, stop that movement as much as possible. See Chapter 17 for tips on avoiding pain triggers.
- **Move each joint through its full range of motion at least once a day to help you maintain freedom of motion in your joints.** For tips on how to take your joints through their range of motions, see Chapter 19.
- **Exercise!** Exercise protects joints by strengthening the muscles around them. Strong muscles keep your joints from rubbing against one another, which wears down cartilage (and hurts!).

Chapter 5

My Aching Back

In This Chapter

- Understanding back pain
- Accepting the mysteries of back pain
- Exploring treatment options
- Adapting to back pain

At least once in your life, you've probably winced with pain and moaned, "Ouch, my sore back!" Back pain is so common that it's the No. 2 reason why people visit doctors. (Headaches beat out back pain for the No. 1 spot.)

Sore backs that are long-lasting are frustrating for many reasons. First is the pain itself. It's an intruder — and an unwelcome and constant companion. Two other maddening characteristics of chronic back pain are that the cause (or sometimes the causes, if more than one factor is involved) is often unknown, *and* back pain can often severely limit activities at work, at home, and at play.

Although an ongoing sore back is just no fun at all, it's not all gloom and doom either. Whether you know what caused your back pain or not, you can use many effective treatments and techniques to lessen and manage your pain, even if you can't completely cure it. We cover many of these treatments and techniques in this chapter and Parts III and IV in this book.

If you follow the guidelines in this book, you may need to be cautious about lifting, twisting, and performing some other actions. But you likely can resume many tasks that you love, such as playing ball with your children and joining your buddies on the golf course. And you may even take up some new and fun activities like yoga or Pilates, which are great for your back.

Identifying Who Gets Chronic Back Pain

Maybe you're like Sandy, whose back really hurts nearly every day from her chronic arthritis problem. Or you may be more like Jim, who somehow

twisted his back getting out of the car, and found the pain excruciating. The doctor treated him for a pulled muscle, which helped for awhile, but every so often, the pain comes back again. In Lori's case, she woke up one day with severe back pain and has no idea why she has it — and the reason for her pain has her doctor stumped as well. Fortunately for Lori, proven treatments can improve chronic back pain, even when the cause is unknown.

The back and spine are two of the strongest parts of the human body. Even so, because of day-in-and-day-out wear and tear on the back, at some point in life, nearly everyone has a sore back. But, what about back pain that *never* altogether leaves? Studies show that one in five adults have chronic, low back pain, which is the most common form.

Some people are more inclined to have back pain than others. Randy Shelerud, M.D., director of the Spine Center at the Mayo Clinic in Rochester, Minnesota, says that people with the following traits are especially likely to develop chronic back pain:

- **Taller height:** Studies demonstrate that people prone to back pain have a greater standing height than people who are not.
- **Overweight or obese:** Additional weight puts stress and strain on the spine and muscles.
- **Smoking cigarettes:** Smoking leads to degeneration of the discs of the spine.
- **Poor muscle strength and conditioning in the lower back:** Weak muscles are less able to support the spine.
- **Age 45 to 64:** The older you are, the more likely you are to have arthritis in the spine or degenerative joint disease.

Looking at the Back's Delicate Anatomy

To understand back pain and why it's laid claim to your life, you need to know a little bit about your spine and the other parts of your body that are associated with it.

If you're reading this chapter, you or someone close to you probably knows the woes of back pain, and you probably want to skip right away to the part about how to make it go away. However, we encourage you to at least scan this section on anatomy. It'll help you better understand how to manage your sore back or will help you to help your loved one to understand what you're going through.

Your back is supported by your quite remarkable spine, which provides your body with strength and flexibility and also surrounds and protects your

spinal cord and nerves. Your spine is a canal that runs down the length of your back from your brain to your bottom. It's made up of bones, ligaments, tendons, large muscles, weight-bearing joints, and highly sensitive nerves. (See Chapter 2 for more details on human anatomy.) The following sections look at each part of the spine, shown in Figure 5-1.

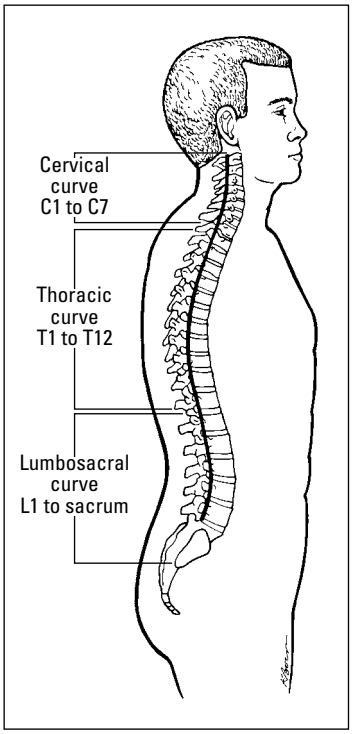


Figure 5-1: Anatomy of the spine.

Vertebrae

The bones in your spine are called *vertebrae,* and they are held together by ligaments. The normal adult spine has 32 vertebrae, each stacked on top of each other:

- **Cervical vertebrae:** These seven vertebrae in the neck area hold up your neck.
- **Thoracic vertebrae:** These 12 vertebrae are located in the middle back and extend forward as the ribs.
- **Lumbar vertebrae:** These five vertebrae, located in the lower back, are the largest ones, and they carry most of your body's weight. That's why so many people with back pain report pain in this area.

- **Sacrum:** These five vertebrae, located below the lumbar vertebrae, are fused together as one section. They attach the spine to the pelvis.
- **Tailbone:** These three vertebrae, located at the very bottom of the spine, are also fused.

Facet joints

The joints between adjacent vertebrae are called *facet joints.* The facets are bony knobs that meet between each vertebra. They link the vertebrae together and make it possible for them to move against each other. The facet joints give the spine its flexibility.

Spinal cord

Your spinal cord is comprised of cells and nerve-like pathways or tracts that run from the bottom of your brain stem all the way down to your lower back. Part of the central nervous system, the spinal cord is protected by the vertebral column, which is formed by the vertebrae.

Discs

Between each vertebra are discs that cushion them and serve as spacers. They safeguard the openings where the nerves exit the spinal cord.

Muscles, tendons, and ligaments

The muscles running up and down your back play an important role in supporting your spine so that you don't collapse like a jellyfish. When these muscles are strong (in other words, when you're "physically fit"), they support and protect your spine and help you move around with ease. But if these muscles become weak (through lack of exercise, aging, or other reasons), then your spine is more vulnerable to injury, and your mobility is also more limited.

The muscles in your stomach area and trunk also help support your spine and give it good mobility. In addition, tendons connect your muscles to your bones, and ligaments join your vertebrae together.

Describing Chronic Back Pain

Chronic back pain ranges from a general vague soreness to a recurring sharp severe pain, with all variations of pain in between. Stiffness is a common complaint of back sufferers, especially in the morning. For many people, the pain is located in the lower back (lumbar region). Although the pain is undeniably a problem, often the biggest concern with backaches is the havoc they can play with your everyday life.

For example, is it difficult to perform your everyday activities, such as grocery shopping or walking your dog? Do you have trouble moving around at work? Is it uncomfortable to sit at a computer for long periods of time?

Chronic back pain commonly hits (and stays with you) in one of two ways:

- **Constant:** It's present for more than three months.
- **Recurring:** The pain stays for long periods of time. Then it leaves (hooray!), but later it comes back yet again. This maddening pattern continues, for months or longer.

Chronic back pain may get worse when you move your back, sit down, or lift something weighing more than 10 or 20 pounds. The pain often improves when you "take a load off," meaning that you reduce the amount of weight that your spine has to support. Often, doing something simple, such as getting off your feet or putting down a heavy bag, can help. (And if you're a woman carrying a purse, clean it out at least once a week! Those loose coins can add unneeded pounds to your burden.)

Is it hard to carry your bags through airports? Maybe you've even given up flying because you don't want to make your back problem worse by carrying around heavy bags. Get suitcases with wheels that you can move much more easily than the bags you must lug around.

Taking a Look at the Causes of Back Pain

The bad news is that, for the vast majority of people, the cause of back pain is and will remain a mystery. In fact, only 15 percent of people with back pain have a diagnosis that specifically explains the cause. Knowing this fact can be discouraging. Simply put, if you and your doctor don't know what's causing your back pain, how do you go about treating it?

Fortunately, doctors use proven treatments and activities that can help lessen back pain even when the cause of your pain is unknown. (That's the good news.) We discuss these issues in the "Diagnosing and Treating Your Chronic Back Pain" section, later in this chapter. The following sections look at some common causes of back pain.

Behaviors

You can't control your gender or your age. (As mentioned in the section "Identifying Who Gets Chronic Back Pain," earlier in this chapter, middle-aged and older people have a greater risk for back pain than men or younger people.) But you *can* control some factors, such as smoking, being overweight, and not being fit. These causes are so important that we include them in the following list of behaviors that can cause chronic back pain. According to the Mayo Clinic:

- Positioning yourself awkwardly, such as twisting around too far
- Not stretching or not stretching correctly, both before and after exercising
- Attempting to lift heavy items or lifting them improperly (such as using your back, instead of your legs, to lift the weight)
- Carrying around heavy objects, such as computer cases
- Performing numerous repetitive motions, such as lifting and bending, which strain your back muscles
- Standing or sitting with poor posture
- Being overweight
- Having poor "core" muscle strength (The core consists of the abdominal, lower back, and pelvic muscles around your trunk.)
- Being overweight and not exercising regularly
- Smoking

Lifestyle factors

Some common causes of back pain may not be within your control — especially if they're tied to your livelihood:

- Demanding physical work, such as construction
- Repetitive heavy lifting
- Repetitive work of other kinds that includes a lot of bending or twisting
- Staying in one position for a very long time, such as sitting at a computer screen for hours and hours

Sometimes your job induces back pain. Maybe you don't want to quit your job, so what can you do instead? If you have to sit for long periods at the computer, be sure to take regular breaks, at least a few minutes every hour. Stand up, stretch, and shake out your body. Okay, you may look funny. But you may also find that you've started a new trend at work!

Common health conditions

When a doctor can diagnose the source of back pain, the cause is usually one of the following conditions:

- **Muscle spasms:** A strain or sprain can cause your back muscles to shrink and the blood flow to decrease, both of which cause pain. Fibrous connective tissue (fibrosis) may grow in the muscle.

  Injured muscles may also spasm or knot up to keep you from using that part of your body while it heals. Often the pain doesn't strike right away, but instead it lurks in the background and then sneaks up on you later and pounces, long after you've forgotten what may have caused it.

- **Osteoarthritis:** Sometimes back pain is caused by osteoarthritis (OA) of the spine (see Chapter 4). This condition is often called *spondylosis.* OA causes the discs between the vertebrae to collapse. Without the discs to cushion the space between the vertebrae, the joints (facets) abrade against each other, which can cause pain and stiffness.

  Ironically, your body may try to make up for the collapse of the discs by creating new bone (called *bone spurs*), which can pinch your nerves and cause significant pain.

  Being significantly overweight increases the chance of getting OA in the spine, so try to keep your pounds down to a reasonable level.

- **Osteoporosis:** As you age (especially if you're a woman), your bones are more likely to lose calcium, causing them to fracture easily. This condition is known as *osteoporosis.* If you have osteoporosis, even routine activities like grocery shopping and cleaning can cause low back pain. And a fall can lead to a very painful broken back or hip. Medications for osteoporosis can help, as well as a routine level of caution. (For more information on osteoporososis, see Chapter 4.)

- **Herniated discs:** Sometimes the discs in your spine come apart and stick out of the spine. This condition is called a *herniated, ruptured,* or *slipped disc.* If the disc pinches one of the nerves coming out of the spinal cord, it can cause a great deal of pain. The sciatic nerve, which runs from your spinal cord to your leg, is most commonly affected by herniation. This condition is called *sciatica.*

- **Spinal stenosis:** Over time, the spine may narrow, a condition called *spinal stenosis.* The narrowing can put pressure on the spinal cord and/or nerves. In general, spinal stenosis can cause cramping, pain, or numbness in your legs, back, neck, shoulders, or arms. It may also cause loss of sensation in your extremities and sometimes causes problems with bladder or bowel function.
- **Spondylolisthesis:** If one of the vertebrae moves out of place and touches the bone below it, the resulting condition is called *spondylolisthesis.* The slipped bone, usually in the lower back or neck, can pinch a nerve and cause pain.
- **Degenerative disc disease:** Sometimes the spinal discs lose their essential internal moisture that acts like fluid in a shock absorber. Once the fluid is gone from the middle of the disc, the external disc starts to buckle from the weight formerly carried by the middle of the disc. The disc begins to bulge, and then it cracks.

Diagnosing and Treating Your Chronic Back Pain

The first step toward diagnosing what's going on with your back is to find the right doctor to help you. (See Chapter 13 for more information on selecting a good doctor.)

To find out what's going on with your spine, your doctor may order tests, such as X-rays, a magnetic resonance imaging (MRI) scan, a computerized tomography (CT) scan, or a discogram, which is a special X-ray examination that involves injecting dye into the affected disc. These tests can help you and your doctor establish a diagnosis, and decide on a treatment plan.

When developing a treatment plan for chronic back pain, having realistic expectations is extremely important. The hard truth is that chronic back pain usually doesn't go away forever. However, you can do many things to lessen and manage your back pain. Your goal should be to get to a point where you can function and have a normal or close-to-normal quality of life, despite your sore back. We cover some major actions that you can take to achieve that goal in the following sections.

Hurry up and wait

A common approach to both acute and chronic back pain is "watchful waiting." We know, we know. You want to feel better *now* — even if that means having less pain instead of being completely pain-free. Who could blame you?

But the truth is that often it takes awhile, sometimes a long while, for sore backs to heal to a more tolerable level of pain.

Waiting doesn't mean that you try to pretend your pain isn't there and that you basically do nothing. Instead, it means that you wait and watch to see whether taking over-the-counter painkillers, stretching, and protecting your back from further injury lessens the hurting and stiffness enough so that you can enjoy life without resorting to taking heavy-duty prescribed drugs and/or having surgery.

Most people don't realize it, but when back pain is severe, a short period of bed rest is okay. However, more than a couple of days of down time actually does more harm than good.

Judicious exercise and stretching

Exercise therapy is really the best choice that you can make to strengthen and heal the muscles and other tissues surrounding your spine so that they can better support your back, give it the flexibility you need, and prevent future pain.

We emphasize the word *therapy* in the term *exercise therapy.* In this sense, therapy means performing exercises specifically designed to strengthen and improve sore backs. The exercises should be supervised by physical therapists or other professionals who'll ensure that you're doing them correctly and that you're not injuring yourself by doing too much or performing the exercises the wrong/painful-inducing way.

Hot and cold therapy

Heat and cold can soothe sore backs and help reduce inflammation. If you injure or irritate an already sore back, as soon as possible, apply a cold pack for up to 20 minutes at a time. (You don't need anything fancy. Put the ice in a plastic bag and then wrap the bag in a cloth or towel to keep a thin barrier between the ice and your skin.) Continue applying ice as long as you have pain spasms.

When things settle down, switch to using heat from a heating pad, hot towels, or a heat lamp. The heat from the pad, towels, or lamp helps loosen up your tight muscles.

Don't use a heat application longer than 20 minutes.

Support braces or belts

You may want to consider using a brace or back belt to support your spine, particularly when you're lifting anything especially heavy. And some people with fragile spines — particularly those with advanced osteoporosis (see Chapter 4) — must wear them to prevent injury. If you're not in the latter category, but are considering wearing a brace or belt to reduce pain, be sure to discuss this option with your doctor first and be cautious about using these supports too often or too long. Research studies are inconclusive about whether braces or belts reduce pain and stiffness, and they can cause your muscles to weaken.

If you do decide to use a brace or back belt, they are available without a prescription at pharmacies and medical-supply stores. In some cases, your doctor may write a prescription to have a device specially made to fit your particular circumstances.

Medications

Medications for chronic back pain range from taking over-the-counter painkilling drugs (a common strategy) to taking narcotics, which should be used only when absolutely necessary and for limited periods of time. Always try nonprescription pain killers first. (See Chapter 14 for an overview of these drugs.)

Surgical procedures

Most people don't need surgery for back pain. However, when your back pain has a known cause and all other approaches have been exhausted, surgery can provide welcome relief. (Read more about surgery in general in Chapter 16.)

Here are the major types of surgeries for back pain:

- **Laminectomy and laminotomy:** With these procedures, part of the vertebrae are removed.
- **Fusion:** Two vertebrae are welded together. This surgery has a long recovery time, but it's used for many patients with back pain.
- **Disc replacement:** The Food and Drug Administration (FDA) approved this therapy of removing the old disc and replacing it with an artificial disc in late 2004. It's still unknown how effective it is.

If you need back surgery, find out whether your surgery can be performed in a minimally invasive manner. Using a laparoscopic surgical technique, the surgeon reaches your spine from the front rather than through the back. This technique avoids the need for long incisions, and the spinal nerves and cord do not have to be set aside to remove a disc. Therefore, there is less risk of pain caused by the surgery, and the recovery should be faster.

Complementary and alternative therapies

We cover complementary and alternative therapies for chronic pain in Chapters 14 and 15. Many therapies we describe in these chapters are great for managing chronic back pain. They include the techniques that physical therapists, occupational therapists, recreational therapists, fitness instructors, and massage therapists — all people interested in improving back pain — use effectively. Other important approaches to look over in Chapter 15 are acupuncture, biofeedback, and chiropractic care.

Chapter 6

Head Cases: Migraines and Other Types of Craniofacial Pain

In This Chapter

- Telling the difference between primary and secondary headaches
- Managing migraines
- Discovering other major types of chronic headaches
- Finding help for chronic headaches

Just before one of Mona's horrible migraines strikes her, she gets fuzzy in the head and can't think straight. Sometimes she sees weird jagged patterns, which means that a really bad headache is on its way. Tim, on the other hand, has severe cluster headaches that cause his eyes to water like crazy and give him excruciating pain for about 45 minutes each time — then it's over. Sandy has frequent tension headaches, and when they hit, she feels like some evil genie has placed an invisible rubber band around her head and is steadily and maddeningly tightening it, probably laughing like crazy the whole time.

Maybe you can relate to the headache problems of Mona, Tim, or Sandy. Headaches are one of the most common chronic pain conditions, and 45 million Americans suffer from chronic headaches, according to statistics from the American Chronic Pain Association. Seven in 10 people have at least one headache a year.

All headaches are caused by the activity of pain fibers that innervate blood vessels within the brain, its fibrous covering (called the *dura*), or muscles that support the head. The good news is that often people can learn to identify their own headache triggers and work to avoid the things that set them off, whether it's a type of food, severe stress, or another trigger. And if you can't avoid a trigger, at least you can have your medication or treatment at the ready.

Distinguishing Between Primary and Secondary Headaches

Experts define headaches as either primary or secondary headaches. *Primary headaches,* such as migraine and tension headaches, aren't caused by other diseases, but happen on their own. Genetics is thought to play a role in primary headaches, particularly in the case of migraines and tension headaches. In contrast, *secondary headaches* are caused by diseases or injuries. Examples are headaches that are caused by tumors or an infection.

Both types can hurt a lot, and sometimes a secondary headache hurts more than a primary one.

If you suffer from frequent headaches, here's a little self-test to help you determine whether you're suffering from a primary or secondary headache. When a headache attacks, ask yourself this question: "Are the symptoms of this headache different from the headaches I usually get? Or, is this headache just like those I usually get?" Ongoing (old) headaches tend to be primary. New headaches or those with different symptoms tend to be secondary headaches. (This little test is only a generalization and not a hard and fast rule. For example, you may have never had migraines, and sometimes they suddenly appear in your life.)

Resources for people with chronic headaches

The Internet offers helpful resources for people with chronic headaches. Check out the following Web sites:

American Headache Society (AHS) Committee for Headache Education (ACHE): ACHE is sponsored and directed by the American Headache Society, a professional society of health-care providers dedicated to the study and treatment of headache and face pain. Educational information on headache topics such as migraine, headache treatments, diary cards, nonpharmacological management, and trigger avoidance are available on this site (`www.achenet.org`).

National Headache Foundation: NHF is an information resource for headaches sufferers, their families, and the health-care providers who treat them. You can contact NHR at 1-888-NHF-5552 or visit its Web site at `www.headaches.org`.

National Institute of Neurological Disorders and Stroke (NINDS): NINDS conducts and supports research on brain and nervous system disorders, including headaches. Its Web site (`www.ninds.nih.gov/about_ninds/ninds_overview.htm`) provides information on numerous clinical trials in headache research.

If you're having symptoms that point to a secondary headache, don't write them off as "just another headache." Secondary doesn't mean "not important." The thing is, primary headaches are almost never life-threatening — they can be stunningly painful and make your life miserable — but they're rarely medical emergencies. In contrast, serious illnesses, such as brain tumors or meningitis, can cause secondary headaches, so you need to attend to them.

Avoiding Tension Headaches

Most headaches are *tension headaches,* which are headaches caused by tensed muscles in the shoulders and/or the neck. If you suffer from tension headaches, you probably experience two or three of them a month. But you may be among the unfortunate few who have headaches two weeks out of every four, or even more often. Ouch! Tension headaches usually appear gradually, and they can last from hours to days.

Many people can't concentrate when they have a tension headache because of the very distracting pain. Tension headaches (see Figure 6-1) are often accompanied by strain in the muscles of the head, neck, and shoulders. Many people compare the pain of a tension headache to a vise squeezing their heads. The pain usually occurs on both sides of the head, and it's a constant, dull pain. Most tension headaches strike during the daytime and worsen over the day's events. You rarely wake up with a tension headache.

Tension headaches can be triggered or worsened by stress, tiredness, loud noise, and/or bright light or glare. Other triggers are eyestrain, temporomandibular joint dysfunction (TMJ) (see Chapter 4), and neck pain, covered in the section called "Paying Attention to Neck Pain," later in this chapter.

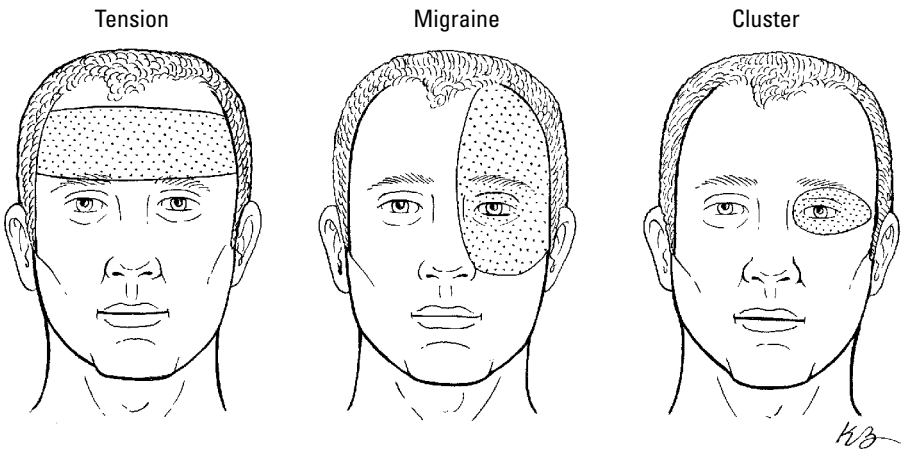


Figure 6-1: Three common types of headaches.

Diagnosing tension headaches

The International Headache Society (IHS) has developed standards, which are widely accepted around the world, for diagnosing tension headaches. According to the IHS, tension headaches last from 30 minutes to seven days and are accompanied by at least two of the following criteria:

- A pressing/tightening, as opposed to a throbbing or pulsating quality
- Mild or moderate intensity (which may interfere with, but doesn't prevent, activity)
- A headache that occurs on both sides of the head
- The head pain isn't aggravated by walking, climbing stairs, or similar routine physical activity

You usually don't have nausea and vomiting with a tension headache (although you may lose your appetite).

Treating tension headaches

Tension headaches are usually treated with pain relievers such as aspirin and acetaminophen. Research by the Diamond Headache Clinic in Chicago has found that 200 mg of caffeine helps some people once a headache is triggered. (Although caffeine is usually bad for you, it occasionally can help you.) If these measures don't work, your doctor may recommend trying specific medicines used for migraines. (We cover these medicines in the next section, "Managing Migraine Headaches.") In addition, some doctors recommend tricyclic antidepressants, a type of medication that — although referred to as an antidepressant — has a variety of medical uses such as treatment of neuropathic pain, irritable bowel syndrome, and headaches.

Watch out for caffeinated drinks

If you drink a lot of soda with caffeine or you're a heavy consumer of coffee or tea, you need to know that heavy doses of caffeine may be the cause of your chronic headaches. A study in *Cephalgia* (a headache journal for professionals) in 2003 reported that after children who drank a lot of soda every day were tapered off caffeine, all but 3 of the 36 participants experienced a complete remission of their severe chronic headaches. You're not a child, but maybe caffeine is the unknown villain in your chronic headache problem.

Don't stop drinking all sodas immediately, but instead taper off slowly and substitute water. Hopefully, your headaches will be much fewer — or even gone altogether!

Many people with tension headaches find that when they get adequate rest and sleep their headaches occur less often and are less intense. You can read about techniques to help you sleep well and tackle fatigue in Chapter 20.

Injections of *Botulinum toxin type A (Botox),* a neurotoxin that blocks the ability of nerves to make muscles contract, helps some people. (Yes, it's the same Botox that's used by people who want to eradicate their facial wrinkles. Maybe you can have a smooth forehead and fewer migraines!) Botox actually eases tension headache pain for some people. But eventually, without further treatments, the headaches (and the wrinkles) come back.

Treating tension headaches with medicines, such as nonsteroidal anti-inflammatory medications (NSAIDs) and caffeine on an ongoing basis can actually cause more headaches or make the headaches that you have get even worse. This condition is called *rebound headache* or *daily headache syndrome.* The treatment for rebound headaches is to steadily taper off all headache medications. Limiting how much medicine you take is key to preventing rebound headaches.

Managing Migraine Headaches

Migraines are so much more than just a headache. Yes, they involve head pain, usually on one side. But the pain can be brutal, and it's often accompanied by nausea, vomiting, and very high sensitivity to light and noise. Often these symptoms are extremely severe.

The typical migraine appears on one side of the head and generates a throbbing pain (refer to Figure 6-1). Migraines usually build up gradually and may last from several hours to (gasp!) a couple of days. However, sometimes they strike suddenly, and they're agonizing from the starting point.

A headache may not follow the classic migraine pattern, but it may still be a migraine headache. For some people, migraines encompass both sides of the head and cause a dull pain rather than a throbbing pain. Fortunately, such nontypical migraines usually respond to treatments for migraines.

Triggers for migraines include foods or drinks such as chocolate and certain wines, stress, the environment, odors/perfumes, emotions, medications, and hormonal fluctuations. Ironically, relaxation after stress can trigger this type of headache.

Some sufferers know when a migraine is about to strike because it is preceded by a sensory distortion called an *aura,* which includes visual disturbances such as flashing lights, zig-zag lines, or disturbed vision.

Migraine headaches are three times more common in women than in men, and some women experience migraines just before or during their periods. They may finally receive some relief from migraines during pregnancy, only to be slammed again with migraines soon after Junior is born, when their menstrual cycle resumes. Migraines often begin during the teenage years.

Diagnosing migraine headaches

IHS developed the standard for diagnosing migraines and migraines with and without auras. If the symptoms of either type are painfully familiar to you, be sure to discuss them with your primary care physician.

In general, chronic migraines without aura last 4 to 72 hours and have at least two of the four following characteristics:

- It's located on one side of the head
- It has a throbbing quality
- The pain is moderate or severe, to the point that it inhibits or prohibits daily activities
- The pain is aggravated by using the stairs or doing routine physical activity
- During the headache, at least one of the two following symptoms occur: an acute sensitivity to light, sound, nausea, and/or vomiting

Rare migraines

Some people suffer from rare forms of migraines:

- *Basilar artery migraine,* which may cause combinations of temporary blindness or visual disturbances, dizziness, an inability to talk, a loss of balance, ringing in the ears, tingling and/or numbing in the arms and legs, disequilibrium, a temporary loss of consciousness, or confusion. These symptoms, in turn, are followed by a throbbing headache, usually in the back of the head, which may be accompanied by nausea and vomiting.
- *Ophthalmoplegic migraine,* pain around the eye, accompanied by nausea, vomiting, and double vision.
- *Abdominal migraine,* which affects children of families with a history of migraine. The child has stomach pain, nausea, and vomiting. They frequently have migraine headaches as adults.

A migraine with aura is experienced by people who've had at least two headaches with a minimum of three of the following signs:

- Visual disturbances.
- An inability to speak.
- At least one aura symptom that develops gradually over more than four minutes or two or more symptoms that occur in succession.
- No aura symptom that lasts more than 60 minutes.
- The migraine follows the aura. (It may also simultaneously begin with the aura.) The advantage of the aura and the delayed headache is that it gives you warning time to take your medication and stave off the worst pain.

Treating migraine headaches

If your migraine headaches are interfering with your daily life, treatment should include organizing your lifestyle so that you're away from your triggers as much as possible. Even daylight and everyday noises, such as children playing and dogs barking, can trigger excruciating pain. Your doctor may also suggest that you take preventive medications.

When migraines strike, many people find it helpful (and others say it's absolutely necessary) to rest in a quiet, darkened room until their symptoms lessen. Some migraine sufferers lie in bed and pull the covers over their head or wear masks to block out as much light and sound as possible. Painkillers such as aspirin or naproxen can provide relief, particularly when taken as soon as the headache starts. The earlier you take them, the better.

If migraines make you nauseous and/or cause you to vomit, taking medicine by mouth may not work. In this case, other options are available, including taking medications rectally or intravenously. Your doctor can also prescribe a type of medication called an *antiemetic* to stop nausea and/or vomiting.

Your doctor may also prescribe other medications effective for migraines. They include triptans, which block the release of chemicals that trigger migraine pain (Imitrex, Zomig, and others); dihydroergotamine, a drug which narrows veins and arteries; and butalbital (Fiornal or Fioricet), a barbiturate.

Some people with migraines experience nasal congestion, runny eyes, or other symptoms that may suggest a sinus headache. These headaches should not be confused with sinus headaches because they won't respond to medical treatment for sinusitis. (For more on sinus headaches, see the upcoming section "Suffering from Sinus Headaches.")

Preventing migraines

If you get migraine headaches more than two or three times a month, then preventive treatment should be at the top of your to-do list. The first step is to identify and stay away from your headache triggers as much as possible. (You can read about identifying and side-stepping pain triggers in Chapter 17.) Your doctor may also prescribe medications such as beta-blockers to block the release of adrenaline, which can trigger migraines, or she may order an anti-seizure medication called Divalproex, which can help prevent migraines. Typically, migraine sufferers take these medications at a time when the headaches usually strike, such as before a menstrual period or on weekends.

Some people with migraine headaches experience weekend headaches or headaches brought on by sleeping more than usual. If weekend headaches are a problem for you, avoid sleeping in on weekends. Try to wake up at the same time on weekends as you do during the week.

Too little sleep is also a problem for migraine sufferers. People who get migraines need sufficient sleep. In fact, fatigue is one of the most common triggers of migraine headaches. In other words, playing poker until 3 a.m. and then getting up at 6 a.m. to go fishing is a no-no if you get migraine headaches.

In addition, some patients with migraine headaches believe that certain foods trigger the condition. However, not all people with migraines have dietary triggers, and sensitivity to certain foods differs for each migraine sufferer. In other words, chocolate may trigger a migraine for you, but not for your coworker who also gets migraines. His triggers may be peanuts and wine, which don't bother you at all. (Read the sidebar on common migraine triggers for more information.)

Are you a chocoholic? Sometimes chocolate is a migraine trigger, but don't go on the wagon right away. Just savor a smaller than usual amount of chocolate for a week or so and note whether your migraines decrease in frequency or severity. If not, your beloved chocolate probably isn't a trigger, so it's a keeper.

Keep a diary of the foods you eat and the drinks you consume and eliminate any suspicious foods from your diet so that you can see whether their absence eases the frequency and severity of your headaches.

Common migraine triggers

According to the National Headache Foundation, certain foods may trigger migraine headaches; if they trigger migraines in you, avoid them. All the foods in this list contain *tyramine,* a substance that's produced in the natural breakdown of the amino acid tyrosine. Tyramine levels increase in foods when they're aged or aren't fresh.

- Ripened cheeses, such as Cheddar, Emmentaler, Stilton, Brie, and Camembert (American, cottage, and cream cheese, as well as Velveeta, are okay.)
- Herring (pickled or dried)
- Chocolate
- Anything fermented, pickled, or marinated
- Sour cream (no more than 1/2 cup daily)
- Nuts, peanut butter, or foods such as crackers or cookies that contain nuts
- Sourdough bread, breads and crackers containing cheese or chocolate
- Broad beans, lima beans, fava beans, or snow peas
- Foods containing monosodium glutamate (MSG), such as soy sauce, meat tenderizers, and seasoned salt
- Figs, raisins, papayas, avocados, or red plums (no more than 1/2 cup daily)
- Citrus fruits (no more than 1/2 cup daily)
- Bananas (no more than 1/2 banana daily)
- Pizza (because of the cheese)
- Excessive amounts of tea, coffee, or cola beverages (no more than 2 cups daily)
- Sausage, bologna, pepperoni, salami, summer sausage, or hot dogs
- Chicken livers

Suffering from Sinus Headaches

Some people suffer from a chronic inflammation or infection of the sinuses *(sinusitis),* which causes a severe headache. They may be allergic to a variety of items, ranging from cats and dogs to dust and many other possible allergic triggers. If this is your situation, try to determine what you're allergic to (ask your doctor for help) and if you can, avoid that trigger. If that means you need to stay away from Fluffy or your partner's beloved cat, then do it! It's better than walking around with a very bad headache most of the time.

If you have sinusitis you may need antibiotics. Your doctor may also prescribe a nasal spray to help keep your nasal passages clear.

Understanding Cluster Headaches

Middle-aged men are the primary victims of *cluster headaches.* Often, these headache sufferers have one attack a day for one to three months. Then, happily, they go into remission for months to years. However, some unfortunate people have cluster headaches with no interruption.

Cluster headaches usually occur at the same time and often wake up their victims in the middle of the night. Pain always occurs on one side of the head and in and around the eye (see Figure 6-1). The pain of a cluster headache is severe, but usually (whew) only lasts about 30 minutes to one hour. People experiencing cluster headaches are usually anxious and restless. Other symptoms include nasal congestion, a watery discharge from the nose, watery eyes, and a condition called *Horner's syndrome,* which causes a droopy eyelid and contraction of the pupil of the eye.

Diagnosing cluster headaches is based on its distinctive group of symptoms and by ruling out other problems. Because cluster headaches are so frequent and severe, they can make it impossible to work, care for children, or carry out day-to-day tasks.

Prevention is extremely important. You and your doctor can head off cluster headaches (pun intended) with some of the same medicines used for migraine headaches, such as acetaminophen, aspirin, and a triptan. Oxygen inhalation also helps many people when they're having an acute attack. So, it is important to discuss treatment options with your doctor.

Tackling Thunderclap Headaches

Thunderclap headaches get their names for how they arrive: Boom, just like a thunderclap. One minute you're fine, and the next minute, you have a severe headache. The pain of thunderclap headaches peaks in a minute or so and then, blessedly, fades over the next few hours. A less severe headache may follow.

Thunderclap headaches occur most frequently in women older than age 45. These headaches are secondary headaches that can have serious causes, such as bleeding in the brain or a blood clot in the sinuses. If you ever experience a thunderclap headache or think you may be having one, seek immediate medical attention. If bleeding in the brain is causing the headache, you may need emergency surgery.

Emergency headaches

If you have any of the following symptoms, seek immediate medical care:

- A sudden, severe headache, unlike one you've ever had (which may be due to bleeding in the brain and is a medical emergency for many reasons, including the fact that it can cause severe damage to the brain)
- A headache that strikes after heavy exercise (which may also be caused by bleeding in the brain)
- Fever and neck stiffness associated with the headache (which may be due to bacterial meningitis or viral encephalitis)
- Seizures or lessening of mental function, which may be symptoms of brain tumors
- Weakness of the arms, legs, or face muscles, which may suggest a *transient ischemic attack* (a short interruption of blood flow to the brain)
- A recent head injury, which may be causing bleeding in the brain
- A new headache associated with nausea, vomiting, and visual changes
- Alcoholic beverages (The National Headache Foundation recommends that you limit yourself to two normal size drinks selected from Haute Sauterne, Riesling, Seagram's VO, or Cutty Sark)

Paying Attention to Neck Pain

Neck pain is just that: a pain in the neck, and far too often also in the shoulders, arms, and head. It affects about 10 percent of the population each year.

Neck pain may be caused by a *whiplash injury,* where the neck is jerked forward and back in a car crash. It may also be caused by changes in the spine due to arthritis, aging, or muscle strain. Often, the cause of neck pain is occupational and may be brought on by sitting at a computer desk for long periods of time.

If the problem is your computer, make sure that your monitor is set so that your eyes naturally hit about the middle of the screen. If not, adjust your chair and your screen until they do. Make sure that your knees are slightly lower than your hips.

Some simple suggestions can considerably ease neck pain:

- Keep your head back, over your spine, to reduce neck strain.
- Take frequent breaks if you drive long distances or work long hours at your computer.

- If you grind or clench your teeth during sleep, consider using a night brace, available from your dentist.
- Don't tuck your phone under your chin. Use a headset or speakerphone for long conversations.
- Pull your shoulder blades together and then relax. Pull your shoulders down while leaning your head to each side to stretch your neck muscles. Stretch your neck frequently if you work at a desk. Shrug your shoulders up and down.
- Sometimes acupuncture helps. Read about acupuncture in Chapter 15.
- Stretch and strengthen the muscles that support your neck, which helps make the job of holding up your head easier. Walking provides a workout for the neck muscles. These simple movements can translate into much less pain!

For many years the standard treatment for neck pain was wearing a brace to hold up the head and give the neck a rest. Now experts know that movement is critical to keeping the neck and surrounding muscles healthy. However, if you have severe neck pain, it's important to exercise your neck only under the supervision of a physical therapist or other medical professional. Deep massage is also helpful for people with chronic muscular neck pain.

Chapter 7

The Odd Couple: Injuries and Strokes

In This Chapter

- Understanding complex regional pain syndrome
- Exploring the different types of spinal cord injury pain
- Thinking about the pain associated with strokes
- Identifying the different types of brain injury

Jack was driving home after working late Friday night when his car was violently rear-ended by a drunk driver. Jack survived the accident, but he suffered an injury to his left leg. He recovered well after rehabilitation. But months later, Jack was stricken in his left leg with a very painful condition known as *complex regional pain syndrome.* About the same time, Marie, one of Jack's coworkers, suffered a major stroke. Months later, she, too, was stricken with pain in her left leg — different causes, but the same end condition.

This chapter covers major chronic pain conditions that result from injury to the peripheral nerves, the spinal cord, or the brain, regardless of whether the injury is from a car accident or other injury or from a stroke.

You need to know a few caveats about the pain-causing conditions discussed in this chapter. After an injury has healed, a lot is known about the previous harm to the body, but much remains still undiscovered. You may ask your doctor a question like "Why do I have post-stroke central pain, but my mother, who had a similar stroke years ago, didn't have it?" The answer is that no one really knows why. In this chapter, you discover what *is* known today about pain conditions that result from damage to the nervous system.

Getting the Lowdown on Complex Regional Pain Syndrome (CRPS)

Complex regional pain syndrome is long-term pain that may strike after an injury to an arm or a leg. The hallmark of complex regional pain syndrome (CRPS) is pain that's through the ceiling and agonizingly painful when compared to the feeling from the trigger that set it off, which may be something as ordinary as a cool breeze brushing against your shirt. (Some people never identify the trigger.) On a scale of 1 to 10, the pain from CRPS is about a 50. Unfortunately, the pain of CRPS gets *worse* over time. It may not even show up until long after the damage has healed. (For more information about CRPS, see Chapter 11.)

CRPS is also known as *reflex sympathetic dystrophy* or *causalgia,* a Civil War term that described intense pain felt by some soldiers long after their wounds healed.

CRPS probably doesn't have only one cause, but instead this medical syndrome may result from *many* causes with similar symptoms. Scientists know that injured nerves can become active spontaneously, sending impulses to the spinal cord even without painful stimulus. This abnormal activity depends on inflammation and scarring with constriction of the nerve and other factors that are difficult to detect (diagnose). In short, the sympathetic nervous system can be a culprit that's maintaining the chronic pain of CRPS. (See Chapter 2 for information about the sympathetic nervous system.)

Identifying CRPS requires considerable skill and guesswork on the part of the neurologist or other diagnostician. No specific test is available to diagnose the condition; the common thread is the excruciating pain felt by you or our loved one. As a result, CRPS is diagnosed by first ruling out other conditions. For example, doctors may use bone scans to identify changes in the bone and in blood circulation.

Symptoms of CRPS may include color changes in the arm, hand, leg, or foot. The changes may vary from red to white to blue at different times, and there is excessive hair loss over the painful extremity. The skin may become very thick, and a significant amount of swelling may occur in the affected extremity. Excessive sweating may occur over the affected area, and usually the sufferer feels severe burning pain.

If you discover you have CRPS, you may be one of the lucky ones who recovers spontaneously from the symptoms. However, some people have unremitting pain and crippling, irreversible physical changes despite treatment. Some doctors believe that early treatment is helpful in limiting the severity of the disorder.

Treatment is focused on lessening pain and includes techniques you read about in this book, such as physical therapy, surgery, and medication. (See Chapter 11 for more information about treatments for CRPS.)

Suffering a Spinal Cord Injury (SCI)

The spinal cord contains cells with axons that form pathways to the brain for conducting information from your body. Also, it contains pathways from the brain to cells in the spinal cord that control your movements. The spinal cord is surrounded by bones (vertebrae which make up the spinal column or back bones). (Read more about the spinal cord and its role in carrying information to and from your brain in Chapter 2.)

Spinal cord injury (SCI) includes injury to the cord itself, as well as to one or more vertebrae. Severe damage to the cord can eliminate intentional movements controlled by all the regions of the spinal cord below the injury. All sensations from below the injury can also be lost.

Because the treatments differ, you need to understand the distinction between a spinal cord injury and the type of back injury pain that is specifically caused by pinched nerves (for example, by ruptured discs). Even if you break a vertebra or vertebrae, you may still not have injured the spinal cord, but chances are you will have pinched nerves. And the pinched nerves can cause pain in regions supplied by nerves coming in between the injured vertebrae. This type of pain is called *at-level* (at the level of injury) or *segmental.* (Chapter 5 covers issues concerning chronic back pain.)

If you have segmental pain, you may develop *allodynia* and *hyperalgesia* in the painful region. *Allodynia* is pain caused by something that usually does not elicit pain, such as shaking hands with someone. *Hyperalgesia* is an extremely painful reaction to something minor, such as a soft breeze, that would normally only hurt a little.

If you're unlucky enough to have vertebrae that are so badly crushed or displaced that they constrict and damage your spinal cord, the damage can cause the cells in the pain pathways of your spinal cord to go haywire, resulting in pain. (Yes, we know that haywire is not an accepted medical term. But we thought we'd use something a little more descriptive than abnormal spontaneous activity, which is what scientists call it when, for no detectable reason, cells in the pain pathways send pain messages to the brain. See Chapter 2 for more information on abnormal spontaneous activity in pain pathways.)

These haywire pain messages can result in chronic pain that is felt below the injury called *below-level pain.* This type of pain is often described by victims as horrible.

If you have pain from a SCI, you may hurt severely at times and have little or no pain at other times. Pain may come and go with your daily circumstances. For example, fatigue, weather changes (particularly cold), and stress can all affect your pain levels.

Research has shown that your level of injury and how you were injured can determine whether you develop chronic pain after a SCI. Paradoxically, lower levels of injury tend to mean more pain, while higher levels mean less pain.

Treatments for SCI are similar to those for other pain conditions, including techniques you read about in this book, such as physical therapy and medication. Surgery may be necessary to repair vertebral displacement or other causes of traction on the spinal cord. SCI can cause ulcers, *spasticity* (a condition in which some of the body's muscles are continuously contracted) and other health problems, which in turn can cause chronic pain.

Dealing with Central Post-Stroke Pain

A *stroke* occurs when blood can't reach the brain, either because blood is blocked from getting through a vessel or a blood vessel bursts. The result is an injury to the brain, hence the popular term for stroke: *brain attack*.

Five percent of the people who have a brain attack develop *Central Post Stroke Pain* (CPSP).

Some stroke victims with central pain notice it when the stroke hits, but for most victims, the pain strikes several months later. It may be a burning, throbbing, shooting, or stabbing pain. If you have central pain resulting from a stroke, you'll feel it in the part of the body affected by the stroke.

According to the Pain Relief Foundation, other characteristics include

- A loss of feeling in the affected part, such as not being able to tell the difference between hot and cold.
- Hypersensitivity to touch. In some patients, light touch, such as clothing brushing against the skin, causes severe pain. In some cases, a minor movement may cause severe pain (allodynia).
- For one in five people with CPSP, the pain gets better over a period of years. A third of these people will get better in the first year.

Strokes vary in the location and size of brain damage they cause, producing different symptoms for different people. For example, Lois may have severe chronic pain after her stroke, but her roommate, Roberta, is more fortunate and has none.

Chronic pain after a stroke is usually due to damage to cells or axons in the individual's pain pathway. We hear you sighing and asking: "Shouldn't damage to the pain pathway *get rid* of pain?" Well, it can, but, curiously, it can also cause chronic pain.

Spotting the signs of a stroke

If you have any stroke symptoms, seek immediate medical attention. Symptoms include the following, all of which come on suddenly:

- Numbness or weakness of face, arm, or leg — especially on one side of the body
- Confusion, trouble speaking or understanding
- Trouble seeing in one or both eyes
- Trouble walking, dizziness, loss of balance or coordination
- Severe headache with no known cause

If you've experienced any of these symptoms, you may have had a mini-stroke and are at risk for a larger stroke. Ask your doctor whether you can lower your risk for stroke by taking aspirin or using other means. (For more on prevention, see the section called "Stroke prevention," later in this chapter.)

Surviving Traumatic Brain Injury

A *traumatic brain injury* (TBI) is a blow, jolt, or penetrating injury that leads to damage to the head, disrupting brain function. Of course, not all blows or jolts to the head result in a TBI. But when they do, TBI may cause short or long-term problems with independent function.

Symptoms of a brain injury can be mild to severe, depending on the amount of damage. Some symptoms show up right away, while others may not appear until several days or weeks after the injury. Headaches are a common long- and short-term problem after a TBI.

According to the Brain Injury Association, other symptoms may include (but are not limited to):

- Spinal fluid (thin water-looking liquid) coming from the ears or nose
- Loss of consciousness
- Dilated or unequally sized pupils
- Vision changes (blurred vision or seeing double, inability to tolerate bright light, loss of eye movement, blindness)
- Dizziness, balance problems
- Respiratory failure (not breathing)
- *Coma* (not alert and unable to respond to others) or a semicomatose state
- Paralysis, difficulty moving body parts, weakness, poor coordination
- Slow pulse

- Slow breathing rate, with an increase in blood pressure
- Vomiting
- Lethargy (sluggish, sleepy, gets tired easily)
- Confusion
- Ringing in the ears or changes in ability to hear

Half of all brain injuries are due to transportation-related accidents, such as car, motorcycle, and bicycle accidents, as well as injuries to pedestrians. About 20 percent of brain injuries are caused by violence, including firearm use and child abuse. For people ages 75 years and older, brain injuries are most often caused by falls.

In addition, blasts are a leading cause of TBIs for active duty military personnel in war zones.

The chronic pain triggered by brain damage usually results in one of the following types of injuries:

- **Concussion:** A *concussion* is by far the most frequently occurring type of traumatic brain injury. Also called a mild traumatic brain injury, concussions cause a temporary loss of mental activity. Often the individual won't remember what happened immediately after the injury. Concussions can result from any blow to or jarring of the head, but generally don't involve bleeding or punctures.
- **Diffuse Axonal Injury:** *Diffuse Axonal Injury* (DAI) is the result of a TBI and whiplash. With this type of injury, axons throughout the brain are severely stretched or distorted by movement of the brain in the skull. And because axons are responsible for communication between brain cells, such an injury can disrupt important functions resulting in a coma. DAI is typically the underlying injury in shaken baby syndrome.
- **Contusion:** A *contusion* is bleeding in the brain. It basically describes a bruised brain!
- **Coup-Contrecoup Injury:** *Coup-Contrecoup Injury* refers to contusions occurring at the site of the injury as well as the opposite side of the brain. It is caused by the brain swinging back and forth against the skull. (Brains are not meant to swing back and forth.)

For all brain injuries, treatment should begin at the time of the injury. The first two goals are to stabilize the person and prevent further injury. About half of all severely injured people will require surgery. Recovery from a brain injury is a difficult and long process, often requiring physical therapy and retraining. The good news is that undamaged regions of the brain can often be trained to take over functions lost or reduced by damage to other parts of the brain.

Seeing the signs of a concussion

Immediate signs of concussion, seen within seconds or minutes of an injury, include loss of consciousness; impaired attention, such as a vacant stare, delayed responses, and inability to focus; slurred or incoherent speech; lack of coordination; disorientation; extreme emotional reactions; and memory problems.

The following symptoms can occur hours or even days or weeks after a concussion: persistent headache; dizziness/vertigo; poor attention and concentration; memory problems; nausea or vomiting; fatigue; irritability; intolerance of bright lights and/or loud noises; anxiety and/or depression; and disturbed sleep.

Preventing Spinal Cord and Brain Injuries

The bottom line in regard to injury to the spinal cord and brain — regardless of the cause — is that the resulting pain syndromes and related conditions can be severe and debilitating. Prevention for all these conditions is mostly common sense: practice safety to prevent spinal and brain injuries and practice a healthy lifestyle to prevent strokes. This section provides some tips on how to add these practices to your daily life. (Unfortunately, CRPS has no specific preventive measures.)

Spinal cord and traumatic brain injury prevention

The following tips to preventing spinal cord injuries are from the Centers for Disease Control and Prevention (CDC).

Motor vehicles

Motor vehicles are the leading cause of SCI in the United States for people under age 65. Here are some safety tips for driving and riding in motor vehicles.

- Always wear a seat belt.
- Secure or buckle children into age- and weight-appropriate child safety seats.
- Secure or buckle children under 12 years old in the back seat to avoid air bag injuries.
- Never drive under the influence of alcohol or drugs.
- Don't ride in a car with a driver impaired by alcohol or drugs.

- Prevent others from driving while impaired by alcohol or drugs.
- Raise the headrest on the seats of the vehicle so that the headrest contacts the back of the head, not the neck.
- Avoid talking on cell phones while driving a motor vehicle.

Falls

Falls are the leading cause of SCI for people ages 65 and older. To prevent falls, take the following steps:

- Secure banisters and handrails at all stairwells.
- Use a step stool with a grab bar to reach objects on high shelves.
- Place nonslip mats on the bathtub and shower floor.
- Install grab bars in the shower and bathtub.
- Exercise regularly to keep muscle tone and balance.
- Wear sturdy nonslip shoes.
- When possible, reduce the use of sedatives or other medications that increase the risk of falling.
- Perform a home safety check and remove things that may be tripped over.
- Use safety gates at the bottom and top of stairs when young children are around.
- Install window guards in windows above the first floor.
- Consider installing a ramp to a porch rather than using stairs.

Sports and recreation

The majority of sports and recreation injuries occur among infants to adults age 29. Following are tips to help make sports and recreation activities safer.

- Wear a helmet when riding a bike, motorcycle, scooter, or skateboard; in-line skating and roller-skating; skiing or snowboarding; horseback riding; and during football, ice hockey, batting; and running the bases in baseball and softball.
- Make sure that the water is deep enough before you dive in head-first. If water is too shallow, you may be seriously injured. Entering feet-first is safer than diving.
- Wear appropriate safety gear when engaging in sports activities.
- Avoid head-first moves, such as tackling with the top of your head or sliding head-first into a base.
- Insist on spotters when performing activities that put you at risk, such as new gymnastics moves.

Firearms

Firearms are a leading cause of spinal cord injury. If you have firearms in your home, the following precautions can make your home safer:

- Keep firearms stored unloaded in a locked cabinet or safe.
- Store bullets secured in a separate location.

Stroke prevention

The following tips to preventing a stroke are adapted from the National Stroke Association.

- Know your blood pressure and have it checked at least annually. If it's elevated, work with your doctor to keep it under control. High blood pressure (hypertension) is a leading cause of stroke. If the higher number (your systolic blood pressure) is consistently above 120 or the lower number (your diastolic blood pressure) is consistently over 80, talk to your doctor.
- Find out whether you have *atrial fibrillation.* Atrial fibrillation (AF) is an irregular heartbeat that changes how your heart works and allows blood to collect in the chambers of your heart. This blood, which is not moving through your body, tends to clot. The beating of your heart can move a clot into the blood supply to part of your brain, causing a stroke. If you have AF, your doctor may prescribe medicines called blood thinners. Aspirin and warfarin (Coumadin) are the most commonly prescribed treatments.
- If you smoke, stop. Smoking doubles the risk for stroke.
- If you drink alcohol, use moderation. Studies show that drinking up to two alcoholic drinks per day can reduce your risk for stroke by about half. But *more* alcohol than this each day can increase your risk for stroke by three times and also lead to liver disease, accidents, and more. If you drink, limit yourself to two drinks each day.
- Find out whether you have high *cholesterol* (a soft, waxy fat/lipid in the bloodstream and all body cells). If your total cholesterol level is over 200, talk to your doctor. You may be at an increased risk for stroke.
- If you're diabetic, follow your doctor's advice carefully. Having diabetes puts you at an increased risk for stroke, but if you control your diabetes, you may lower your risk for stroke. Your doctor can prescribe lifestyle changes and medicine to help control your diabetes.
- Include exercise in your daily activities. A brisk walk for as little as 30 minutes a day may reduce your risk for stroke.

- Adopt a lower sodium (salt), lower fat diet. By cutting down on sodium and fat in your diet, you may lower your blood pressure and, most importantly, lower your risk for stroke.
- Ask your doctor whether you have vascular (blood circulation) problems that may increase your risk for stroke. For example, fatty deposits can block the arteries that carry blood from your heart to your brain. This kind of blockage, if untreated, can cause stroke.
- If you have blood problems such as sickle cell disease, severe *anemia* (lower than normal number of red blood cells), or other diseases, work with your doctor to manage these problems. Left untreated, these can cause stroke.

Resources for people with CNS and stroke injury

The following list covers important resources for people with stroke:

Brain Injury Association of America, 8201 Greensboro Dr., Suite 611, McLean, VA 22102; 703-761-0750, Family Helpline, 800-444-6443; www.biausa.org. The Brain Injury Association of America provides fact sheets on many safety topics and recommendations on how to prevent injuries. The association provides free online access to *Prevention Matters,* a newsletter that focuses on current brain injury prevention issues. It also provides a Family Helpline.

National Spinal Cord Injury Association, 6701 Democracy Blvd., Suite 300-9, Bethesda, MD 20817; Helpline: 800-962-9629; www.spinalcord.org. The National Spinal Cord Injury Association is dedicated to improving the quality of life for hundreds of thousands of Americans living with spinal cord injury and disease (SCI/D) and their families. Its Resource Center answers calls and e-mails and provides information and referral to individuals with new and existing SCI/D, their families, and their service providers. Its National Peer Support Network provides peer-support referrals to programs across the country, linking people with SCI/D to each other. The Christopher Reeve Paralysis Foundation recently funded the association to expand the program. NSCIA has 21 chapters and 19 support groups actively serving communities.

National Stroke Association, 9707 E. Easter Lane, Englewood, CO 80112-3747; 800-STROKES (787-6537); www.stroke.org. The National Stroke Association provides education, services, and community-based activities in prevention, treatment, rehabilitation, and recovery. The National Stroke Association serves the public and professional communities, people at risk, patients and their health-care providers, stroke survivors, and their families and caregivers.

National Institute of Neurological Disorders and Stroke (NINDS), NIH Neurological Institute, P.O. Box 5801, Bethesda, MD 20824; Voice: 800-352-9424 or 301-496-5751, TTY (for people using adaptive equipment): (301) 468-5981; www.ninds.nih.gov. The mission of NINDS is to reduce the burden of neurological disease and stroke. NINDS provides educational materials to consumers about neurological disease and stroke.

Chapter 8

Burn Pain

In This Chapter

- Understanding burn classifications
- Identifying when burns need treatment at burn centers
- Managing chronic health problems caused by burns
- Discovering how posttraumatic stress disorder (PTSD) is connected to chronic pain

Most people think of severe burns as acute injuries, so you may wonder why a book about chronic pain contains a chapter about burn pain. The truth is that burns are one of the most preventable *causes* of chronic pain.

Many serious burns ultimately lead to chronic pain. For example, researchers at the New England Medical Center in Boston, Massachusetts, studied 358 burn survivors. These survivors had burns over 59 percent of their bodies. Many were burned years ago — on average, they were studied 12 years from the time of the burn injury. Yet even though it had been more than a decade since their burns, over half of this group (52 percent) had constant and chronic pain as a direct result of their former burns.

In addition to the physical trauma of burns, the event that caused the injury can lead to a mental and emotional problem called posttraumatic stress disorder (PTSD). This form of anxiety develops after a terrifying and sometimes pain-inducing event. PTSD is sometimes thought to cause chronic pain, but its impact is often overlooked or misunderstood. Fortunately, treatments and resources described in the section called "Understanding the PTSD/Chronic Pain Connection," later in this chapter can help you deal with the problem.

Lamenting the Tragedy of Burns

Burn injuries in the United States result in more than 1 million emergency department visits and about 3,000 deaths a year. Children and the elderly have the toughest time recovering from their burns as well as from the horrific events that cause them. Tragically, children account for more than a third of all burn injuries in the United States. A surprising 75 percent of all burns are believed preventable.

While you're driving in traffic, or when you're home or with your children on the playground, you and your loved ones may risk burn injuries from a range of sources:

- **Fires:** Burns from fire, often referred to as *thermal fires,* can be caused by anything — flames, liquids, gases, and objects — if temperatures exceed 115º F (46°C), and the hot substance comes in contact with your skin. The higher the temperature, the faster the skin burns, and in only 3 1/2 minutes, the heat from a house fire can reach more than 1,100° F.
- **Chemical burns:** Chemical burns are caused by strong acids or alkalines touching your skin. Unfortunately, you can find these products stored under your bathroom sink and on the utility shelf in your garage. Dangerous chemicals used in the home include bleach, boric acid, paint thinner, and products used to clear drains. If you have children or grandchildren around, keep your cleaning supplies locked up! In addition, handle these chemicals gingerly yourself.
- **Radiation burns:** Radiation burns are most often the result of spending too much time in the sun or in a tanning bed. Excessive X-rays or nonsolar radiation can also cause this type of burn. Deep radiation burns from X-rays may not be visible for days or weeks after exposure.
- **Electric shock:** Electrical burns may be deceptive because often the only visible damage occurs at the point where the electrical current entered and exited the body. However, on its way through your body, the electrical current may seriously damage internal organs. Lightning strikes, high-voltage power lines, or faulty electrical equipment can all cause electrical burns. Next time you're at a summer picnic and a thunderstorm starts up, pack up and get out! The safest place is in your car and *not* under a tree!

Classifying Burns

Burns can cause serious damage to the victim's skin, harm the body's organs, and elicit horrific pain. The level of pain suffered depends on the dimensions of the injury. The deeper and wider the injury, the more excruciating the pain.

Burns are classified by how deep they go, as well as by the percentage of the body that they cover (see Figure 8-1):

- When burns are limited to the epidermis (the outer layer of the skin), they're **first-degree burns.** They cause pain, redness, swelling, and minor damage to the skin. The skin is dry, but blister-free.

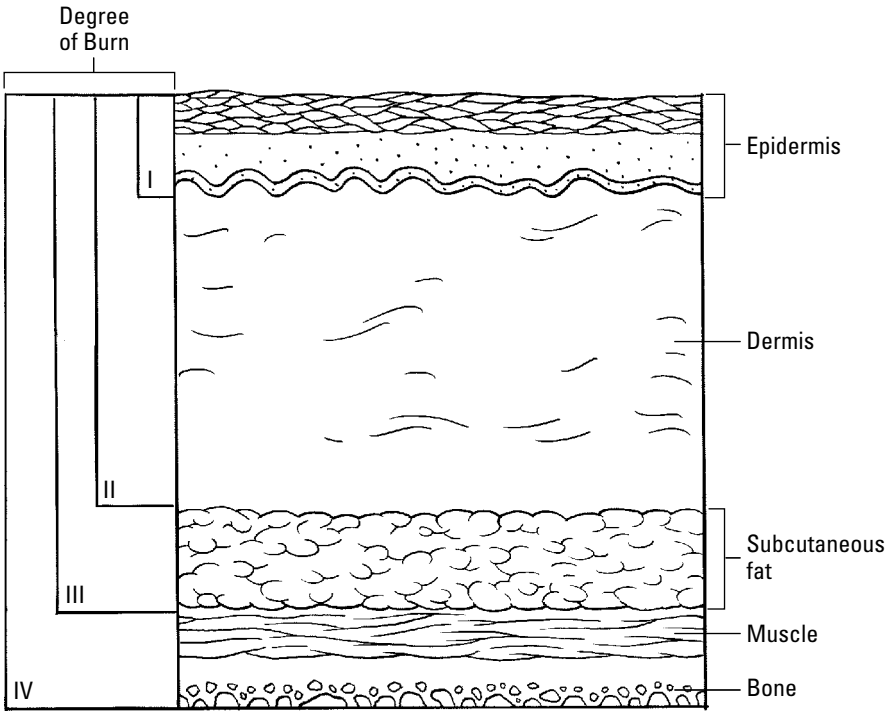


Figure 8-1: First- to fourth-degree burns.

- When damage from burns reaches the *dermis* (the next deeper layer of skin), these burns are **second-degree burns.** Second-degree burns are very painful and cause redness, swelling, and blistering. The skin is moist and weepy. They'll heal in a couple of weeks, but some second-degree burns require surgery and skin grafting.
- If burns reach the next layer, the site of the subcutaneous tissue, they're **third-degree burns.** In a third-degree burn, the skin layer is lost, and nerve endings may be destroyed, causing a loss of pain sensation in the area. However, the area of the third-degree burn is surrounded by second-degree burns, which cause severe pain.

  Charred veins and nerve endings are visible with third-degree burns. Remnants of skin are leathery. Third-degree burns cause scars and can result in loss of function. They won't heal without surgery, and they're the burns that can cause chronic pain, even though other sensations are lost.
- **Fourth-degree burns —** the most severe type of burn — involve damage and destruction to the underlying muscle, bone, ligaments, and tendons and will require skin grafting along with reconstructive surgery when possible. At times, amputation is needed for fourth-degree burns.

The percentage of the body that a burn covers is called *total body surface area* (TBSA).The more TBSA covered, the more serious the injury.

Preventing Chronic Pain

To prevent burn pain from becoming a chronic problem, you need to manage the pain immediately after the injury. Untreated pain can spin out of control and cause long-lasting problems and heightened anxiety.

Here's a good example of the physical processes that cause trouble later on when adequate pain management isn't administered after a burn injury:

- The burn causes a condition called *hypermetabolism,* which means that your body's energy output increases. In addition, the stress of the injury causes the release of *catecholamine neurotransmitters,* which further heighten your body's energy output. The increased hypermetabolsim (dare we say hyper-hyper-metabolism?) has the effect of decreasing blood flow to the area of the burn. But your body greatly *needs* that blood flow to heal back up again.
- At the same time that this decreased blood flow is happening, the excruciating pain of the burn can curb your immune system, which you need for healing and avoiding infections and other complications. The acute pain also derails blood flow. So, if the pain is not dealt with aggressively, the injury doesn't heal.

Treating Burns

It's important to do everything possible to heal well and control pain in the days and weeks after a burn injury in order to prevent acute pain from morphing into chronic pain.

After the initial emergency of caring for burn victims, treating the injury means that the patient must endure a lot of painful procedures, including the removal of dead tissue, which is called *debridement.* The doctor or other medical professional must also clean the burn area, replace dressings, exercise burned limbs and joints, and possibly perform a skin graft. In addition, physical and occupational therapy begins as soon as possible to return function to the burn area. Many burn victims also require repeated surgeries.

Some long-term medical issues that occur for burn victims are

- **Scarring:** After the initial phase of a burn, your skin generates scar tissue. Getting appropriate treatment during the scarring process is extremely important to prevent chronic problems.

  If a burn injury doesn't heal on its own in a week to ten days, the doctor cuts away dead tissue and performs skin grafts. Without such treatment, the skin regenerated at this point is very thin and only marginally protective. In addition, the area heals with ugly protruding scars called *granulations* or *hypertrophic scarring,* which grow out of control. To prevent granulations, burn victims often wear garments that put pressure on the burn area.

  If you or a loved one has suffered a severe burn, prevention of long-term scars is a serious challenge. The victim's face, hands, and so on may be extremely disfigured, causing serious adjustment problems. The good news is that treatments are being developed all the time, including facial transplants.

- **Contractures:** As scar tissue forms after a burn, the skin contracts, and joints can no longer move normally. To prevent muscles from shortening (called *contractures*), which can cause deformities, burn victims must go through extremely painful exercises of the involved joints. If these exercises are done repeatedly, they can prevent the problem. However, sometimes contractures have to be released surgically or are permanent.

- **Loss of the ability to sweat:** Sweat glands are destroyed in second- or third-degree burns and don't regenerate. Because sweating helps regulate body temperature, victims of extensive burns may not do well in hot, cold, or humid environments and often have to restrict exercise.

- **Skin problems:** Deep burns destroy glands in the skin so that the skin becomes very dry. In addition, new skin is weak and vulnerable and needs to be protected.

Understanding the PTSD/Chronic Pain Connection

Severe burns are caused by horrifying events, such as burning buildings, chemical explosions, or other frightening calamities. One of the most difficult health problems resulting from such events is *post-traumatic stress disorder* (PTSD), a chronic anxiety syndrome in which the burn victim keeps mentally re-experiencing the event. People with the disorder may have a difficult time healing, both physically and emotionally.

Praising burn centers

Severe burns should be treated at one of the 125 specialized burn centers located across the country. (Military personnel with burns are treated at the Brooke Army Medical Center in San Antonio, Texas.) Getting appropriate treatment can help victims avoid chronic pain and other health problems later.

Burn centers have specially trained staffs to treat people with extensive burn injuries. The American College of Surgeons has developed criteria for the types of burn injuries that should be treated in a specialized burn center:

- Burns that damage the first and second layers of skin *(partial thickness burns)* that are greater than 10 percent of the total body surface area (TBSA)
- Burns that involve the face, hands, feet, genitalia, the pelvic floor, or major joints
- Third-degree burns in any age group
- Electrical burns, including lightning injury
- Chemical burns
- Inhalation injury
- Burn injury in patients with preexisting medical problems such as cancer or heart disease that may complicate management, prolong recovery, or affect survival
- Any patients with burns and trauma (such as fractures), for whom the burn injury poses the greatest risk of morbidity or mortality
- Burned children in hospitals without qualified personnel or equipment for the care of children
- Burn injury in patients who require special social, emotional, or long-term rehabilitative intervention

PTSD may strike soon after the burn has occurred or months later. Symptoms of PTSD include

- Obsessively recalling the event over and over again, so much that it intrudes on other thoughts
- Avoiding things associated with the event
- Experiencing nightmares
- Feeling emotionally numb
- Being on guard, hyper-aroused, overly alert, or easily startled
- Experiencing flashbacks

PTSD is usually considered chronic if it lasts longer than three months. One of the unhappy results of the condition is that anxiety disorders and substance abuse are common for people with chronic PTSD.

The International Association for Traumatic Stress Studies (IATSS) has found that PTSD is linked to development of chronic pain. According to the IATSS, people with lasting PTSD symptoms frequently report high rates of health problems. The bottom line is that symptoms of PTSD overlap with those associated with chronic physical pain, such as that from burns.

According to another organization that studies PTSD, the PTSD Alliance, symptoms of PTSD include the following physical complaints, which may be accompanied by depression:

- Chronic pain with no medical basis (frequently gynecological problems in women)
- Chronic fatigue syndrome or fibromyalgia
- Stomach pain or other digestive problems, such as irritable bowel syndrome or alternating bouts of diarrhea and constipation
- Breathing problems or asthma
- Headaches
- Muscle cramps or aches such as low back pain
- Cardiovascular problems
- Sleep disorders

It's important to seek counseling for PTSD from a professional specifically trained to help people with the syndrome. For example, PTSD is such a huge problem for military victims that the VA has a specific program to assist soldiers with the disorder.

A therapeutic approach called *exposure therapy* is effective for many people with PTSD. The therapy involves talking about the event repeatedly with a counselor in order to get control over your thoughts and fears. Specific medications, including some antidepressants, also help.

Getting Help

Specialized groups help burn victims and their families, they can also help you cope with posttraumatic stress.

For burn recovery, try the following resources:

- **American Burn Association (ABA):** The ABA (www.ameriburn.org) works to improve the quality of care provided to burn patients. Activities include stimulating research in treating burn injuries, fostering prevention efforts, and providing continuing education courses, annual scientific meetings, and scientific publications.
- **Burn Recovery Center:** More than 100 specialized burn recovery hospitals treat an average of 200 burn patients a year. Physicians in these centers and their staffs specialize in the treatment of and recovery from burns. For a list of specialized burn centers, go to www.burn-recovery.org/burn-centers.htm.
- **Phoenix Society for Burn Survivors:** The name of the Phoenix Society for Burn Survivors (www.phoenix-society.org) is taken from the legendary bird that lived for 500 years and was consumed by flame, but rose again, reborn from its ashes. The organization offers peer support, education, and advocacy for burn survivors.

These organizations can offer help for PSTD:

- **Anxiety Disorders Association of America (ADAA):** The ADAA (www.adaa.org) promotes the treatment, prevention, and cure of anxiety disorders and improving the lives of people who suffer from them. The ADAA Web site is a resource for consumer information about PTSD, including a PTSD self-test, message boards, useful links, and a directory on where to find help.
- **International Society for Traumatic Stress Studies (ISTSS):** The ISTSS (www.istss.org) provides a forum for the sharing of research, clinical strategies, public policy concerns, and theoretical formulations on trauma in the United States and around the world. The ISTSS Web site provides videos of trauma survivors telling their stories of recovery.

Chapter 9

Digestive and Urinary Conditions

In This Chapter

- Discovering symptoms and major causes of chronic digestive pain
- Understanding your treatment options
- Weighing the risk of taking NSAIDs
- Analyzing chronic pain caused by chronic bladder diseases
- Finding a physician who specializes in digestive health

You may wonder what the common denominator is between digestion and urination, so here it is: When you eat food and drink liquids (which hopefully were tasty and nutritious), your digestion processes it all, pulling out the elements it needs. It then eliminates what it doesn't use. Urination is the end result of a similar process by the kidneys, which takes out what is needed by your body and eliminates the rest in the urine.

And usually life goes on with little disruption. However, if these body systems don't work well, the results can range from the nausea and bloating of dyspepsia to the severe pain of Crohn's disease in the digestive system. And in the urinary tract, urethritis and interstitial cystitis are two painful chronic diseases that may develop when things go awry.

Some of these chronic conditions are beyond your control. As with the color of your eyes, you inherit a predisposition to develop them from previous generations. However, many diseases are caused by — or worsened by — what and how much you eat, drink, or even smoke.

Looking at Your Digestive and Urinary Systems

Simply put, your digestive system breaks food down into nutrients so that your body can use them, and then it excretes the rest. From your mouth to your rectum, it consists of the organs labeled in Figure 9-1.

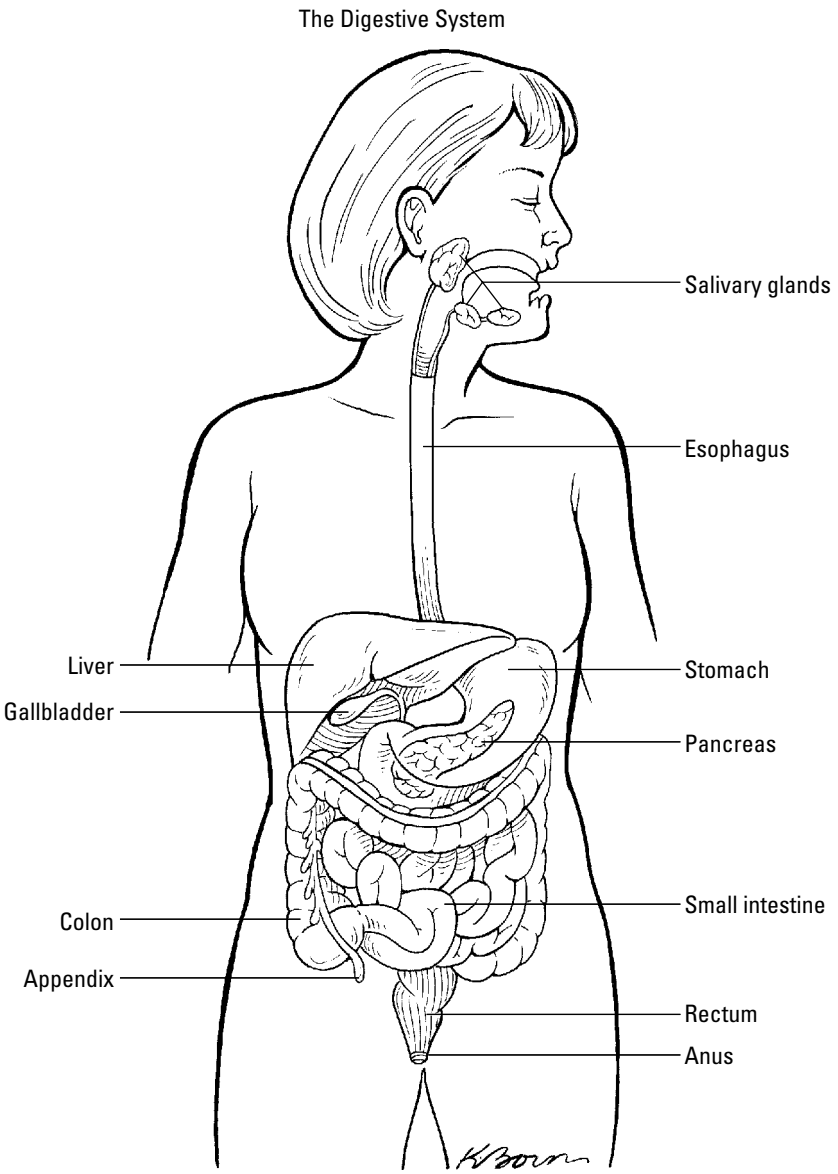


Figure 9-1: The digestive system.

Your kidneys and urinary tract get rid of the waste left over by your cells and organs after they've completed their jobs. These organs are shown in Figure 9-2.

Because many digestive and urinary conditions can cause relentless hurting, we can't possibly cover them all in one chapter. The following sections touch on major diseases and offer you resources to find out how to diagnose and treat them.

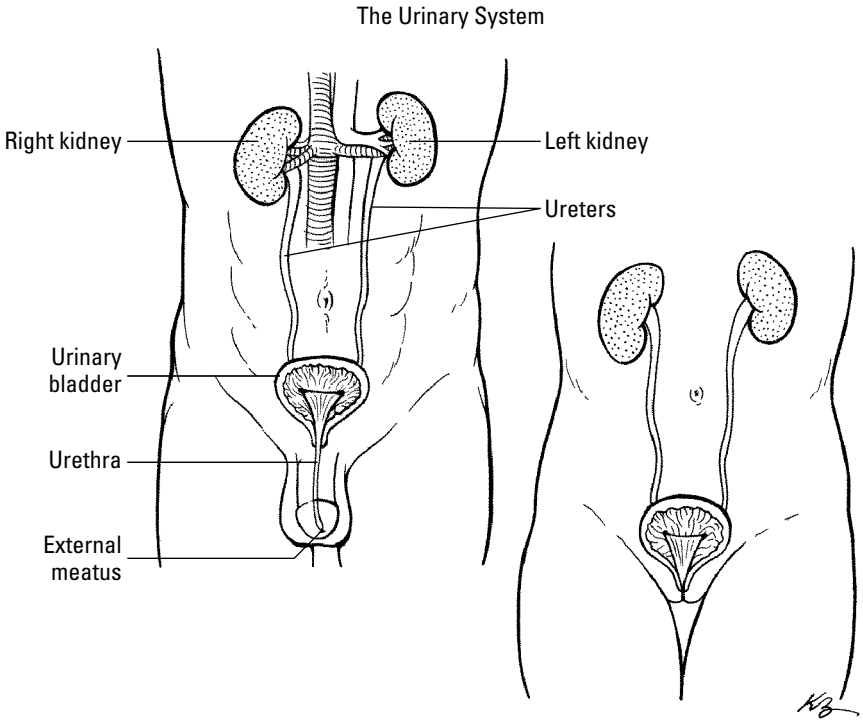


Figure 9-2: The urinary system.

Alcohol liver disease

The liver is the body's largest organ, with a startling 500 metabolic and regulatory functions. Drinking too much alcohol for too long can cause fatty liver, alcoholic hepatitis, and cirrhosis, three progressively worse liver diseases. Each one refers to harm done to the liver, a major organ that you can't live without. Of the three, cirrhosis is the most serious liver disease and can't be cured. The person with cirrhosis needs a liver transplant to survive.

Here are some facts about these diseases:

- **Fatty liver,** also called *steatosis,* is a buildup of fat in the liver cells. It has the dubious distinction of being the No. 1, alcohol-related health problem. (Fatty liver can sometimes be caused by obesity, in the absence of alcohol consumption.) Fatty liver doesn't cause pain, although some tenderness in the liver can occur.

- Regular binge drinking, or episodes of rapidly consuming five or more drinks for men or four or more drinks in women, can cause **alcoholic hepatitis,** which is often a precursor to the development of cirrhosis. Limit your alcohol consumption to one or two drinks only, once in awhile, and your liver will thank you! Alcoholic hepatitis can cause pain as well as fatigue, fever, and other symptoms.
- **Cirrhosis** is the most serious alcohol-related conditions. It's the massive loss of healthy liver cells and a buildup of scar tissue, which disturbs the blood flow. Cirrhosis causes pain and other symptoms, such as bleeding in the gastrointestinal (GI) tract.

The liver is enflamed and enlarged in all three conditions.

You can reverse fatty liver and alcoholic hepatitis by no longer consuming any alcohol. Cirrhosis isn't reversible, but can be arrested. (Read more about alcoholism in Chapter 14.)

Not all heavy drinkers develop alcohol liver disease, but it's impossible to tell who will get it and, for those who do, how severe the symptoms will be.

Sobriety (total abstinence from alcohol) is crucial to recovery from alcoholic liver disease. In addition, doctors usually prescribe nutritional fortification and vitamin supplementation, because many people with alcohol liver disease may have vitamin deficiencies. In addition, corticosteroids are prescribed to decrease inflammation.

Celiac disease

Celiac disease is the body's inability to absorb nutrients, which is related to its inability to digest gluten. (*Glutens* are proteins found in commonly eaten grains, including wheat, rye, oats, and barley.)

The condition may strike at any age, including infancy. Many people have celiac disease, but they don't know it. Most adults diagnosed with celiac disease have had it for ten years or longer before finally receiving an accurate diagnosis. (It's not that doctors are stupid, but rather that it's a tough disease to diagnose.)

Painful signs of celiac disease are chronic diarrhea, dyspepsia, gas, and a distended stomach. If you have celiac disease, you may be constantly exhausted, be depressed, and develop anemia or osteoporosis. Children with celiac disease may have a delayed puberty and even suffer from neurological symptoms, such as epilepsy. People of all ages who have celiac disease may develop a rash called *dermatitis herpetiformis* (DH). This skin condition is small clusters of red bumps that are extremely itchy. The clusters appear around the elbows, knees, scalp, buttocks, and back.

The good news is that removing gluten from your diet makes the condition go away and lets your aching intestines heal. The bad news is that getting rid of gluten isn't easy. Gluten hides in many products and restaurant foods. If you want to eliminate gluten altogether from your diet, you'll need to become a strict reader of food labels and an inquisitive customer in restaurants.

Crohn's disease

Crohn's disease is an inflammation of the wall of the intestine and causes chronic pain. Crohn's usually strikes during the teen years and early 20s. People who smoke have an increased risk for developing this disease. Crohn's is diagnosed by a colonoscopy, in which an optic tube with a tiny camera attached to it is inserted into the body through the rectum to examine the digestive tract.

Some common symptoms of Crohn's disease are

- Chronic diarrhea
- Bloody diarrhea
- Bleeding from the rectum
- Abdominal pain
- Fever
- Loss of appetite
- Dehydration
- Weight loss

As with other chronic inflammatory diseases, the symptoms of Crohn's disease may subside, but they come back again later. Crohn's can scar the wall of the intestines, leading to blockage and ulcers. Tunnels, called *fistulas,* can develop and interconnect an affected area of intestine with surrounding tissues, such as the bladder, vagina, or skin. Fistulas and cracks may also develop around the anus.

Treatment of Crohn's disease is focused on improving symptoms and controlling the disease process. People with Crohn's should never smoke cigarettes because smoking is a risk factor for Crohn's, and if you already have the disease, smoking increases the pain. Lactose intolerance is common for people with Crohn's, so dairy products should be limited in the diet if you're lactose-intolerant in addition to having Crohn's. (Read about lactose intolerance in the section called "Lactose intolerance," later in this chapter.)

The treatment for Crohn's depends on how severe the disease is and can include drug therapy, nutritional therapy, and surgery. Over half of those with Crohn's eventually require at least one surgical procedure.

Dyspepsia

Dyspepsia is discomfort in the upper abdomen. The condition can overlap with peptic ulcers and GERD. (Both conditions are covered in the "Peptic ulcers" and "GERD: Gastroesophageal reflux disease" sections later in this chapter.) Often the cause of dyspepsia is unknown.

This condition is very common, and at least one in four people have dyspepsia.

You may feel fullness in the top part of your stomach or feel full after eating just a small amount of food. You also may have bloating, burping, nausea, gagging, and/or vomiting. (It's bad enough that you're feeling the discomfort of dyspepsia, but if others notice you're burping and gagging, you may also feel embarrassed.)

If you have chronic dyspepsia, limit or eliminate alcohol, caffeine, and fatty foods from your diet. Keeping a food diary to identify symptoms is helpful. (See Chapter 18 for information on a food diary.) Your doctor may also prescribe medicines called antisecretory therapies or proton pump inhibitors.

GERD: Gastroesophageal reflux disease

After you swallow food, it travels down the esophagus and empties into your stomach. At the bottom of the esophagus is a muscle that acts as a door. When it becomes weak and doesn't close all the way, the acidic contents of your stomach may back up, sneaking through the door, entering the esophagus and irritating it. (This process is referred to as *reflux,* and the disease is called gastroesophageal reflux disease, sometimes also known as heartburn.)

People of all ages can have GERD, including babies whose esophageal muscle has not matured. One in five adults report that they have symptoms of GERD at least once a week. As many as one in ten have symptoms every day.

The most common symptoms of GERD are heartburn and indigestion. Other symptoms may include cough, hoarseness, and wheezing. When untreated, GERD can cause *esophagitis* (inflammation of the esophagus), narrowing of the esophagus, and a precancerous condition called *Barrett's esophagus.*

If you have GERD, you can control symptoms by following recommendations from the National Institutes of Health:

- Avoid alcohol and spicy, fatty, or acidic foods that trigger heartburn.
- Eat smaller meals.

- Don't eat within two hours of bedtime.
- Lose weight if needed.
- Wear loose-fitting clothes. Maybe you were a size 12 ten years ago, and now you're a size 16. Wear your actual size — until you get it back down to a size 14 (or 12) again.

Many people find relief from GERD by taking over-the-counter antacids. But if you're popping antacids all day, every day, you have chronic GERD (or another serious problem), and you should see your doctor.

Additional techniques that can help are elevating the head of your bed by 6 inches, and staying away from caffeinated drinks, alcohol, and, sadly, chocolate. When you have GERD, you should also avoid grapefruit and orange juice, beans, cheese, onions, tomatoes, and cabbage.

Some drugs, especially anticholinergics, can lead to GERD. Ask your doctor whether you can take a lower dosage of the drug.

Peptic ulcers

A *peptic ulcer* is a break in the lining (called the *mucosa*) of the stomach or *duodenum* (the first part of the small intestine). Peptic ulcers occur five times more commonly in the duodenum than the stomach. Ulcers range in size from a few millimeters to a few centimeters.

One in ten people develop peptic ulcers, and men are slightly more likely to have them than women. Contrary to myth, drinking alcohol, a bad diet, and excessive stress don't cause ulcers (although they can each make the pain from existing ulcers much worse).

Instead, the two major causes of peptic ulcers are

- ***Helicobacter pylori (H. pylori):*** *H. pylori* are bacteria that many people unknowingly carry around in their stomachs and duodenums. In fact, 50 percent of Americans over age 60 have the bacteria in their gastrointestinal systems, and most of them don't develop ulcers. Why they escape the pain of ulcers and others do not is unknown.
- **The heavy use of nonsteroidal anti-inflammatory drugs (NSAIDs).** You can find more information on these drugs in Chapter 14. People who take NSAIDs for a long time have a 10 to 20 percent chance that they'll develop ulcers in the stomach and a 1 to 2 percent chance that they will develop them in their duodenum. Incredibly, the risk of a gastric ulcer is 40 times higher if you take NSAIDs on a long-term basis compared to a person who doesn't take them. People who have *H. pylori* and also take NSAIDS are at an even greater risk for developing ulcers. (See Chapter 14 for information on NSAIDs.)

Pain and indigestion are the main signs of peptic ulcers. The symptoms are often relieved by eating.

Ulcer pain comes and goes, often with eating cycles. If the pain is constant, it means that the ulcer has broken through the lining of the stomach or duodenum, which can cause the stomach or intestinal contents to flow into the abdominal cavity. In addition, it can cause inflammation of the lining of the stomach wall (peritonitis). Both problems can cause infection and are medical emergencies. See your doctor!

Treatment for peptic ulcers varies depending on the cause of the condition:

- ***H. pylori:*** The goal with treating ulcers caused by *H. pylori* is to relieve the painful symptoms, stop the infection, and heal the break. Your doctor will prescribe antibiotics to kill the bacteria and proton pump inhibitors to calm the stomach or small intestine. (*Proton pump inhibitors* are a group of drugs that reduce gastric acid production.)
- **NSAIDs:** If you must take NSAIDs to relieve pain and inflammation, treating your ulcers may be difficult. Your doctor may advise you to take a proton pump inhibitor on a daily basis as long as you continue to take NSAIDs.

Irritable bowel syndrome (IBS)

Irritable bowel syndrome (IBS) is a chronic problem of the large intestine that causes stomach pain and changes in bowel habits. Symptoms of IBS wax and wane, and sometimes it's not too bad and other times — bad!

The condition is common, and women are more likely to have IBS than men. Symptoms include constipation or diarrhea, and (this is truly maddening) some patients alternate between constipation and diarrhea. Bloating is also common.

The cause of IBS is not known, although hormones may play a role. Your doctor will probably run tests to make sure that you don't have another disease causing the symptoms.

If you have IBS, you can control your symptoms with diet, stress reduction, adjusting your medicines, and, when appropriate, taking specific drugs prescribed by your doctor. Symptom and food diaries are great tools for identifying food triggers. Trouble digesting dairy products (lactose intolerance) may also be a problem.

For many people with IBS, fatty foods and caffeine are the culprits triggering their symptoms. Other possible food triggers are fruit sugars, sorbitol (used in artificially sweetened foods), and foods that produce gas, such as brown beans and cabbage.

Lactose intolerance

People with lactose intolerance can't digest a sugar in dairy products that's called *lactose.* Their bodies don't produce enough *lactase,* an enzyme that digests lactose. That means no more ice cream, whipped cream, or milk. (However, sufferers may be able to consume a small amount of a product with lactose if they take an over-the-counter medication, such as Lactaid.)

The condition is common in people of non-European ancestry, particularly Asians, Native Americans, or African-Americans, and its incidence increases with age. Estimates are that 50 million people in the United States have partial to complete lactose intolerance. People with other conditions, such as Crohn's disease and a tropical disease called Sprue, may also develop lactose intolerance.

If you're lactose intolerant, you probably have some combination of chronic diarrhea, bloating, cramping, and gas if you regularly eat and/or drink dairy products. Quantity matters when it comes to lactose intolerance. Most people with lactose intolerance can drink one or two glasses of milk at different meals in one day, but if they exceed that amount, then they have symptoms.

If you have symptoms of lactose intolerance, your doctor will probably first recommend eliminating cow's milk from your diet to see whether they go away. If you give up cow's milk and your symptoms improve, but you would like additional confirmation, three types of tests are used most frequently: the lactose tolerance, hydrogen breath, and stool acidity tests.

Dairy products are so prominent in American diets that it's worth experimenting to find the amount of dairy you can actually eat or drink before symptoms begin. Always tell a new doctor that you're lactose-intolerant so that she can keep that in mind when prescribing drugs. (Lactose is used as a filler in many drugs, such as some brands of birth control pills and antacids, and certain antibiotics and other medications can inhibit lactose absorption.) Use the food diary, described in Chapter 18, to help you discover whether you may be lactose-intolerant. Your physician may order blood or breath tests to verify that you have a problem.

Foods high in lactose include milk, ice cream, and cottage cheese. (Who cares about the cottage cheese, but ice cream is tough to give up!) Aged cheeses, such as Parmesan, have a lower lactose content than fresher cheeses. Unpasteurized yogurt contains bacteria that produce lactase and, as a result is usually okay to eat if you're lactose-intolerant.

If you eliminate dairy from your diet, take calcium supplements to prevent osteoporosis.

You can find milk pretreated with lactase in most grocery stores. However, lactase-treated milk sometimes still has some lactose in it, so be cautious about how much you drink at one time. Lactase enzyme replacement is also available commercially (Lactaid).

Pancreatitis

Chronic pancreatitis is an inflammation of the pancreas that doesn't go away. A gland behind the stomach, the pancreas plays an important role in digesting food and metabolizing carbohydrates. Heavy drinkers of alcohol and/or people who smoke cigarettes are the most likely to develop pancreatitis.

If you have pancreatitis, you're likely to have pain, loss of appetite, nausea, vomiting, constipation, gas, and weight loss. During flares, you'll feel tenderness over the pancreas. Attacks can last as long as two weeks, but some pain may be constant.

If you have chronic pancreatitis, you must eat a low-fat diet and eliminate alcohol and narcotics. Doctors prescribe drugs that specifically treat the condition.

Interstitial cystitis (IC)

A chronically inflamed bladder that causes major pain is called *interstitial cystitis* (IC). This condition is also known as painful bladder syndrome (PBS).

Both men and women develop IC, but it's more common in women. The average age of people with IC is 40. IC may be caused by several diseases and is associated with allergies, irritable bowel syndrome, and inflammatory bowel disease.

IC causes pain when the bladder fills up and also causes the urgent need to urinate. IC may cause difficulty in controlling the flow of urine. The person with IC may constantly feel like she has a bladder infection. In fact, some doctors give antibiotics to people with such chronic bladder pain, but antibiotics don't help unless the person really does have an infection.

IC has no cure, but treatments are available to control symptoms. For example, if you have IC, you should avoid smoking cigarettes, drinking alcohol, and eating spicy foods. Medical treatment includes inflating the bladder and bathing the inside of the bladder with a medicine called dimethylsulfoxide (DMSO), which is approved by the FDA to treat this condition. Oral medications may also be used to control bladder spasms. Consult an urologist who specializes in IC if you think you may have this disorder.

Advanced treatments for IC include implanting a *sacral nerve stimulator device.* The device is a reversible treatment that sends mild electrical

pulses to the *sacral nerve,* the nerve near the tailbone that influences bladder control muscles.

Urethritis

Chronic urethritis is an ongoing inflammation of the urethra that can strike both women and men. (The *urethra* is the canal that eliminates urine from the body.) It may be caused by injury, bacteria, a virus, or sensitivity to chemicals. People who are sexually active with many partners are particularly at risk for urethritis. Symptoms of chronic urethritis for men include a discharge from the penis, itching or pain when urinating, and blood in the urine. Women experience pain while urinating, an increased need to urinate, and a vaginal discharge. Antibiotics are frequently prescribed along with painkillers for chronic urethritis.

Practicing safe sex is extremely important to prevent spreading the infection and potentially causing urethritis in others. Often, your sexual partner must also be treated. If the condition is made worse by chemicals, such as spermicides, stop using them.

Chronic urethritis can cause permanent damage to the urethra and genitourinary organs in both sexes.

Diagnosing Digestive and Urinary Conditions

Each type of chronic digestive or urinary condition has its own set of diagnostic criteria. To diagnose and treat these problems, your primary care physician may refer you to a physician who specializes in digestive or urinary health. In addition, the following organizations can help you locate a specialist:

- **American College of Gastroenterology,** P.O. Box 342260, Bethesda, MD 20827-2260; phone 301-263-9000; Web site `www.acg.gi.org`. To locate a specialist in digestive health, use the American College of Gastroenterology's Physician Locater by clicking Patients and then GI Physician Locator.
- **American Urologist's Association,** 1000 Corporate Blvd., Linthicum, MD 21090; phone 1-866-RING (toll-free), `www.urologyhealth.org`. For urinary problems, use the American Urological Association's Urologist Locator by clicking Find a Urologist.
- **National Digestive Diseases Information Clearinghouse,** 2 Information Way, Bethesda, MD 20892–3570; phone 800-891-5389; Web site `http://digestive.niddk.nih.gov`. The clearinghouse provides consumer information about digestive diseases.

Chapter 10

Reproductive Conditions

In This Chapter

- Understanding the parts of the male and female reproductive systems
- Looking at major female reproductive conditions that cause chronic pain
- Figuring out how the male prostate gland can cause chronic pain

The amazing reproductive systems of a man and woman together can create new life — what can be more remarkable than that? But from raging hormones to enlarged prostates, your reproductive system can also be the source of many chronic pain problems. In this chapter, we tell you what you need to know to understand the tie between chronic pain and the reproductive system.

Understanding Your Reproductive Systems

Most of the time, the reproductive system works fine. But sometimes something goes wrong, causing chronic pain for a man or woman. Fortunately, treatments are available for most chronic pain conditions in the reproductive system.

As you can see from Figure 10-1, the female reproductive system is much more complex than the male system. While the female reproductive system is deep inside the woman's body, most of the male reproductive system is external and accessible, such as the penis and the scrotum, the sac that contains the testicles. The result of these differences in anatomy means that reproductive conditions in women are much more difficult to diagnose and treat than those in men. For this reason, we spend much more time in this chapter discussing women's reproductive conditions than we do discussing men's problems.

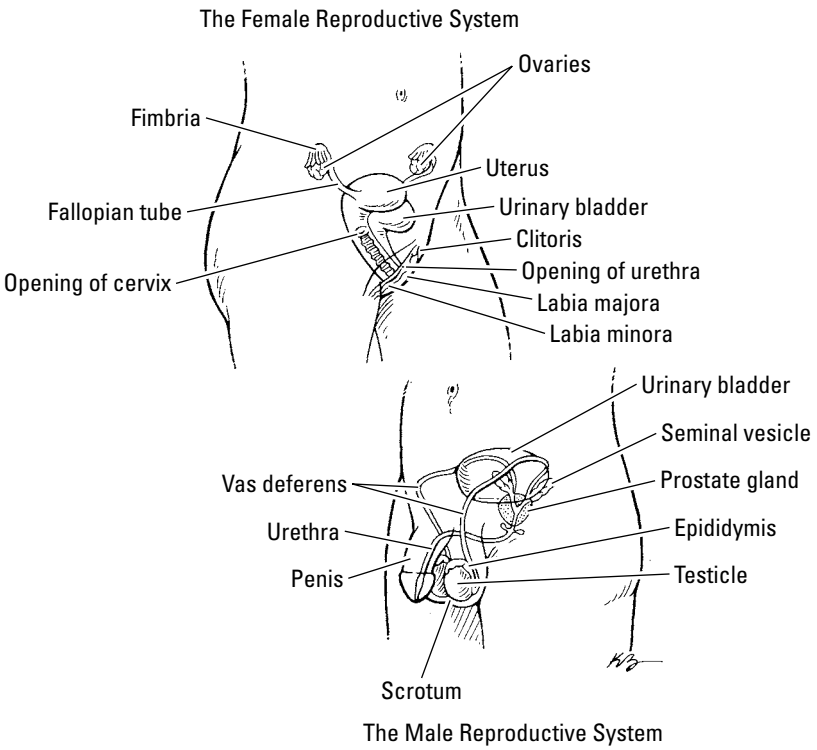


Figure 10-1: Female and male reproductive systems.

For Women Only: Problems in the Reproductive System

Women's reproductive systems give them a lot of practice with handling pain. Monthly cramps and, for many, childbirth, go together with being female. Unfortunately, some chronic pain conditions can also strike women. The most common chronic painful conditions of the female reproductive system are endometriosis, pelvic inflammatory disease (PID), and premenstrual syndrome. The onset and the early stages of menopause can cause considerable distress as well.

Endometriosis

The *endometrium* is the lining of the *uterus* (the part of the body that babies grow inside). About 12 times a year, the uterine lining builds up in preparation for a fetus, and then it sloughs off during menstruation when no pregnancy occurs. Most women refer to this monthly cycle as "my period."

Some unhappy women have a problem in which the rogue endometrium somehow escapes outside the uterus, hiding out in other parts of their bodies, such as the bladder or ovaries. This escapee tissue actually goes through the menstrual cycle in its new location, the same as it would have if it had remained where it was *supposed* to be, in the uterus. Stuck in its new location and with no way out, the endometrium becomes inflamed, and it can develop cysts and create other problems, a condition called *endometriosis.* Figure 10-2 shows common areas in the female anatomy where endometriosis occurs.

Endometriosis causes aching in the abdomen, lower back, and/or rectum. The pain may migrate to the vagina or upper legs. If you have this condition, you'll probably start to feel pain two to seven days before your period, and it will become increasingly severe until your period stops. You may also experience bleeding from the rectum. As the disease progresses, the pain may become constant and unremitting. Infertility is also common for women with endometriosis.

Six to 10 percent of women in the United States suffer from the chronic pain of endometriosis, and it's four or five times more likely to strike infertile than fertile women.

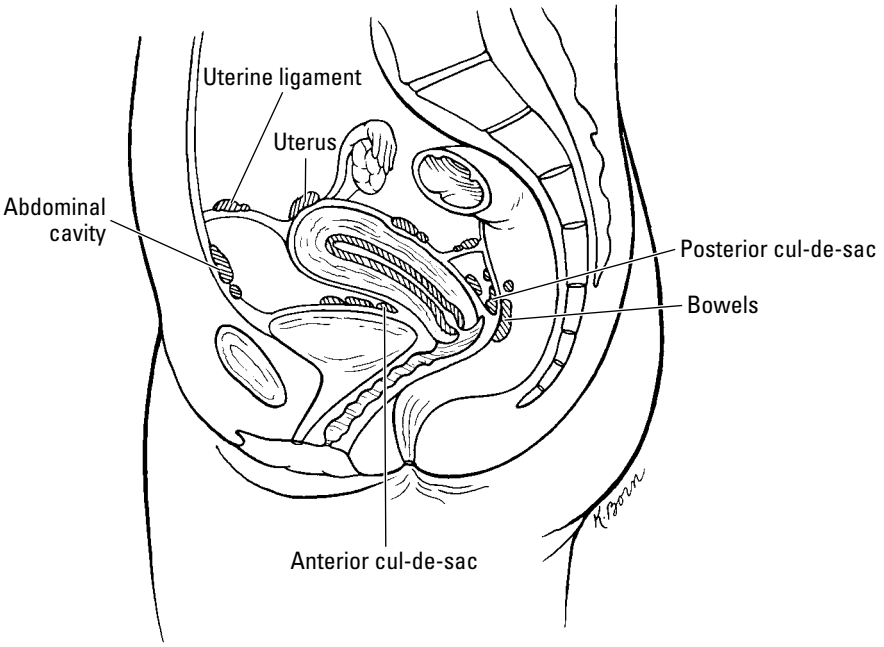


Figure 10-2: Endometrial tissue's common escape sites.

Treatment may include hormone therapy, prescribed painkillers, and, in severe cases, surgically removing affected tissues. For women who want to become pregnant, surgery can greatly improve their chances.

Pelvic inflammatory disease

Pelvic inflammatory disease (PID) is a painful infection of the upper genital tract that's caused by a variety of sexually transmitted organisms, including the ones that cause gonorrhea and chlamydia. It's a serious disease that can damage the fallopian tubes, causing infertility. PID can also become a chronic pain problem for some women. (PID is also called *salpingitis*.)

Pelvic inflammatory disease is most common among young, sexually active women who've never given birth and who have had multiple sexual partners. Nonwhite race, douching, and smoking are also factors associated with PID. The use of birth control pills or barrier contraceptives (such as the cervical cap or diaphragm) may protect against PID. However, use of an intrauterine device (IUD) is a risk factor *for* developing PID.

If you've had sex with a partner who may have a sexually transmitted disease (STD), see your doctor right away. She can help you treat most infections that you may be developing.

Symptoms of PID are lower abdominal pain, chills, fever, irregular periods, a yellow or green vaginal discharge, and pain during intercourse. On a scale of 1 to 10, many women will say that PID pain is about a 200.

Early treatment with antibiotics is important for the person with PID and her sexual partner(s). Treatment with antibiotics in a hospital and/or surgery may be necessary.

Premenstrual Syndrome

Ask most women the definition of Premenstrual Syndrome (PMS), and they'll say, "That's easy. PMS is hell." Scientifically speaking, however, PMS is actually a group of painful physical and emotional symptoms that develop during the 7 to 14 days before the onset of a menstrual period and that go away when menstruation occurs.

PMS symptoms differ from woman to woman. Also, if you have PMS, your own symptoms may change with each period. Common problems are

- Bloating
- Acne
- Painful breasts

- Weight gain
- Skin disorders
- Irritability and/anger
- Depression
- Inability to concentrate
- Mood swings
- Lack of interest in sex
- Lethargy
- Cravings for carbohydrates

We know what you are thinking: "Sure! Every woman has some of these symptoms before a period." Well, if you have PMS, these symptoms are severe. You're not just a bit of a fuzz-head; you truly can't think straight! You're not just yawning a little; you take to bed at any opportunity. You get the idea!

The condition attacks about two in five women, which is a lot of women! For most women with PMS, the condition is a chronic pain problem.

Sadly, little research has been done on how to treat PMS. Many experts recommend that women participate in aerobic exercise, reduce their caffeine, salt, and alcohol intake, and eat complex carbohydrates, such as vegetables. Your doctor may also prescribe a diuretic to help with bloating and tender breasts and may order hormones to decrease breast pain and cramping. Nonsteroidal anti-inflammatory drugs (NSAIDs) can help ease painful cramps. Many women also find that taking a selective serotonin reuptake inhibitor (SSRI) antidepressant can stabilize the mood swings that PMS can cause.

Soaking in a warm bath can help ease painful cramps considerably.

Menopause

Menopause is the winding down of female reproduction. Your body produces less and less estrogen, and then menstruation finally ends altogether, either due to aging or the surgical removal of both ovaries. When periods have stopped for one year, menopause is officially diagnosed.

The average age at menopause is 51 years. If menopause occurs before age 40, it's considered premature.

The process of menopause usually takes one to three years, with accompanying physical symptoms, but symptoms such as night sweats, hot flashes, and irritability can go on for many years.

Vaginal bleeding that occurs after your periods have completely stopped for a year or more isn't normal. See your doctor to make sure that you don't have a medical problem.

Four in five menopausal women get *hot flashes* during menopause (feelings of intense heat, flushing and sweating). Hot flashes are particularly troublesome for women who have a surgical menopause. Other painful symptoms of menopause include

- Thinning and drying of the vagina
- Atrophy of the bladder
- Anxiety
- Mood swings
- Lethargy
- Osteoporosis

For many years, *hormone replacement therapy* (HRT) was frequently prescribed for menopause symptoms. However, taking hormones is now considered controversial and may even put you at risk for breast cancer. The decision for or against hormones is a personal one, and it's important to talk this issue over with your gynecologist.

Other treatments for menopause include estrogen creams for vaginal dryness, vaginal rings with estrogen, and antidepressants. Consuming estrogen-containing foods, such as pomegranates, rice, and barley, may help.

For Men Only: Problems in the Reproductive System

Reproductive problems for men are often linked to sexual activity or the aging process. Sometimes they're caused by infections, as with *prostatitis* (inflammation of the prostate).

For example, prostate problems are very common after age 50. And the older men get, the more likely they are to have such problems. Prostate cancer is diagnosed in many men, and, after lung cancer, it's the most commonly occurring form of cancer for men.

The *prostate* is a walnut-sized gland that is part of a man's reproductive system. The gland tends to expand with age and may squeeze the *urethra,* which carries urine away from your bladder. (The prostate surrounds the urethra.) Several prostate problems can develop:

- *Acute bacterial prostatitis* is an infection of the prostate caused by bacteria. Symptoms include chills, fever, and pain in the lower back and genital area. Problems with urination are also common. Bacterial prostatitis can become chronic.
- *Chronic prostatitis* is the most common type of prostatitis, and it's a common infection that can strike men of any age. The condition comes and goes and is difficult to treat.
- *Enlarged prostates,* or *benign prostatic hyperplasia* (BPH), are common in older men. Over time, an enlarged prostate may press against the urethra, making it hard to urinate. Dribbling and urgency can occur. A doctor does a rectal exam to check for BPH.

Many men try to avoid the rectal examination during their annual physical exam because it's so embarrassing. Don't be one of them! The rectal exam that your doctor performs can detect serious problems with the prostate, such as BPH, prostatitis, or even prostate cancer.

Antibiotics are used to treat acute bacterial prostatitis, but they will not help chronic prostatitis. For chronic prostatitis, doctors sometimes prescribe medicines to relax the gland. Other medicines used for BPH are alpha-blockers or finasteride, a medicine that lowers the testosterone level. However, taking finasteride can also dampen a man's libido and hamper his sexual performance. (Understandably, most men aren't very enthusiastic about these side effects.) Sometimes surgery is necessary to relieve BPH symptoms.

Diagnosing Pain Problems: Who Can Help

Each cause of reproductive pain has its own set of diagnostic criteria. To diagnose and treat these problems, your primary care physician may refer you to a physician who specializes in reproductive health. For women, this person is usually a gynecologist, and for men, it's usually an urologist.

For women:

American College of Obstetricians and Gynecologists, 409 12th St., S.W., P.O. Box 96920, Washington, DC 20090-6920; phone 202-638-5577; Web site `www.acog.org`. To locate a gynecologist, use the American College of Obstetricians and Gynecologists Physician Directory on its Web site.

American Society for Reproductive Medicine, 1209 Montgomery Highway, Birmingham, AL 35216-2809; phone 205-978-5000; Web site `www.asrm.org`. To locate a specialist in reproductive health, use the American Society of Reproductive Medicine's Physician Locater on its Web site.

The Society of Reproductive Surgeons, 1209 Montgomery Highway, Birmingham, AL 35216-2809; phone 205-978-5000; Web site www.reprodsurgery.org. To locate a reproductive surgeon, use the Society of Reproductive Surgeons' Surgeon Locater on its Web site.

For men:

American Urological Association, 1000 Corporate Blvd., Linthicum, MD 21090; phone: 866-746-4282 or 410-689-3700; Web site: www.auanet.org. To find an urologist, use the American Urological Association's Find an Urologist on its Web site.

Chapter 11

Following the Nerve Pathways: Neuralgias and Neuropathies

In This Chapter

- Understanding the basics of nerve pain
- Comprehending complex regional pain syndrome
- Coping with peripheral neuropathy
- Managing postherpetic neuralgia
- Dealing with trigeminal neuralgia

More than 15 million people in the United States suffer from nerve pain, called *neuralgias* and *neuropathies.* These conditions differ greatly in symptoms and treatments.

In this chapter, you find out more information about the different types of nerve conditions and chronic nerve pain.

Understanding Your Network of Nerves

Your body's network of nerves, called the *peripheral nervous system,* relays messages back and forth between your *central nervous system* (your brain and spinal cord) and the rest of your body. The network is stunningly intricate and complicated, which is probably because it has a really important job. It's responsible for everything from helping you move from point A to point B, to enabling you to feel sensations of pain and hot and cold temperatures, as well as the touch of a loved one's hand. It also helps maintain your heartbeat, digestion, and other vital body functions. (For more on the peripheral nervous system, see Chapter 2.)

You can injure the peripheral network and its nerve messengers in a number of ways — for example through an accident or as a result of diseases, such as diabetes and rheumatoid arthritis. Even treatments for some diseases — such as chemotherapy for cancer — can injure your nerves. If such damage

occurs, some of your nerves may stop working altogether. Or they may go haywire on you and send mixed-up pain messages. For example, if you've damaged nerves, instead of feeling major pain when your neighbor's 120-pound dog leaps joyfully on your foot, you may feel merely a tingling sensation. On the other hand, nerve damage may make you so exquisitely sensitive to touch that even putting a cotton sock on your foot can cause excruciating pain.

The different types of nerve pain are associated with constant or recurring pain that doesn't get better. However, the type of pain that is experienced can vary. It can be a feeling that's like burning, numbness, tingling, a stabbing sensation, or feeling like pins and needles are pricking you, or feeling like you're receiving an electric shock.

Considering Complex Regional Pain Syndrome (CRPS)

Complex regional pain syndrome (CRPS) is a painful condition of the arm, hand, leg, or foot. The major symptom is intense pain out of all proportion to the type of injury that initially set it off. CRPS frequently develops in the hand, along with restriction of shoulder motion on that same side of the body (called *shoulder-hand syndrome*). (See Chapter 7 for more information about CRPS.)

CRPS causes burning pain, sweating, swelling, and disturbances of color and temperature in the affected area, which is often blotchy, purple, pale, or red. It also causes shiny and thin skin, stiffness in the affected joints, weakness and wasting of muscles, changes in the overlying skin and nails, and a limited range of motion. Not a pretty picture.

Unhappily, the pain and other symptoms of CRPS worsen over time. The sympathetic nervous system may be the culprit in maintaining the pain. (See Chapter 2 for information on the sympathetic nervous system.) Often, CRPS is set off by an injury, even a minor one. Mere bug bites can trigger the condition! Sometimes the cause isn't known.

CRPS may develop in three typical stages.

- **Stage I can last about three months.** You may feel a burning pain, stiffness in your joints, sweating, and warmth in the affected area. Other (rather odd) symptoms may include fast-growing nails and hair, thin and dry skin, and blotchy, purple, pale, or red skin color.
- **Stage II typically follows and can last for a year.** Swelling increases, and your skin in the affected area cools and becomes extremely sensitive to touch. Even the touch of a bed sheet can cause excruciating pain. The pain also typically becomes diffuse, and you may feel stiff.

- **Stage III is the last stage.** At this point, alas, the condition is permanent. The pain may cover your entire limb. Your joints may be very stiff.

If it's caught and treated in time, you can keep CRPS in a holding pattern and prevent it from ever advancing any further than Stage 1.

Physical therapy is the cornerstone of treatment for CRPS, and the priority is to restore your function and keep your body from becoming any weaker due to immobility. For tough cases, *prednisone,* a steroid medication, may help you considerably.

Sympathetic nerve blocks and a procedure called *spinal cord stimulation,* in which an electrode inside the spine elicits low-dosage impulses, also helps some people with CRPS.

Getting on Your Nerves: Peripheral Neuropathy

Peripheral neuropathy is well-named. *Peripheral* means beyond (in this case, away from the brain and the spinal cord and out into the body). *Neuro* means nerves, and *pathy* means disease. So, peripheral neuropathy describes conditions caused by damage to the nerves connecting the brain and spinal cord to the rest of the body (the peripheral nervous system).

Peripheral neuropathy has many causes. It occurs most commonly in people with diabetes mellitus and those who abuse or are dependent on alcohol.

Suffering the symptoms

The symptoms of peripheral neuropathy depend on which nerve or nerves are damaged. The following list of symptoms is adapted from information from the National Institutes of Health.

Sensation changes

Damage to sensory nerves can cause nerve pain, sensations of tingling or numbness, or an inability to determine your joint position, which, in turn, causes a lack of coordination. For many neuropathies, the symptoms begin in the feet and then move toward the center of the body.

Movement difficulties

Damage to motor nerves interferes with muscle control and can cause weakness, loss of muscle bulk, and loss of dexterity. Other muscle-related symptoms may include

- Cramps
- Lack of muscle control
- Difficulty or inability to move a part of the body (paralysis)
- Muscle atrophy
- Muscle twitching
- Difficulty breathing or swallowing
- Falling (from legs buckling or tripping over your own toes)
- Lack of dexterity (such as being unable to button a shirt)

Autonomic symptoms

The autonomic nerves control your involuntary or semivoluntary functions, such as the control of your internal organs and your blood pressure. Damage to autonomic nerves can cause many symptoms and signs, including

- Blurred vision
- Decreased ability to sweat
- Dizziness that occurs when standing up or fainting that's associated with a drop in blood pressure
- Heat intolerance with exertion (decreased ability to regulate body temperature)
- Nausea or vomiting after meals
- Stomach bloating
- Feeling full after eating a small amount (early satiety)
- Diarrhea or constipation
- Unintentional weight loss
- Urinary incontinence
- Feeling of incomplete bladder emptying
- Difficulty with starting to urinate (urinary hesitancy)
- Male impotence

Tagging the types

Peripheral neuropathies are common, especially among older people, and can cause both acute and chronic pain problems. More than a hundred different types of peripheral neuropathy exist, with many different causes. For example, *Bell's palsy* can be caused by a facial nerve becoming swollen or inflamed. It

causes paralysis or weakness on one side of the face. Peripheral neuropathies are classified according to their symptoms and cause.

Anyone who suffers from nerve problems (or who loves someone who does) needs to know these two terms:

- **Polyneuropathies,** which are what most neuropathies are, occur when more than one peripheral nerve stops working or goes haywire at once, causing weakness and/or pain. Many conditions can cause polyneuropathies, including diabetes, cancer, and other diseases. Often, polyneuropathy affects the same nerves on both sides of the body, and frequently the problem begins in the legs. Polyneuropathy can affect the sensory, motor, and autonomic systems. Polyneuropathies in all these systems can occur together at one time. Polyneuropathies tend to progress slowly and become chronic over months and years.
- **Mononeuropathy** refers to damage to only one nerve. Individual nerves are injured or crowded out, compressed, or stretched by organs, discs, and other anatomic structures, especially if the nerve passes through a narrow space (called *entrapment neuropathy*). The symptoms that occur depend on the nerve that's involved. Mononeuropathies have many causes, including
  - Physical injury or trauma of a nerve caused by an accident
  - Long-lasting pressure on a nerve, caused by inactivity, such as when you're confined to a wheelchair or bed
  - Overuse of structures surrounding a nerve through such actions as typing, running a checkout stand, or other repetitive motions (for example, carpal tunnel syndrome, caused by compression of the nerve that extends through the wrist)
  - Damage to a disc in the spine, which causes pressure on a nerve

  Nerves come in different varieties, depending on whether they're motor, autonomic, sensory, or mixed nerves (with sensory, motor and autonomic components). A mononeuropathy can involve one or all of the following:
  - Damage to a nerve that controls muscle movement (motor nerves), causing reduction of strength and dexterity
  - Damage to a sensory nerve, which detects sensations, such as cold or pain
  - Damage to a nerve that affects the heart, blood vessels, bladder, intestines, or other internal organs *(autonomic neuropathy)*
  - *Mononeuropathy multiplex,* when several isolated nerves are injured at once

The Neuropathy Association

If you have neuropathic pain, the Neuropathy Association can be a great resource for information and emotional support. Here's a description of how to contact the organization and some of the key programs it has to offer:

The Neuropathy Association, 60 E. 42nd St., Suite 942, New York, NY 10165; phone: 212-692-0662; Web site `www.neuropathy.org`. The Neuropathy Association has 50,000 members, with approximately 120 support groups throughout the United States and abroad providing public awareness, patient support, education, and advocacy. At present, seven Neuropathy Centers are available at major university hospitals in the United States. The Web site offers a list of neurologists and support groups by state.

If you have peripheral neuropathy, you're at risk for additional nerve injury at your body's pressure points. Avoid putting weight on these areas for long periods of time; for example, don't lean on your elbows or sit in one position for lengthy periods.

If you have chronic polyneuropathy, you can lose your ability to sense temperature and pain. As a result, you can severely burn yourself and not even know it. You can also develop open sores and calluses, especially on your feet, as the result of injury or prolonged pressure. Visually check your body, especially your feet, at least every day. Wear socks and don't go barefoot in or out of the house. Be sure to check between your toes. In addition, keep your feet clean and dry to prevent calluses and sores from developing. You should also look inside your shoes a few times each day to discover rocks or any other objects that may rub against your feet and cause sores.

To guard against burns, check the temperature of the water before you take a bath or shower. Measure the water temperature with a thermometer and make sure that the temperature setting of your hot-water heater is not set above 125° F (52°C). Also, use a part of your body that has normal sensation (such as your elbow) to check for hot surfaces.

Preventing peripheral neuropathies

Some causes of neuropathy are under your control. For example, if you have diabetes, controlling your blood sugar level is extremely important to prevent the death of nerve fibers. If you or a loved one drinks a lot of alcohol, do everything you can now to beat this dependence. Or, if you're being treated with chemotherapy, ask your doctor to prescribe one of the new medicines

available to prevent nerve damage. Ask about one of the drugs presently being developed that includes neuroprotective and neurotrophic agents (also called nerve growth factors).

Eating a diet high in B vitamins (in meats, fish, eggs, low-fat dairy foods, and fortified cereals) is also preventive for neuropathy.

Major types of polyneuropathy

Many different types of polyneuropathies can cause chronic pain, including these key ones:

- **Diabetes-related polyneuropathy** has the dubious distinction of being the most common form of peripheral neuropathy. In this condition, high blood sugar levels of uncontrolled diabetes slowly destroy nerve cells. About 50 percent of people with diabetes develop peripheral neuropathy.
- **Nutritional polyneuropathy** is common among people who are malnourished or alcoholic. The cause is usually a lack of B vitamins, especially B1, B12, and folic acid. Poor diet, digestive problems, and long-term use of some medications can cause vitamin deficiencies. Alcoholism also depletes the body of B vitamins.
- **Rheumatoid arthritis** can cause a number of painful nerve conditions, such as entrapment neuropathies, which are caused by chronic compression of a nerve in a narrow space.
- **Alcoholic polyneuropathy** is caused by toxic effects of heavy long-term drinking. The condition can be hard to distinguish from nutrition-related neuropathies because of the loss of B vitamins that comes with heavy drinking. People who've been alcoholic for 10 years or more are at high risk for alcoholic polyneuropathy.
- **Polyneuropathy due to cancer and cancer treatments** strike many people. In fact, some chemotherapies used for cancer treatments can damage peripheral nerves.
- **Polyneuropathies caused by inherited disorders** are rare, but occur. Examples are: *Charcot-Marie-Tooth disease,* which is a group of disorders that affect peripheral nerves (named after the scientists who discovered it), and *amyloid polyneuropathy,* a progressive condition of the sensory and motor systems.
- **Toxic neuropathies** are caused by exposure to industrial agents or pesticides, such as acrylamide and carbon disulfide, or to metals, such as arsenic and lead. They can also be caused by drugs such as phenytoin (Dilantin), used for epilepsy, and isoniazid, used for tuberculosis.
- **Guillain-Barre syndrome** is caused by the body's immune system attacking nerves in the body. The condition can lead to paralysis.

In addition to these conditions, diseases of the kidneys, thyroid, and liver, as well as infections can cause polyneuropathies.

Treating peripheral neuropathies

Treatment for peripheral neuropathies begins with identifying and treating the condition causing the problem (such as rheumatoid arthritis or diabetes) or getting rid of the cause (such as consuming too much alcohol or overexposure to lead). If this first approach is successful, the neuropathy may get better, and painful symptoms may go away. If painful symptoms won't budge, the next steps are to relieve them as much as possible and prevent immobility and deconditioning. A number of treatment choices are available, and a combination of several approaches may be most successful.

You can use many types of medications to relieve the pain of peripheral neuropathy. You can treat milder pain with over-the-counter drugs, such as acetaminophen (Tylenol) or aspirin. Stronger pain may require prescription pain medications, such as codeine, Demerol, or morphine. For electric-like pain, doctors also prescribe anticonvulsants, such as carbamazepine (Tegretol) and gabapentin (Neurontin). Serotonin norepinephrine reuptake inhibitor (SNRI) antidepressants, such as duloxetine (Cymbalta), are also used. Some people find that capsaicin cream (Zostrix), the substance found in hot peppers, or the topical numbing cream, lidocaine, to be helpful. Lidocaine is also available in a prescribed patch (Lidoderm).

If you have peripheral neuropathy, you need to know that both physical and occupational therapy are important to build muscle strength and control, and prevent deconditioning. If the neuropathy is severe, wheelchairs, splints, and other assistive devices may be necessary to help you maintain your basic functions and carry out daily activities. Many people use special frames to keep their bedclothes from touching tender areas.

Pain in the Face: Trigeminal Neuralgia

Trigeminal neuralgia (TN) is nerve pain in the cheekbone area, where the trigeminal nerve is located. Your *trigeminal nerve* is responsible for sensations on your face, and it's the motor nerve controlling the muscles you use to chew. If you develop trigeminal neuralgia (also called *tic douloureux*), you'll experience episodes of sudden and sharp facial pain.

TN usually strikes near one side of the mouth and shoots toward the ear, eye, or nostril on the same side. Episodes last from two seconds to two minutes. Some people can have a hundred episodes a day. People with TN often describe the pain as intense and excruciating.

Unfortunately, TN episodes can worsen over time, and the time between the attacks shortens. In addition, a dull ache or burning may occur between episodes. Symptoms are confined to tissues innervated by the trigeminal nerve, running on one side of the face only.

The pain may be triggered by such seemingly innocuous things as a light touch on the skin, mild breezes (which most people enjoy), as well as by everyday acts, such as talking and eating. In order to prevent attacks, many people hold their faces as immobile and expressionless as possible while talking and eating. If you talk to someone with TN who seems emotionless, he is probably trying to prevent the pain by using inscrutable expressions.

Bouts of TN can stop for several months or longer. But the bad news is that they come back, sometimes with a vengeance.

TN most commonly occurs in middle and later life, but it can occur in all ages. TN affects women more often than men. Often the cause of TN is difficult to detect. Sometimes it's caused by multiple sclerosis, a tumor, or an aneurysm pressing on a nerve.

In the recent past, doctors tried to eliminate the pain of TN with techniques such as injecting the trigeminal nerve with alcohol or a procedure called *balloon rhizotomy,* which destroys the affected part of the nerve.

Recently, surgeons have successfully relieved pressure on the trigeminal nerve by separating blood vessels from it. However, if you or a loved one is elderly, a procedure called *radiofrequency rhizotomy* is still the preferred procedure because recovery is easier.

Gamma radiosurgery, a nonivasive procedure that uses beams of radiation to the trigeminal root, successfully treats TN in 4 out of 5 people.

Anticonvulsants, such as carbamazepine (Tegretol) and phenytoin (Dilantin), are used to treat TN. Other drugs used to treat TN include antidepressants, muscles relaxants, and opioids.

The Trigeminal Neuralgia Association

If you have Trigeminal Neuralgia, the Trigeminal Neuralgia Association can be a great resource for information and emotional support. Here's a description of how to contact the organization and some of the key programs it has to offer.

Trigeminal Neuralgia Association, 925 Northwest 56th Terrace, Suite C, Gainesville, FL 32605; e-mail `tnanational@tna-support.org`; phone 352-331-7009 or 800-923-3608; Web site `www.tna-support.org`. TNA provides one-on-one patient support through its toll-free telephone lines and its Web site and helps maintain more than 65 local support groups throughout the United States, Canada, Europe, and Australia.

Postherpetic Neuralgia

Until a vaccine for chicken pox first became available in 1995, most children suffered from the infection, which also made some of them vulnerable to developing a painful condition in adulthood called *shingles.* Now vaccinated children won't get shingles when they grow up. Unfortunately, everyone else who suffered through chicken pox before then — and that's most readers! — is at risk for developing shingles.

Shingles causes painful blisters in a band on the torso or around the nose and eyes. Both chicken pox and shingles are caused by an infection of one or more nerves with a virus called varicella-zoster. About 15 percent of patients who develop shingles go on to develop a painful condition called *postherpetic neuralgia* (PHN). If an initial bout of shingles is severe, it's even more likely to cause PHN. Both shingles and PHN primarily strike older people ages 65 and older.

PHN causes throbbing, aching, itching, and other painful symptoms that can last for years. The affected area can become so sensitive that even a slight touch can be excruciatingly painful.

Getting immunized (even if you've had chicken pox) with the varicella vaccine may reduce the chances of getting shingles or PHN. In addition, taking oral acyclovir, used to treat outbreaks caused by the herpes viruses, may also be preventive. The faster you take these drugs, the more effective they'll be.

As with TN, the drugs used most frequently for treating PHN are anticonvulsants, such as carbamazepine (Tegretol) and phenytoin (Dilantin). Other drugs used to treat this condition are antidepressants, muscles relaxants, and opioids. Some people find capsaicin cream (Zostrix), the substance found in hot peppers, or the topical numbing cream, lidocaine, to be helpful. Lidocaine is also available in a patch, available by prescription (Lidoderm). Epidural steroid injections, which places the anti-inflammatory cortisone directly around spinal nerves, may also be helpful in bringing relief.

Chapter 12

Cancer Pain

In This Chapter

- Discovering who suffers from chronic cancer pain
- Understanding the World Health Organization's pain position
- Exploring helper analgesics for advanced cancer pain

Many people fear the pain that's caused by cancer more than anything else about the disease, including death. However, while pain management for people with cancer is still evolving, many alternatives for pain control are available to you and your loved ones with cancer. This chapter discusses the major types of medical treatment for cancer pain. Many people also find that complementary and alternative methods, such as biofeedback and acupuncture, are helpful for cancer pain. For more information on these methods, see Chapter 15.

Frightening and Shockingly Common: Cancer

Perhaps nothing is more frightening than hearing the words, "You have cancer." And it's incredible to think that men have a 1 in 2 chance of hearing these words from their doctor in their lifetime, and women have a 1 in 3 chance of getting this diagnosis.

More than 100 types of cancer can invade virtually every part of your body, from your skin and bones to your internal organs and your blood. All types of cancer are caused by abnormal runaway cells that, for some reason, begin to replicate wildly. These turncoat cells sometimes spread to other parts of your body and attack healthy tissue. It's this disease process, called *metastasis,* that makes cancer such a monster and that also can lead to severe, long-term pain.

The cruel truth is that chronic pain often accompanies cancer. According to the National Cancer Institute, 70 to 90 percent of people with advanced cancer have pain, and about a third of people with early cancers also have pain. Yet many types of cancer, such as leukemia and lymphoma, are not painful at all.

In general, the painful cancers are those that cause *tumors* (growths of tissue that group together in a mass).

Cancer pain has been described as aching, sharp, burning, and throbbing. It is usually caused by tumors that are growing and pressing in on nociceptors in healthy tissues, organs, and vessels. (For an explanation of nociceptors, see Chapter 2.) Bone pain is a common consequence of advanced cancer. It is the result of the disease moving to the spine, skull, or other parts of the skeleton. Bone pain is most common for patients with advanced cancers of the lung, bronchus, breast, rectum, prostate, colon, and kidney. Other types of cancer pain are caused by:

- Surgery to remove tumors
- A low blood supply due to blood vessels squeezed by tumors
- Inflammation due to the damage caused by growing tumors
- Musculoskeletal pain caused by immobility

Unfortunately, you can get hit with all these types of pain. In addition, the cancer may secrete chemicals in the region of the tumor that can cause pain. Treating the cancer can help relieve this pain.

If you or a loved one has cancer and you experience changes in your bowel and bladder function and/or a sharp pain in your back or neck, the cancer may have reached your spine. This metastasizing can cause paralysis and other problems, so get help right away. The tumor can be treated by radiation or surgery.

It's not a pleasant prospect, but *breakthrough pain,* or pain overlaying pain, is common for people with cancer. Breakthrough pain occurs when the individual has a continuous level of pain and then, despite using painkillers, even more pain breaks through, causing the pain level to soar. More than half of people with cancer report this type of severe pain. Breakthrough pain is often treated with opiates. A short-acting drug may be combined with a long-acting drug to combat breakthrough pain.

Shingles pain and cancer

Shingles, a painful re-outbreak of the chicken pox virus that you had as child, can strike people with cancer because their immune systems are so impaired. Shingles attacks can lead to post-herpetic neuralgia, which is extremely painful and difficult to treat. (For more information on post-herpetic neuralgia, see Chapter 11.) Treatment for shingles includes painkillers, as well as sedatives, antidepressants, and anti-seizure medications.

If you have breakthrough pain at predictable intervals, head it off by taking a painkiller a half hour or so *before* the pain usually strikes.

The WHO? The World Health Organization

Yes, the WHO was a '70s rock group, but there's also the WHO as in the World Health Organization, an international group devoted to medical issues. According to WHO, about 90 percent of all cancer pain is treatable. In fact, WHO developed a *treatment ladder,* shown in Figure 12-1, which is widely used by physicians around the world as a guideline for treating cancer pain.

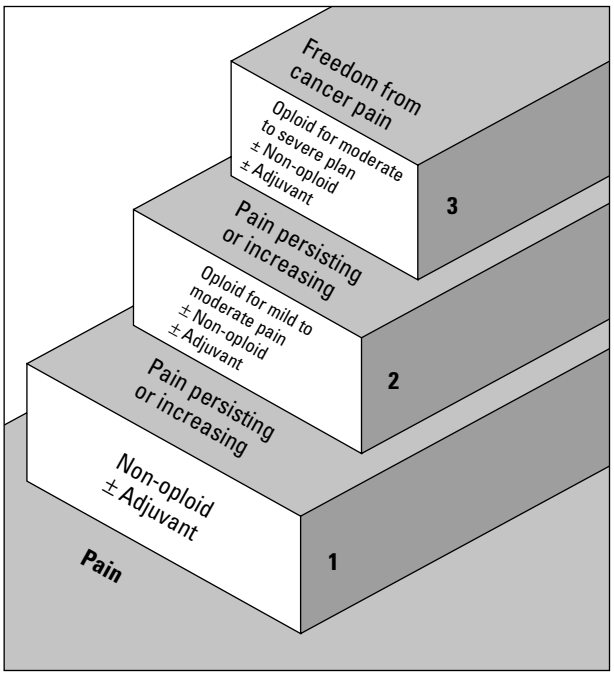


Figure 12-1: WHO analgesic ladder.

www.who.int/cancer/palliative/painladder/en/index.html

The American Cancer Society's position on pain medicines

Many people fear becoming addicted to pain medicines. But, in fact, the American Cancer Society's official position is the following: "People who take cancer pain medicines, as prescribed by the doctor, rarely become addicted to them: Addiction is a common fear of people taking pain medicine. Such fear may prevent people from taking the medicine."

The American Cancer Society also says that fear of possible addiction may cause family members to encourage a cancer patient to "hold off" as long as possible between doses. This is a bad idea! Instead, pain should be treated before it hits a peak. Otherwise, it's much harder to control it.

When opioids (also known as narcotics) — the strongest pain relievers available — are used for pain, they rarely cause addiction. When you're ready to stop taking opioids, the doctor gradually lowers the amount of medicine you're taking. By the time you stop using the drug, the body has had time to adjust. Talk to your doctor, nurse, or pharmacist about how to use pain medicines safely and discuss any concerns you have about addiction.

The analgesic ladder has three steps:

1. **Start with non-opioid analgesics for mild pain.**
2. **If non-opioids don't provide relief, move to weak opioids in addition to, or without, a non-opioid.**
3. **If the weaker opioids don't work, use stronger opioids for more severe pain or combine non-opioids with stronger opioids in this stage.**

In 2006, on the 20th anniversary of the launching of the WHO analgesic ladder, Dr. Kathleen Foley, former chair of the WHO Expert Committee on Cancer Pain Relief and Active Supportive Care, made important clarifications to the WHO analgesic ladder. Many of these suggestions are important to understand if you or a loved one has cancer pain.

- Your goals as a cancer patient and your doctor's goals should be to
  - Increase your hours of pain-free sleep
  - Relieve your pain when you're resting
  - Relieve your pain when you're standing or active
- Drugs alone can usually give you adequate relief from pain caused by cancer.
- The drug must be given in the right dose and at the right time.
- Taking all pain-killing drugs by mouth is preferred.

- Take your drugs by the clock for persistent pain. In other words, take painkillers according to directions at the prescribed times, not as needed or when you think of it.
- The right dose of an analgesic is the dose that relieves your pain. For example, the dose of oral morphine may range from as little as 5 mg to more than 1,000 mg depending on the patient's tolerance level.
- Adjuvant drugs should be prescribed as indicated. (For information about adjuvant drugs, check out the upcoming section "Checking Out Helper Drugs.")
- Pay attention to detail. Be sure to tell your doctor(s) whether the painkillers you're taking are working. Maybe you need a different drug. Your goal is to receive the maximum benefit with as few side effects as possible.

Educating Yourself about Opioids

If you or a loved one has extensive tumors, you may quickly progress to the third step on the WHO ladder. (See the section "The WHO? The World Health Organization," earlier in this chapter, for more on this ladder.) If so, opioids are the core treatment for your cancer pain. Different types of opioids help with different types of pain.

- **Short-acting opiods:** If pain strikes primarily when you're active, such as when you're shopping at the grocery store, visiting your grandchildren, or doing housework, then your doctor may prescribe a short-acting opioid to help you continue with these activities. Examples of short-acting opiods are oxycodone or hydromorphone.
- **Long-acting opiods:** If your pain is a constant companion, your doctor may prescribe long-acting opioids. Examples of long-acting opioids are MS Contin, OxyContin, Methadone, and Duragesic. You may also need a low dose of a short-acting opioid.

Unfortunately, most people who've been taking opioids for a long period of time develop a tolerance to the opioid that they're using for pain. Tolerance means that it takes increasing dosages to achieve the same level of comfort that you were getting from your opioid medication. (For more information on tolerance to opioids, see Chapter 14.) Your doctor may use several methods to help you if you develop tolerance, including rotating with another opioid and adding in another type of drug called an *NMDA antagonist,* which can reduce pain sensitization within the central nervous system.

If your cancer progresses, you may not be able to take medication by mouth because of nausea. Fentanyl is an opioid available in a skin patch. It skips the

digestive system altogether and is one substitute option. (If you and your doctor are considering Fentanyl patches, be sure to see the warning about the patch in Chapter 14.)

Your medical providers can also give you opioids by other routes. Less invasive methods include injections or infusions in muscles, veins, or under your skin. More invasive methods include inserting tubes in the space around the spinal cord *(epidural catheters)* or in the spinal cord *(intrathecal catheters).*

In addition, *patient-controlled analgesic devices* (PCAs) offer you the flexibility to control the delivery of your pain medication when you need it (within a limit set by your doctor). PCAs are usually used for intravenous (IV) opioids, which means that the opioid goes into your vein through tubing.

The handy devices can even be carried in your pocket. When you feel pain, you push a button, and pain medicine is delivered through the tube. Because you're the one with the pain, only you push the button.

You may decide that you'd rather live with the pain of cancer than put up with the drowsiness, hallucinations, and other side effects that can occur with opioids. Obviously, this choice is up to you.

If the opioids you're taking make you feel drowsy and/or confused, your doctors may be able to prescribe other medications to help with these side effects, such as stimulants or helper pain drugs (called *adjuvants*). If this approach is successful, you may be able to lower the dose of the opioid you are taking.

Checking Out "Helper" Drugs

If you or a loved one has side effects from cancer medications and/or the drugs are not managing your pain, adding helper drugs, called *adjuvant analgesics* may work for you. (*Adjuvant* means something that helps or assists.)

Adjuvant analgesics don't relieve pain on their own, but instead can boost the relief given by analgesics when taken along with them. Your doctor may prescribe these medications for you along with opioids and NSAIDs. Adjuvants are often used for bone pain and may also be prescribed together, such as an antidepressant and a bisphosphonate.

The following list gives examples of frequently used helper drugs for cancer.

- **Antidepressants,** such as amitriptyline (Elavil) and nortriptyline (Pamelor), can provide nerve pain relief and help people sleep better. Side effects may include dizziness and gastrointestinal problems. The drugs usually take a couple of weeks to take effect.

Resources for people with cancer pain

If you or a loved one has cancer, you have access to a wide range of valuable services, including a Web page on pain management and support networks of people with the condition. Resources include

American Cancer Society (ACS); phone 800-ACS-2345, 866-228-4327 for TTY; Web site www.cancer.org. ACS provides a Web page about pain management for people with cancer: click Coping with Physical and Emotional Changes on the ACS site index. ACS also publishes the *American Cancer Society Guide to Pain Control*, Revised Edition, $15.95, available online at the society's bookstore.

Cancer*Care,* 275 Seventh Ave., Floor 22, New York, NY 10001; phone 800-813-HOPE (4673); Web site www.cancercare.org. Cancer*Care*'s programs include free counseling, education, and practical help provided by trained oncology social workers.

Cancer Hope Network, 2 North Road, Suite A, Chester, NJ 07930; phone 877-467-3638; Web site www.cancerhopenetwork.org. The Cancer Hope Network matches patients with trained volunteers who have gone through similar experiences.

The Wellness Community, 919 18th St. NW, Suite 54, Washington, DC 20006; phone 888-793-WELL; Web site www.thewellnesscommunity.org. The Wellness Community provides free, professionally led support groups, educational workshops, nutrition and exercise programs, and mind/body classes for people with cancer.

- **Anticonvulsants,** such as Neurontin (Gabapentin), were originally developed to help control seizures, but they can also relieve tingling or burning from nerve injury (neuropathic pain). (See Chapter 11 for information on neuropathic pain.) Like antidepressants, the benefits of anticonvulsants take awhile to kick in. If you're taking an anticonvulsant, your doctor will want to run drug tests frequently because these drugs can damage the liver and reduce the number of red and white cells in the blood.
- **Bisphosphonates,** such as Actonelor Fosamax, are drugs that help slow down bone loss. They're used to treat cancers that have metastasized to the bones. Cancer cells in the bones cause the breakdown of too much tissue, weakening bone and putting you at high risk for fractures. The breakdown of bone cells also causes pain. Bisphosphonates can reduce both the pain and fractures. On the down side, bisphosphonates may cause upper gastrointestinal disorders, such as esophagitis, esophageal ulcer, and gastric ulcer.
- **Radiopharmaceuticals** are targeted drugs injected into an individual's veins. They accumulate in cancerous bone tissue and give off radiation that kills the cancer cells and can significantly relieve pain. Strontium chloride Sr 89 (strontium-89) is the most common radiopharmaceutical used to treat bone cancer or cancer that has metastasized to the bone.

When Medicine Isn't Enough

The harsh reality is that medications don't always conquer cancer pain. If this situation is the case for you or your loved one, several other treatments can reduce pain by shrinking tumors. Radiation is often the first choice. In addition, nerve blocks or implanted pumps may help relieve pain. When a tumor presses on nerves or other body parts, surgery may also help. (See Chapter 16 for more information on nerve blocks, pain pumps, and surgery.)

Part III

Managing Your Pain Medically

The 5th Wave By Rich Tennant

"It says to avoid strenuous activities such as wing walking, bear wrestling, or trying to find out if this medication is covered by your insurance company."

In this part . . .

This part gives you the information you need to start taking care of your chronic pain medically. We share information to help you put together an anti-pain team.

We cover the benefits and side effects of a wide range of drugs used against chronic pain. We also explore the potential benefits and risks of complementary and alternative medicine and help you separate the legit from the bogus. Finally, we give you an overview of the surgical options for chronic pain.

Chapter 13

Putting Together an Anti-Pain Team

In This Chapter

- Uncovering the right doctors
- Discovering the types of health-care providers available
- Checking out national resources and support groups
- Sharing information with your doctor

When you have a chronic pain condition, you need your own anti-pain team, but what on earth is that? Well, your treatment is likely to involve a number of medical professionals and paraprofessionals, such as a primary care physician (PCP), a medical specialist, a physical therapist, a massage therapist, a dietician, or others. Such experts are members of your anti-pain team.

Of course, you want a cracker-jack team to help tame your pain into a reasonable level of submission. To ensure the success of your team in combating your pain problem, enlist professionals with whom you're comfortable and who have the skills and experience to help you reduce your pain and actually enjoy your life. (Maybe you haven't had that experience for awhile!) Forming a team, though, doesn't just happen; it does require research on your part. To make your job easier, this chapter provides detailed information on what to look for in a doctor and questions to ask when assembling your team.

Understanding How a Team Helps You

If the word *team* scares you a little because you think you'll have to spend a lot of time managing the players, don't panic because the opposite is true.

Setting up an effective anti-pain team means that you'll spend less time with your doctors and other health providers and more time enjoying your life. With a skilled and efficient team, you won't have gaps in your care or treatment, which means you should have less pain. Also, the time you do spend with providers will be better spent, and you won't be going from health provider to health provider looking for relief that somehow never comes.

Once your team is assembled, be upfront with your care providers. The more the members of your team know about you and your chronic pain condition, the better they can do their jobs.

Assembling Your Team

You're the only one who knows what your pain feels like, so you're the only one who knows if and when your pain treatments are working. For these reasons, the person who should manage your anti-pain team is you.

An important responsibility of managing your team is to be informed about your condition or conditions so that you can communicate effectively with all the providers in your group. One way to educate yourself is to take advantage of resources available through national associations and support groups. (Read about these resources in the section "Educating Yourself as Much as Possible," later in this chapter.)

The first member on your team is your primary care physician (PCP), so you want to be extra careful when selecting this person. As the manager of your team, you'll be responsible, along with your PCP, for finding and recruiting the rest of the players.

An anti-pain team that works for someone else, even if that person is close to you, may not work well for you.

One of the first actions you should take as manager of your team is to make sure that you've lined up a qualified primary care physician who you feel respects and listens to you. A good primary care doctor will get to know you and your physical, psychological, and social situation. This big picture of you puts your doctor in a great position to help you take charge of your chronic pain. (The doctor acting in this capacity may also be a specialist such as a rheumatologist or pediatrician.)

What primary care physicians do

Primary care physicians hail back to the old-style family physician. In fact, your best choice for a primary care physician may be a family doctor whom you've been going to for many years.

The primary care physician looks at the whole person, not just one body part or disease state, which is particularly important because chronic pain affects all parts of your life. Many primary care physicians keep up to speed on treating pain and companion problems, such as depression and fatigue, and give you first-rate care. Often, they try to treat you before sending you to a specialist, such as a rheumatologist, cardiologist, or doctor who specializes in pain management.

Your primary care physician oversees all medical care. You see the doctor on a regular basis, and he conducts physicals to assess your overall health. He'll also order lab tests, refer you to and keep a list of the other doctors you see, and maintain records of your health conditions. In fact, the other doctors you see send a report back to your primary care physician every time you visit them. Your primary care physician also oversees all your medications, which helps prevent duplication, overmedication, and toxic drug reactions.

Your primary care physician may have taken care of you for years. In that case, use the following sections to assess her to make sure that continuing with this doctor is the right thing to do. If you're looking for someone new, use the guidelines in these sections to find the right person.

Primary care doctors come in different types with different backgrounds and skill sets, which may make a difference in your care.

- *General practitioners* or family doctors take care of the entire family. Their training enables them to diagnose and treat health problems of patients from childhood to older age. They're a great option if you prefer one doctor to get to know and take care of you and your whole family.
- *General internists* are trained in the wide range of adult health problems. As a general rule, they do not provide care for children.
- *Pediatricians* are internists who care for and treat children from birth through the teens. If your child has chronic pain, you'll want to find a pediatrician experienced in treating the condition causing the problem.
- *Geriatricians* are internists who care for and treat older adults. If you or a loved one is over age 65, geriatricians are a great choice because of their special training in taking care of age-related health problems. In addition, because chronic pain is common for older adults, geriatricians are usually quite knowledgeable about treating people who are hurting.

Resources for locating a PCP include these association Web sites where you can find lists of certified doctors who practice in every area of the country:

- **American Academy of Family Physicians:** `http://familydoctor.org`
- **American Board of Internal Medicine:** `www.abim.org`
- **American Academy of Pediatrics:** `www.aap.org`
- **American Geriatrics Society:** `www.americangeriatrics.org`

Searching for the Right Doctor

When looking for a PCP or any other doctor on your team, you need to know about their expertise level. In fact, you have the right to know this information. You also need to identify what's most important to you in your relationship with your doctors so that you can make the best choices. The following sections arm you with information to achieve both tasks.

Getting recommendations

How do you find the right doctors for your anti-pain team? If you have a good relationship with a physician — someone you respect and are comfortable with — you may want to start by talking to him. In addition, your family, friends, coworkers, and other health professionals can often help you.

Ask people you know these questions:

- What do you like about your primary care physician?
- Do you know any physicians who treat people with my condition?

You should collect several names because some physicians may not have some of the criteria that you'll want your doctor to meet. (For more on this topic, see the next section, "Figuring out what skills are important to you.") A doctor who is mentioned frequently may be a good one to check out.

If you need more help finding names of good doctors, your insurance provider may be a good resource. Also ask local doctors, local hospitals, or medical centers, medical societies, or medical schools in your community for the name of a doctor who treats your condition. You may even be able to call a county medical society.

In addition, if you belong to a managed-care plan, the plan's membership services office can give you a list of its approved doctors. We provide information on this topic in the sidebar called "Working within a managed-care plan" later on in this chapter.

Figuring out what skills are important to you

If you're like most people, you want your doctor to have great people skills. A 2005 survey of 2,267 adults by Harris Interactive Polls studied this issue. The researchers wanted to know what characteristics people look for when choosing a doctor. Eighty-five percent said it's extremely important for doctors to be respectful. They also wanted their doctors to carefully listen to their health concerns and questions (84 percent); be easy to talk to (84 percent); take their concerns seriously (83 percent); and be willing to spend enough time with them (81 percent). In the Harris survey, these people skills rated higher than good medical judgment (80 percent)!

People skills are very important for doctors who treat patients with chronic pain because you can't measure hurting with blood tests or medical instruments. Pain is a subjective problem, and the only way the doctor can learn about it is through eye contact and conversation.

You also may have your own personal criteria for choosing a doctor. For example, many women prefer to go to female physicians, and some men prefer male doctors. Some people like to go to doctors who practice the same religion that they do. Some patients want to see only seasoned doctors who have been practicing for well over a decade. Others prefer that their doctors be in their early 30s because they feel that younger doctors are more aware of the latest treatments. Your personal criteria are important because they can affect your ability to relate to and trust your primary care physician. For example, if you're a woman who prefers female doctors, it may be because you don't feel comfortable taking your clothes off for a physical examination by a male doctor. Or, if you don't agree with your doctor's religious orientation, you may not trust her judgment when it comes to important medical decisions.

Don't talk yourself into a doctor who doesn't meet your criteria unless you are in a remote area and your options are very limited.

Checking out a doctor's qualifications

Not only is it important that your primary care doctor have great people skills and meet your personal criteria (see preceding section), but you'll also want your physician to be smart, up-to-date on new pain treatments and other important medical issues, and have great credentials.

When looking for a primary care physician, be prepared to do a little digging about her background and practice. A call to the doctor's office will probably give you the information you need. Doctors' staffs are usually trained to answer the following questions:

- **What are the doctor's professional credentials?** You want to know whether your doctor graduated from an accredited medical school. Ask the doctor's nurse or other staff where he went to medical school and then contact the Association of American Medical Colleges (AAMC) by calling 202-828-0400 or visiting its Web site at `www.aamc.org` to see whether the school is accredited.

  If the doctor graduated from a school in another country, the school won't be accredited by or listed on the AAMC Web site. However, you can check to see whether the country where the school is located uses U.S. standards to accredit its medical schools — 35 countries do so. The National Committee on Foreign Medical Education and Accreditation's Web site (`www.ed.gov`) lists these countries.

- **Is the doctor board certified?** One of the best ways to evaluate primary care physicians is to be sure that they're *board certified,* which means they had extra training after medical school in a field of medicine, such as family practice, internal medicine, or geriatrics, and passed a comprehensive examination in their specialty. To check out specific doctors, go to the American Board of Medical Specialties Web site at `www.abms.org` or call its hotline at 800-776-2378.
- **What are the doctor's professional affiliations?** Your doctor should have hospital privileges with a large, well-equipped hospital, which means he may admit patients to that hospital.

Evaluating whether a doctor fits your circumstances

Some doctors have great people skills or excellent medical qualifications, but other characteristics are deal breakers. For example, maybe you're interested in a particular doctor who is very successful at treating people with your condition, but the office isn't accessible by public transportation — and you don't drive or have a car.

Consider the following factors about a potential doctor's practice:

- **Type of health insurance:** Does the doctor accept your insurance? If not, it's a deal breaker. Keep looking.
- **Location of the office:** Is the office close by and convenient? Is parking easy to use? Is the office near public transportation?
- **Lab work:** Will you need to go to another location for blood tests? If so, how far away is it from the primary care physician's office? Is the lab that the doctor uses covered by your insurance?

- **Coverage:** Who will you see when the doctor isn't available? Are these doctors qualified? Do they see a lot of patients with your same health condition?
- **Hospital affiliation:** What hospital is the doctor affiliated with? Does it accept your insurance?
- **Physician extenders:** Do you feel comfortable in a practice that employs *physician extenders* (nurse practitioners or physician's assistants) that you may frequently see instead of the doctor?

Interviewing a doctor

If you've heard good things about a doctor who meets your needs (see preceding section), you're ready to interview him. Whenever possible, interview candidates for your anti-pain team in person before committing to a specific individual and a first medical appointment. An eye-to-eye meeting can tell you a lot about a doctor's people skills. Many doctors hold meet-and-greet appointments for this purpose so that you can sit and chat for 10 minutes or so and ask questions. The bad news is that the primary care physician may charge for this time, and your health insurance may not cover the costs of the appointment. But if you can swing the expense, it'll be worth it to help rule out doctors who aren't a good fit — and rule *in* physicians you like!

A major purpose of the interview is to discover the doctor's approach to managing pain. While many doctors are good at pain management, some primary care physicians don't focus on helping patients control pain, and they don't keep informed about new medications and techniques. When you go to your meet-and-greet meeting, ask the doctor or staff the following questions:

- **Do you have many patients with my type of chronic pain?** Of course, you should ask this question after you explain what your main problem is! The doctor doesn't have to give you an actual number, but should have a good idea what percentage of his practice has chronic pain. If he says less than 20 percent, proceed with caution. The doctor may not have as much experience as you'd like in treating patients with your condition.
- **How do you evaluate your patients' pain?** Hopefully, the doctor uses pain scales, a list of questions, or a similar technique to assess her patient's pain problem. (Read more about these evaluations in Chapter 17.) However, as long as the doctor makes a point to always discuss pain with her patients, this doctor still may be a great candidate.

- **What is your success rate in controlling my type of pain?** Of course, you'd love it if the doctor said, "100 percent!" but that number isn't realistic. However, the doctor saying something like, "Some people do well on XYZ, and others do well with ABC therapy," is a good sign that he's helping a number of people with a problem similar to yours, is willing to try different treatments to find the right one, and is having some success.
- **Do you have any special qualifications to treat my chronic pain?** Ideally, you'd like the doctor to have taken additional training in pain therapy, but a primary care physician with this type of qualification is hard to find; this issue should not be a deal breaker. If the doctor sees, diagnoses, and treats many patients with your condition, this hands-on experience may work well for you.
- **What is your approach to using medications to treat my type of chronic pain?** You're looking for a doctor willing to work with you to find the best medications for your chronic health problem.
- **What is your approach to using alternative or complementary medicine to treat my type of chronic pain?** You may prefer a doctor willing to try nontraditional approaches, such as acupuncture and biofeedback. If so, this question is important. If the doctor pooh-poohs these approaches, then he's not for you.
- **What is your approach to referring your patients to specialists, such as rheumatologists, cardiologists, or neurologists?** You want the doctor to be willing to refer you when your pain control needs are more specialized than treatments he can offer.
- **What pain treatments or therapies would you start with, and what would you do next if the first one doesn't work?** Your doctor should have a lot of experience with this issue. The answer should reflect this experience and be specific. If the doctor brushes off the question, proceed with caution.
- **What is your approach to treatments such as nerve blocks?** The answer to this question may be, "Only as a last resort." But the doctor should have some patients who have had these procedures. If not, he may not have enough experience treating patients with severe chronic pain.

Finding a specialist

A smoothly running anti-pain team addresses the major problems relating to your pain and makes you feel comfortable and safe, which often means including specialists who either focus on the condition itself or on pain management in general.

Condition specialists

Many people with chronic pain have a specialist on their team who helps them manage their particular condition and the pain it causes. For example, if you have migraines it's likely that a neurologist who specializes in caring for people with severe headaches is an important member of your team. Or, if you have cancer-related pain, it's a good bet that your oncologist is a central member of your team.

The following is a list of common pain problems and the specialists that treat them.

- **Arthritis:** Rheumatologists, orthopedic surgeons, physical medicine, and rehabilitation specialists
- **Asthma and allergies:** Allergists and otolaryngologists
- **Cancer-related pain:** Oncologists and anesthesiologists
- **Central pain syndrome:** Neurologists
- **Chest pain:** Cardiologists and pulmonologists
- **Colon and/or rectal pain:** Gastroenterologists and colon and rectal surgeons
- **Diabetes pain:** Endocrinologists
- **Digestive system problems:** Gastroenterologists
- **Ear, nose, throat, head or neck pain:** Otolaryngologists
- **Eye pain:** Ophthalmologists
- **Fibromyalgia:** Rheumatologists and immunologists
- **Headaches:** Neurologists and headache pain specialists with certificates of added qualification in headache management (see Chapter 6)
- **Inflammatory bowel problems:** Colon and rectal surgeons
- **Kidney pain:** Nephrologists
- **Lung pain:** Pulmonologist
- **Multiple sclerosis:** Neurologists
- **Neuropathic pain:** Neurologists
- **Occupational pain (chronic pain that is aggravated when at work):** Occupational medicine specialist
- **Pelvic floor pain (in woman):** Urogynecologists
- **Prostate pain in men:** Urologists

- **Skin conditions:** Dermatologists
- **Spinal cord and nervous system diseases:** Neurologists
- **Stomach pain:** Gastroenterologists and hepatologists
- **Stroke-related pain:** Neurologists
- **Urinary tract pain:** Urologists and nephrologists

You can read more about these pain-causing conditions in Part II.

Pain management specialists

If your pain is *intractable* (it won't go away or lessen), you may want to consider visiting a doctor who specializes in pain management. Pain specialists diagnose the cause of pain and then treat it. A pain specialist works closely with your primary care doctor to assess the cause of your pain and find an appropriate treatment option.

As with primary care doctors, pain specialists have different backgrounds and expertise:

- *Anesthesiologists* are traditionally known for making sure that patients are safe and pain-free during and after surgery or childbirth. In recent years, their role has expanded to include pain management outside the operating or delivery room.
- *Neurologists* diagnose and treat diseases of the nervous system, which processes pain signals throughout our bodies.
- *Neurosurgeons* perform surgery on the nervous system.
- *Psychiatrists* treat and diagnose mental health problems associated with chronic pain.
- *Physiatrists* specialize in physical medicine, a branch of medicine that deals with the treatment, prevention, and diagnosis of disease by physical means such as manipulation, massage, and exercise.

When looking for a pain specialist, make sure that you know the type of professional who you want to work with. For example, anesthesiologists are likely to prescribe medications for your pain. Neurologists or neurosurgeons are likely to suggest nerve blocks or surgeries if warranted. Physiatrists will do physical restoration and may prescribe medication, but do not perform surgery. And psychiatrists will conduct behavioral therapy or a similar approach.

For a comprehensive evaluation and approach to pain management, consider visiting a comprehensive pain clinic, which usually has all types of pain specialists on staff in addition to physical therapists and other professionals. Read about pain clinics in the upcoming "Locating a pain center" section.

The Web sites of these associations offer lists of pain specialists in every area of the country:

- **American Academy of Pain Management:** www.aapainmanage.org
- **American Academy of Pain Medicine:** www.painmed.org
- **National Pain Foundation:** www.nationalpainfoundation.org

Other pain professionals and paraprofessionals

Many types of professionals and paraprofessionals who aren't medical doctors can help you manage your pain. Some providers, such as physical therapists, are traditional members of health-care teams, while others are new to the mix. For example, more people than ever successfully use massage to help manage their pain; just a decade ago, massage therapy was regarded as a luxury.

The following are key health providers you may consider as members of your team:

- *Physical therapists* (PTs) may be among your best friends. Many people with chronic pain say that their PT is the one who makes them feel better day in and day out. (However, if you've ever had major orthopedic surgery, you probably encountered a PT who, at the peak of your post-surgical pain, made you get up and move around to get your lungs moving. Not a fun experience!)

  Physical therapists help their patients return function to injured or damaged parts of their bodies, improve the ability to move around, and relieve pain. They also use techniques that promote overall fitness and health, all of which contribute to pain reduction.

  Treatment by a PT can include electrical stimulation, hot packs, cold compresses, and ultrasound to relieve pain and reduce swelling. They may use traction or deep-tissue massage to relieve pain. Therapists also teach patients to use devices, such as crutches, prostheses (replacements for body parts), and wheelchairs. They also may show patients exercises to do at home to reduce pain and aid recovery.

  Some physical therapists treat a wide range of ailments; others specialize in areas such as pediatrics, geriatrics, orthopedics, sports medicine, neurology, and cardiopulmonary physical therapy.

PTs who are members of the American Physical Therapy Association are bound by its code of ethics and are licensed by the state in which they practice. You can find a list of credentialed PTs at its Web site (www.apta.org).

- *Occupational therapists* help people with chronic pain get along better in daily life and at work. They can help you learn or relearn how to carry out activities in new ways to lessen pain, such as using a computer or cooking in a different way than you've done before. If you have a permanent disability, such as a spinal cord injury or rheumatoid arthritis, they teach you how to use adaptive equipment, such as wheelchairs, *orthotics* (devises that help support a limb or other body part), and aids for eating and dressing. They can also design or make special equipment you may need at home or at work.

  To find a qualified occupational therapist, contact your state Occupational Therapy Association. All 50 states, the District of Columbia, and Puerto Rico have an association. Contact information for every state is on the American Occupational Therapy Association's Web site at www.aota.org.

- *Recreational therapists* use a variety of techniques, such as sports, dance, drama, and aqua-exercise, to help clients manage their pain. Often, you find them in hospitals and other facilities running beneficial exercise programs, such as warm water exercise for people with arthritis and other painful conditions or gentle sports programs for children with asthma. The National Council for Therapeutic Recreation Certification (www.nctrc.org/aboutnctrc.htm) is the nationally recognized credentialing organization for recreational therapists.

- *Dietitians* can help you plan special diets to better manage the condition causing your pain. They also help patients prevent and treat illnesses by promoting healthy eating habits and recommending dietary modifications, such as eating less salt for people with high blood pressure or consuming less sugar for people with diabetes. Look for a dietician who has received accreditation from the Commission on Accreditation for Dietetics Education at www.cdrnet.org.

- *Fitness instructors* can help people with pain enjoy exercise and get its benefits without causing new or further injury. Many organizations certify fitness instructors. One way to ensure that a certifying organization is reputable is to check whether it's accredited or seeking accreditation by the National Commission for Certifying Agencies (www.noca.org/ncca/accredorg.htm).

- *Massage therapists* use rubbing, stroking, and other manipulations on your soft tissues to improve your body's circulation and remove waste products from your knotted muscles. The treatment can loosen up and soothe a stiff and sore body.

Massage therapists can specialize in more than 80 different types of massage, such as Swedish massage (rubbing in the same direction as the flow of blood) and *acupressure* (applying pressure to key points on the skin). Talk with your primary care physician and/or physical therapist about the type of massage that would be most beneficial for you.

- *Orthotists and prosthetists (O and Ps)* help patients with disabling conditions of their arms, legs, or spine or with the loss of a limb by fitting and preparing orthopedic braces and prostheses. Materials originally developed for aerospace and new technologies have resulted in great advances in this industry. For example, people who have lost a foot can now purchase a special prosthesis for golf or tennis with custom muscle sensors and computer chips that enable them to comfortably enjoy their sport.

  If you need the services of these professionals, find a highly trained and competent provider because an ill-fitting devise can cause pain and loss of mobility. Look for a professional who is a member of the American Academy of Orthotists and Prosthetists (`www.opcareers.org`).

Educating Yourself as Much as Possible

Many other factors can influence the quality of your anti-pain team and the care it provides. For starters, the type of insurance you have can have wide-reaching effects on your care. For example, if you have fibromyalgia and the top fibro specialist in your town isn't covered by your insurance company, you may want to consider switching to a different plan.

Also, the type and quality of the hospital in which you're treated are keys to quality care. Recent studies have shown that patients at better hospitals have better results.

Last, roll up your sleeves and discover as much as possible about chronic pain and how to manage it. If you educate yourself, you'll make confident decisions.

Identifying a hospital

Depending on where you live, your health insurance, and other circumstances, you may not have a choice of hospitals available to you. However, hospitals differ greatly in staff competence, care quality, and success rates with different conditions. If you do have a choice, do a little detective work to find the best option for you. Here are some guidelines:

Working within a managed-care plan

If your insurance is through your employer or you are a Medicare beneficiary, you may be in a *managed-care plan.* These plans control the cost and delivery of health services by contracting with a network of doctors, hospitals, and other professionals.

Managed-care plans come in three major types:

- **Health Maintenance Organizations (HMOs)** contract with physicians, hospitals, and other providers who belong to their provider networks. Members select primary care physicians from the HMO's network, and that doctor oversees all aspects of the member's care. If you belong to an HMO, you can see a specialist or other "outside" providers, such as rheumatologists or physical therapists, only if your primary care physician authorizes it. If you visit a specialist on your own, your HMO won't pay for it.
- **Preferred Provider Organizations (PPOs)** are similar to HMOs, but provide more flexibility. They also contract with healthcare providers to form provider networks. However, unlike HMOs, members don't have to have primary care providers, and they don't have to use one of the plan's contracted providers for their care. However, if you belong to a PPO, you pay less if you see the plan's doctors instead of someone outside the network, and you probably won't have to get a referral to see a specialist.
- **Point-Of-Service Plans (POSs)** are options in which members can choose to use an HMO or PPO each time they seek health care. Seeing a specialist depends on which alternative they choose.

It's important to understand how the plans operate because they often differ in how they work with primary care physicians and whether they allow referrals to pain and other specialists.

Two associations offer lists of managed-care plans for consumers in every area of the country. While they don't rate plans according to success in pain management, their evaluation measures show which plans are doing the best job of overall patient care:

- **The National Committee for Quality Assurance (NCQA)** evaluates and rates managed-care plans. NCQA's Health Plan Report Card (`http://hprc.ncqa.org`) is an interactive tool that can help consumers find health plans that fit their particular needs.
- **URAC,** which used to be called the Utilization Review Accreditation Commission until 1996 when its name was shortened, develops quality (accreditation) standards for managed-care plans. For a list of accredited managed-care programs, go to `http://webapps.urac.org/directory/dirsearch.asp`.

- Find out whether the hospital offers the full range of services needed to treat your condition and its expertise and success rate with it. For example, if you have rheumatoid arthritis and live in a rural area, your hospital may not have experience in treating your condition, and you may have to go out of your geographic area to find the care and pain control you need.

- Some government agencies or voluntary health organizations accredit or designate hospitals specializing in conditions, such as cancer, cardiac care, or rheumatology. Make sure that the hospital you're considering has received such an acknowledgment. To locate the appropriate contact information, check out the chapter in Part II that addresses your condition. For example, to find a hospital designated as a cancer care center, check with the National Cancer Institute or American Cancer Society. Its contact information is listed in Chapter 12.
- In some cases a hospital that conducts research into the cause and treatment of your condition is a good choice. To locate such hospitals, use the contact information provided in the chapter in Part II that relates to your condition.
- Find out whether the hospital has programs to improve patient safety and reduce medical errors. Most hospitals are now introducing such programs, and those that aren't are behind the times.
- Some states prepare reports showing outcomes for certain procedures, such as open-heart surgery. If your state publishes such information, find out the outcomes for the hospitals in your area.
- The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) sets quality standards for hospitals. Reviews are done at least every three years. Most hospitals participate in this program, and it's a red flag when a facility doesn't follow JCAHO standards. To find hospitals in your area that adhere to JCAHO's quality standards, go to `www.jcaho.org`.

Locating a pain center

Being evaluated and treated at a pain center can be a lifesaver for people with relentless pain. Based on the understanding that chronic pain affects many areas of victims' lives, pain centers offer a broad range of evaluation and care. The staffs of pain centers typically include specialists from all medical disciplines, such as anesthesiologists, neurologists, neurosurgeons, physiatrists, psychiatrists, nurses, physical therapists, occupational therapists, counselors, nutritionists, and recreational therapists. Evaluation and treatment in pain centers can range from short-term and outpatient to extensive in-facility care.

The Commission on Accreditation of Rehabilitation Facilities (CARF) provides a listing of pain programs that meet its quality standards. Your health insurance may require that any program you visit be accredited by CARF (`www.carf.org`).

Exploring resources from condition-specific organizations

The old adage that information is power is particularly appropriate for managing chronic pain. The more you know about your health problem and the pain it causes, the better prepared you are to manage both. And, when you have up-to-date information about your condition and its treatments, you and your primary care physician can recruit a cracker-jack anti-pain team.

Be sure to look over the relevant chapter in Part II that addresses your pain condition and check out the resources listed there. In addition, the following Web sites offer information about managing pain and pain-causing conditions:

- **The National Pain Foundation:** `www.nationalpainfoundation.org`
- **The American Chronic Pain Association:** `www.theacpa.org`
- **The American Pain Foundation:** `www.painfoundation.org`

You can also find information specific to many pain-causing conditions on these Web sites:

- **The Cleveland Clinic:** `www.clevelandclinic.org`
- **Mayo Clinic:** `www.mayoclinic.com`
- **National Library of Medicine:** `www.nlm.nih.gov/medlineplus/healthtopics.html`

Joining a support group

The support and help of those who "have been there" and who also suffer from chronic pain can lessen your feelings of isolation, give comfort, and provide you with first-hand recommendations of providers and services. A first-rate support group focuses on positive ways to manage pain and doesn't wallow in the negatives of the condition. (In other words, support group meetings aren't pity parties.) Here are key resources for finding a group near you or on the Web:

- **The American Chronic Pain Association** (`www.theacpa.org`) has support groups across the country.
- **The American Pain Foundation's PainAid** (`http://painaid.painfoundation.org`) service is an interactive online community for

people with acute and chronic pain. It offers live chats, discussion boards, message boards, and Ask the Experts chat rooms.

- **The National Pain Foundation's My Community** (`www.nationalpainfoundation.org/MyCommunity`) offers a monitored online chat group and question and answer service.

Telling Your Doctors What They Need to Know

Incomplete and garbled information can result in a frustrating situation and a missed opportunity. If your doctors don't have complete and accurate information about you, their treatment of your health condition will likely be off target. When your health is at stake, being off target can have painful and serious consequences.

The following sections provide important topics to address so that your doctors have the information they need to give you first-class care.

Overcoming shyness

If you're like most people, your contacts with your doctors are one of the most intimate relationships you have. One of this book's authors, Dr. Kassan, puts it this way: "Some of my patients tell me things they don't tell anyone else. It's an honor." In fact, you, the patient, must tell your doctors the most intimate personal details about your health even if you've just met. Often, you'll also have to undress and allow the doctor to poke into private parts of your anatomy. Most people are uncomfortable with such exposure.

It's extremely important to override any feelings of discomfort and embarrassment you may have and to tell your doctor about all current and past health care problems that may be related to your condition.

Take Glenda, for example, who has had chronic pelvic floor pain for many years, but didn't make an appointment with her primary care doctor when she noticed blood in her urine. This situation went on for months until she finally had an annual physical, and lab tests revealed the problem. Glenda had avoided the conversation about her urine out of embarrassment, even though she knew that blood in urine is abnormal and one common symptom of bladder or kidney cancer. "I just didn't want to talk about it," says Glenda. Unfortunately, Glenda had bladder cancer. So far, she has

beaten the cancer, but only after her bladder was removed, a life-changing outcome that complicated her pelvic floor pain. Glenda's story demonstrates the importance of telling your primary care doctor when health problems, signs, and symptoms occur.

Knowing what to tell your doctor

Be sure to share the following information during your exams with your primary care and other doctors:

- **All symptoms you're having:** Symptoms may include such problems as severe pain, rashes, shakiness, headaches, or stiffness.
- **Your health history:** Give the doctor a well-organized description of your present symptoms and any related personal history. For example, if your pain started soon after a car accident, tell the physician about the accident, even if the pain has moved to a different place in your body. Did your arthritis symptoms start after a tick bite? Mention it to your doctor. Many people find it helps to draw up lists to share with their doctors so that they don't forget anything. If you've created a personal health notebook, it's handy for such purposes.
- **Your pain diary:** Give the doctor the highlights from your pain diary if you have developed one.
- **A list of all medicines you're currently taking, including over-the-counter drugs:** Bring a list of your medications by name, how often you take them and at what times, and the strengths of the medicines. (You may want to copy and use the log we provide in Chapter 17.)
- **All side effects you have from your medicine(s):** Side effects are problems, such as sleepiness or rashes. Most medications and supplements have such reactions. However, each drug has its own particular set of side effects. Even aspirin can have side effects, and some painkillers have such harsh side effects that many people would rather put up with the pain than suffer through them.
- **All vitamins or supplements you take (particularly if you take them in high doses):** Vitamins and supplements can interact with any drugs you take or with each other and can be harmful in and of themselves. (See Chapter 15 for more information on how vitamins and supplements can be dangerous in certain combinations.)
- **Any relevant X-rays, tests results, or medical records:** These items may help your doctor diagnose and treat your condition.
- **Any emotional or mental health issues:** Let your doctor know whether you're depressed, anxious, or having other problems. Your doctor may be able to help with these issues, and she should know about them because they can affect your level of pain.

Chapter 14

Prescribing Medicines for Chronic Pain

In This Chapter

- Using OTC drugs to get pain relief
- Delving in to prescription medication
- Getting the right dose
- Avoiding drug and alcohol abuse

Many people turn to painkillers, both over the counter and prescribed, to alleviate or reduce their chronic pain. In this chapter, you read about the benefits and side effects of a wide range of drugs used against chronic pain. You may find that one of these medicines, either alone or in combination with another drug, works well for you.

Keep in mind that while they can reduce the severity of your chronic pain, even the most powerful medicines can't totally remove it forever. So while taking pain-killing drugs is central to the management of many types of chronic pain, you also need to try the other pain management techniques described in Parts III and IV.

Finding Pain Relief Over the Counter

If you have chronic pain, analgesics are probably an important part of your medical care. *Analgesia* means an absence of pain, but the word analgesic is used to describe drugs or treatments that lessen pain (but rarely eliminate it). Analgesics either reduce pain signals going to your brain, or they interfere with your brain's reaction to these signals.

Analgesics include over-the-counter (OTC) drugs, which you can buy without a prescription, and prescribed, nonsteroidal anti-inflammatory drugs (NSAIDs), as well as opioids.

Appreciating off-label use

All medications are officially approved by the Food and Drug Administration (FDA) for one or more medical problems. Based on their knowledge and experience, doctors sometimes practice *off-label use,* which is when they prescribe drugs for medical problems other than the originally intended use.

Most drugs have a variety of medical uses. For example, aspirin is effective against inflammation and pain, but it's also used as a blood thinner to prevent heart attacks. Similarly, many other drugs used for treating chronic pain were originally designed and marketed for other conditions, such as depression or heart rhythm problems.

Don't worry if your doctor is prescribing off label. It's accepted medical practice and perfectly legal for your doctor to use a medication off label. The only problem is that sometimes your insurer or health plan may object to paying for the particular use your doctor is recommending.

In addition, drugs that are often used for other purposes, such as antidepressants or antiseizure drugs, have been found to be beneficial (even though these other drugs aren't technically called analgesics).

OTC drugs come in many forms: tablets, patches, suppositories, sprays, creams, and ointments. OTC pain products include acetaminophen (Tylenol), aspirin (Bayer), naproxen sodium (Aleve), ketoprofen (Orudis KT), ibuprofen (Advil and Motrin), and combinations of these drugs. Less expensive generic versions of these OTC drugs are often available, sometimes from pharmacy chains.

Make sure that you know what's in the OTC drugs you're purchasing. Some pharmaceutical companies combine ingredients, such as a decongestant or antihistamine along with painkillers. Look for a drug's active ingredients, listed by generic name, on its product's label. The ingredients are listed in order of prominence on the label. One of the secondary ingredients may not agree with you. For example, Tylenol PM combines both acetaminophen and diphenhydramine hydrochloride (a drug used to treat hay fever, allergies, and the common cold). If you have trouble sleeping specifically because of your pain and you don't suffer from allergies, you could take regular Tylenol *without* the diphenhydramine hydrochloride to avoid feeling hung over and dried out the next day.

You may wonder what *extra strength* means on the labels of some painkillers. These drugs contain *more* of the main ingredient per dosage than the standard product sold by the same manufacturer. For example, regular strength Tylenol has 325 mg of acetaminophen in each tablet, and Extra Strength Tylenol has 500 mg of acetaminophen in each tablet.

Two categories of over-the-counter drugs are used to reduce pain:

- **Acetaminophen** is well known by its brand name, Tylenol. Scientists don't really know how acetaminophen works, but they know that it raises the *pain threshold.* In other words, if you take acetaminophen, you can tolerate a greater amount of pain before you feel it. Acetaminophen is used to relieve mild to moderate chronic pain and also reduces fever.
- **Nonsteroidal anti-inflammatory drugs** (NSAIDs) reduce pain, fever, and inflammation. (The term *nonsteroidal* is used to distinguish these drugs from steroids, which are also used for inflammation.) Aspirin and ibuprofen (Advil) are the best known NSAIDs. NSAIDs don't cause drowsiness, nor do they slow down breathing as some narcotics do. However, they're not problem-free. They can cause stomach ulcers and heartburn.

  While you can purchase most NSAIDs over the counter, some are available only by prescription. See the next section, "Seeking Pain Relief with Prescription Drugs," about these drugs.

OTC painkillers can be dangerous in some situations. For example, heavy drinkers should be wary of taking acetaminophen (the ingredient in Tylenol and many other OTC pain and cold remedies). Your liver will thank you if you're careful, because acetaminophen can actually be toxic to it. Of course, it's also a good idea to give up heavy drinking, which can cause many medical problems. Taking ibuprofen and drinking alcohol is also a no-no. Alcohol increases the risk of bleeding in the stomach and intestines, which is a side effect of this medication.

The maximum recommended dose for acetaminophen is 4 grams or 8 extra strength (500 mg) tablets in 24 hours. However, the maximum recommended dose for heavy drinkers is *half* that, or 2 grams or 4 extra-strength tablets in 24 hours. If you have liver disease, talk to your doctor before using acetaminophen at all.

Seeking Pain Relief with Prescription Drugs

Prescription drugs include some old standards like opioids, NSAIDS, and topical products. They also include drugs that you may not realize are effective against pain, including antidepressants, anti-epileptics, sodium channel blockers, anti-arrhymthic drugs, sedatives, anti-anxiety drugs, muscle relaxants, antihypertensives, and botulinum toxin.

Understanding generics and nongenerics

You can save precious dollars by buying generic prescriptions, when available. Generic and brand-name medicines act the same way in your body and contain the same active ingredients. Although generic drugs are chemically identical to their branded counterparts, they're typically sold at substantial discounts from the branded price. According to the Congressional Budget Office, generic drugs save consumers $8 to $10 billion a year. Medications can be pricey! Ask your doctor to prescribe generic drugs if available.

Cyclooxygenase (COX)-2 inhibitors are prescribed NSAIDs that have fewer gastrointestinal side effects with short-term use. As of this writing, celecoxib (Celebrex) is the only COX-2 inhibitor available. However, you can still develop ulcers with this drug. While COX-2 inhibitors are associated with heart risks, evidence is mounting that other NSAIDs may have similar risks. Some people claim that they gained significant pain relief with COX-2 inhibitors and were upset when most were removed from the market.

Opioids

Opioids are narcotics naturally derived from opium or synthetically derived and chemically similar to opium. They're controlled by the federal government, and your doctor must follow special rules when prescribing them; for example, the more potent opioids can't routinely be called in to the pharmacy by the doctor, and instead, a written prescription must be given to the patient. It can't be refilled.

Opioids are extremely effective in reducing pain. They're the foundation of medical treatment for chronic pain due to cancer and other conditions causing severe pain.

In some cases, opioids have less severe long-term side effects than anti-inflammatories. However, opioids have many side effects, including drowsiness, constipation, nausea, disorientation, and retention of urine. We're not talking regular constipation here. We're talking you-can't-go-for-days constipation. (Stimulant laxatives and increased fluids can help.) Taking too much of an opioid can cause other serious side effects, including a dangerous slowing of breathing and even coma. A drug called naloxone, given intravenously, can reverse these effects.

Some people taking opioids for long periods of time develop a *tolerance* to the drug, which means that they need higher doses to receive the pain-killing benefits. However, increased tolerance doesn't always occur. For some people, the same dose is effective for a long time. No one knows why this is true.

Opioids and addiction

Most people believe all narcotics — which are also called opioids — are addictive, and they think that if they take them, it's only a matter of time before they become junkies ready to sell their children for drugs. It's true that people with past addiction problems should be very careful with opioids. But most people who take narcotics to manage pain carefully follow their doctor's orders and rarely become drug addicts. (Read more about drug dependence in the section "Facing Prescription Drug Abuse" at the end of this chapter.)

The medical community is now behind effective prescribing of opioids for treating chronic pain. In 1996, the American Pain Society and the American Academy of Pain Medicine issued a joint consensus statement supporting cautious use of opioids for people with severe pain problems. *Cautious use* means patients and doctors discuss the risks and benefits of opioids. Doctors must maintain good records and careful follow-up so that they can determine whether the drugs are improving the condition and not causing other problems. (You may also want to look at Chapter 12 for information about the American Cancer Society's position on prescribing opioids for cancer pain. The society's position essentially agrees with the consensus statement by the American Pain Society and the American Academy of Pain Medicine.)

Many doctors today are concerned that their patients live with considerable pain because of unfounded fears of addiction.

According to the National Institute of Drug Abuse, *addiction* is a chronic, relapsing brain disease characterized by compulsive drug seeking and use, despite harmful consequences.

When opioids are used regularly for a long time, your nervous system adapts by increasing the activity of transmitters that increase pain. The result is that you often experience withdrawal symptoms (including pain) if the drug is stopped suddenly. If you stop taking opioids after long-term use, taper off gradually (under your doctor's orders) to keep symptoms under control.

Opioids are taken by mouth, given by injection, absorbed through the lining of the cheek or gums, or applied through the skin in a patch. They can also be administered through special internal pumps for people with extremely severe chronic pain. If you receive good pain relief from opioids but can't tolerate their side effects, they can be injected directly into the space around your spinal cord.

Opioids administered through injections act faster than oral forms, but the pain relief doesn't last as long. One opioid, Fentanyl, is available as a transdermal skin patch and provides pain relief for up to 72 hours.

In 2005, the Food and Drug Administration (FDA) issued a public health advisory about reports of death and other serious side effects from patients who overdosed while using Fentanyl transdermal patches. Deaths and overdoses have occurred in patients using both the brand-name Duragesic and the generic form of the drug. Some health-care providers and consumers may not be fully aware of the dangers of this drug. The directions for using the Fentanyl skin patch must be followed exactly to prevent serious side effects from overdose.

Other prescription drugs used for pain management

A variety of other prescription drugs are successfully used to manage pain. The following list covers the pros and cons of these medications:

- **Tramadol** (Ultram) and **tramadol combined with acetaminophen** (Ultracet(tm)) are prescription pain medications for managing moderate to moderately severe pain. The combination of tramadol and acetaminophen is much more powerful than either drug alone. Tramadol is considered a weak opioid analgesic. Tramadol doesn't reduce inflammation. Avoid taking more than 400 mg (300 mg in the elderly) of tramadol a day.

  If you're thinking about taking tramadol, use caution if you also take any medications that are monoamine oxidase inhibitors (MAOIs) or selective serotonin reuptake inhibitors (SSRIs). Also, watch out if you're taking some antipsychotic medications, such as Thorazine and Compazine. Sometimes the combination of these drugs with tramadol can cause problems. If you take any of these drugs, make sure that your doctor is aware of it before she writes a prescription for tramadol.

- **Propoxyphene** is a mild opioid analgesic used for the relief of mild to moderate pain. Darvocet-N 50, Darvocet-N 100, and more recently Darvocet A500 tablets contain propoxyphene with acetaminophen. The combination of propoxyphene and acetaminophen produces greater pain relief than produced by either drug alone. Propoxyphene is on the don't-take list of drugs for the elderly. (See Chapter 24 for other drugs older people should avoid.)

- **Fiorinal** is a strong, non-opioid pain reliever and muscle relaxant. It's used for the relief of tension headaches caused by stress or muscle contraction in the head, neck, and shoulder area. It combines a barbiturate (butalbital) with a pain reliever (aspirin) and a stimulant (caffeine). Another option for those who want to avoid aspirin is Fiorcet, which combines fiorinal with acetaminophen and caffeine.

- **Flavocoxid** (Limbrel) is a prescription-only product for the management of osteoarthritis. It's made from a combination of root and bark extracts from plants. The plant extracts contain a substance called *flavonoids*. Some of these same flavonoids are found in green tea. The flavonoid extracts, which are compounds found in fruits, vegetables, and certain beverages, in Limbrel appear to help by halting the production of an enzyme that causes inflammation. The FDA classifies Limbrel as a "medical food." It's given as a prescription, but the foods have been "generally recognized as safe" by the FDA.

  Limbrel has the same side-effects that NSAIDs have, including an increased risk of stomach ulcers. At this writing, no studies show whether flavocoxid is as effective as NSAIDs are for pain relief. Using NSAIDs and flavocoxid together may increase the risk of stomach irritation.

Antidepressants and anti-epileptics

Some antidepressants and antiepileptic drugs are helpful in managing chronic pain, especially *neuropathic pain* (chronic pain caused by injury to the peripheral nervous system). The pain-killing effect of these drugs is independent of their effect on depression.

Antidepressants and anti-epileptic drugs are about equally effective for neuropathic pain. Duloxetine (Cymbalta), an antidepressant, and pregabalin (Lyrica), an antiseizure drug, are modestly successful against fibromyalgia pain. However, they differ in their costs, safety, and side effects. Tricyclic antidepressants may also help reduce pain.

A few of the many antiepileptic drugs that are effective in the treatment of neuropathic pain include carbamazepine (Tegretol), phenytoin (Dilantin), gabapentin (Neurontin), and pregabalin (Lyrica).

If you take medicine for migraines and antidepressants, be sure to read Chapter 6 about the dangers of combining some drugs.

Antidepressants are particularly helpful in managing certain types of pain. Note that using antidepressants doesn't mean that the pain is "all in your head" and that you're really depressed *instead of* being in pain. The pain is real, but the limitations it imposes on you can be depressing. Some transmitters released during depression increase pain, and people are more active and effective in counteracting the pain if not depressed.

Some pain states that may respond well to antidepressants include the following:

- Central pain
- Rheumatoid arthritis
- Chemotherapy-induced peripheral neuropathy
- Complex Regional Pain Syndrome (CRPS), also known as Reflex Sympathetic Dystrophy Syndrome (RSDS)
- Diabetic neuropathy
- Fibromyalgia
- Irritable bowel syndrome
- Migraine and tension headache
- Neuropathic pain
- Phantom limb pain
- Phantom limb/neuroma pain
- Postherpetic neuralgia
- Sympathetic dystrophy

Sodium channel blocking and oral anti-arrhythmic agents

Injuries to the peripheral or central nervous system can cause spontaneous activity of neurons in pain pathways. (See Chapter 2 for an explanation of neurons and pain pathways.) Reducing this unwanted, ongoing activity can reduce pain, which is why anti-epileptic drugs can be helpful. (Epileptic seizures result from high levels of spontaneous activity in other regions of the CNS.)

Other drugs called antirhythmics also have quieting effects on CNS neurons. They're prescribed to prevent disturbances in heart rhythm, but they're also used for treating chronic pain. Just as they stop the premature firing of heart fibers, they also reduce pain signals. Two antiarrhythmics are used occasionally for chronic pain: mexiletine (Mexitil) and flecainide (Tambocor). These medications reduce the pain of diabetic neuropathy, post-stroke pain, CRPS/RDS, and traumatic nerve injury. Lidocaine, a local anesthetic, can reduce spontaneous activity in the CNS and is given intravenously for chronic pain.

Topical pain relievers

While no scientific evidence supports the use of OTC topical ointments (liniments), such as Ben-Gay or Tiger Balm, many people believe that stimulating their sore areas with these ointments relieves their hurting.

Most topical pain relievers are available over the counter. An exception is Lidoderm, which is a prescribed, transdermal skin patch.

Although side effects of liniments are usually considered minimal, don't overuse them. An unusual death of a teenage athlete occurred in 2007 because she used too many liniments, all of which contained methylsalicylates (aspirin). In fact, a variety of liniments contain the same active ingredient that's in aspirin. In addition to methylsalicylate, other types of topical pain relievers include such ingredients as menthol, camphor, eucalyptus oil, turpentine oil, and histamine dihydrochloride. Methyl nicotinate is used in neuropathic pain conditions and CRPS. Capsaicin, the active ingredient in hot peppers, is a topical treatment for neuropathic pain.

Some topical remedies include aspirin in chloroform or ethyl ether, capsaicin (Zostrix, Zostrix-HP), and EMLA (a mixture of local anesthetics) cream. Local anesthetics, such as the lidocaine patch 5% (Lidoderm), are topical treatments for neuropathic pain.

Lidoderm 5% (lidocaine) patches have been approved by the FDA to treat postherpetic neuralgia (PHN). Some people use Lidoderm in an off-label use for arthritic pain.

Other medications

Other medications are sometimes used to treat chronic pain. They include

- **Anti-hypertensive medications:** Some medications for high blood pressure (hypertension) can also relieve chronic pain; for example, clonidine (Catapres, Catapres-TTS patch) relieves the symptoms of complex regional pain syndrome /reflex sympathetic dystrophy.
- **Botulinum toxin:** Botox is a popular wrinkle reducer that acts by temporarily paralyzing muscles. You may have heard of this drug as something celebrities take to get rid of their facial wrinkles in their attempts to attain endless youth, but that's not its only use! This effect can also work for pain control. Botulinum toxin (Botox and Myobloc) can calm overactive muscles and can soothe chronic headaches and muscle pain. Side effects are rare. Botulinum also has direct effects in reducing skin neurotransmitters that transmit pain.

- **Implanted drug-delivery systems:** Some pain relievers such as Ziconotide (Prialt) are administered directly to the area around the spinal cord and to nerve roots. This method can have benefits such as reduced dosages and fewer side effects. For some people with severe injuries, this system is the best way they can take pain medications.
- **NMDA inhibitors:** Drugs called NMDA (N-methyl-D-aspartate) inhibitors are now being tested to relieve neuropathic pain. The hope is that they can stop acute pain from turning into chronic pain by arresting central sensitization (see Chapter 2).

Working with Your Doctor to Find the Right Medication Combo

All medications — including over-the-counter drugs or nutritional and herbal supplements — can act together and cause harmful side effects. It's very important to tell your doctor about everything you're taking, both for your pain and for other medical conditions, even if you don't regard them as medication. See Chapter 17 for a personal medication log that you can copy and use to make a comprehensive list. Your list should include supplements and vitamins you purchase without a prescription, caffeine, alcohol, tobacco, marijuana, and recreational drugs.

Take all your current medication bottles (or a complete list) with you to all doctor appointments and be honest about any other substances you're using. Even over-the-counter and herbal medications can have serious interactions with your prescription medications and with each other.

Medications differ in how they work and how you should take them. It's important to stay on top of the following pointers, adapted in part, from the National Institutes of Health:

- What type of medication has your doctor prescribed (for example is it a painkiller, an NSAID, an antidepressant, an anti-epileptic, or other type of drug)?
- What's the dosage of the medication?
- How often should you take it (or do you take it "as needed")?
- Should you take the medication at bedtime?
- Should you avoid eating anything when taking the medicine, or should you take it before, with, or after meals?
- Under what conditions should you stop taking the medicine?

- What should you do if you forget to take the medicine?
- What side effects may you expect, and what should you do if you have a problem?

Your doctor will take into account the following when she prescribes your medications:

- Your medical condition
- Your weight
- Your age
- Other medications you take

Check out Chapter 13 for a list of information you should always have with you when you see your doctor — including information about your medicines.

Avoiding serotonin syndrome

Many medicines that people with chronic pain take include *serotonin,* a brain chemical that affects both depression and appetite. Not enough serotonin causes depression, while too much can cause problems such as confusion, restlessness, hallucinations, extreme agitation, fluctuations in blood pressure, increased heart rate, nausea and vomiting, fever, seizures, and even coma.

More than 50 frequently used medicines now on the market can increase your serotonin levels. The following is a list of drugs that can add to your serotonin load. Watch for serotonin symptoms when you increase your dose of any of these medicines. This list was developed by the American Chronic Pain Association:

Antidepressants and anti-anxiety, and certain sleep medicines, including fluoxetine (Prozac, Sarafem), paroxetine (Paxil), sertraline (Zoloft), citalopram (Celexa), escitalopram (Lexapro), trazodone (Desyrel), venlafaxine (Effexor), duloxetine (Cymbalta) clomipramine (Anafranil), buspirone (BuSpar), mirtazapine (Remeron), lithium, St. John's Wort, phenelzine (Nardil), tranylcypromine (Parnate), or isocarboxazid (Marplan)

Antimigraine medicines in either the triptan or ergot groups, including sumatriptan (Imitrex), almotriptan (AxertTM), eletriptan (Relpax), frovatriptan (Frova), naratriptan (Amerge), rizatriptan (Maxalt), zolmitriptan (Zomig), ergotamine/caffeine (Cafergot), or dihydroergotamine (DHE 45, Migranal)

Diet pills, specifically L-tryptophan (5-HTP), sibutramine (Meridia), or phentermine

Certain pain medicines, including tramadol (Ultram), fentanyl (Duragesic patch), pentazocine (Talwin), duloxetine (Cymbalta), or meperidine (Demerol)

Certain drugs for nausea, specifically ondansetron (Zofran), granisetron (Kytril), or metoclopramide (Reglan)

Cough syrups or cold medicines if they contain the anti-cough ingredient dextromethorphan (DM) or linezolid (ZyvoxTM), an antibiotic for *staphylococcus* or *enterococcus* infections

Using Medicines Safely

Your pharmacist can answer many questions you have about your medicine. A good general rule is to try to have all your prescriptions filled at the same pharmacy so that your records are in one place. Your pharmacist can keep track of all your medications and tell you whether a new drug may cause problems. If you're not able to use just one pharmacy, keep a record and show all your pharmacists your list of medicines and over-the-counter drugs. (See Chapter24 for information on running your list of prescriptions through a drug interaction database.)

Here are some safety tips for taking pain medications:

- Read and understand the name of the medicine and the directions on the container. If the label is hard to read, ask your pharmacist to use larger type.
- Check that you can open the container; if not, ask the pharmacist to put your medicines in bottles that are easier to open.
- If you have trouble swallowing pills, ask your pharmacist whether a liquid medicine is available.
- Don't chew, break, or crush tablets. The drug may not be effective (because the active ingredients may not be evenly distributed in the pill) or can cause an overdose when crushed or chewed.
- Ask whether the pharmacy has instructions on where to store a medicine.
- Make a list of all medicines you take. Keep a copy in your wallet. The list should include the name of each medicine, the doctor who prescribed it, the reason prescribed, the amount you take, and time(s) you take it.
- Read and save all written information that comes with the medicine.
- Take your medicine in the exact amount and at the time your doctor prescribes.
- Take your medicine until it's finished or until your doctor says it's okay to stop.
- Call your doctor right away if you have any problems with your medicine.
- Do not skip doses of medication or take half doses unless specified by your prescription.
- Find out whether drinking alcohol while taking your medicines is okay. Some medicines don't mix well with alcohol and can make you sick. Anyone taking opioids or antianxiety drugs should not drink alcohol at all.

- Don't take other people's medicines or give yours to anyone else.
- Throw away outdated medicines.
- Make sure that medicines and supplements are out of the reach of children as well as adults with dementia problems.
- If you have prescribed narcotics, keep the main supply in a lockbox or safe.

Buying Drugs from the Internet

The Internet is home to many legitimate pharmacies, but it's also a site for a growing number of businesses that sell drugs to anyone with a credit card, regardless of whether he has a prescription.

No accurate figures exist on how many people buy medicines over the Net without a prescription. But with more sites appearing every week, its fair to say that online pharmacies are a growing market. Buying medicines over the Internet doesn't guarantee a quality product unless you follow certain guidelines to protect yourself.

If you decide you want to buy meds through the Internet, take these precautions:

- Talk with your doctor and have a physical exam before you get any new medicine for the first time.
- Use only medicine prescribed by your doctor or another trusted professional licensed in the United States to write prescriptions for medicine.
- Know your source to make sure that ordering from them is safe. Your state board of pharmacy can tell you whether a Web site is a state-licensed pharmacy, is in good standing, and is located in the United States. Find a list of state boards of pharmacy on the National Association of Boards of pharmacy (NABP) Web site at `www.nabp.info`. Internet Web sites that display the NABP seal have been checked to ensure that they meet state and federal rules.

Using Alcohol and Recreational Drugs

Alcohol is a recreational drug, but it's still a drug. Some people use alcohol to relieve chronic pain, which can be very dangerous and boost the effect of some prescription drugs. Chronic alcoholism frequently causes permanent and serious damage to the liver, greatly complicating the treatment of chronic pain. Many medications can't be given to people with damaged livers.

Marijuana is also a drug. Using marijuana for chronic pain relief is controversial. Some states allow the legal use of marijuana for people in pain. But the federal government continues to threaten physicians with prosecution for prescribing it (although it has yet to do it). If you drink alcohol, smoke marijuana, or take recreational drugs, tell your doctor.

If you live with chronic pain, you may find it easy to fall into medicating your pain with beer, wine, or hard alcohol. Using alcohol as a pain reliever isn't a new phenomenon. Through the generations, people have medicated their physical and emotional pain with alcohol.

Of course, many people who drink alcohol don't have a drinking problem, but for some, drinking to reduce pain can get out of control.

According to the National Institute on Alcohol Abuse and Alcoholism (NIAAA), the following four symptoms indicate an abuse problem has developed into an *addiction* (also known as *dependence*) to alcohol:

- **Craving:** A strong need, or urge, to drink
- **Loss of control:** Not being able to stop drinking once drinking has begun
- **Physical dependence:** Withdrawal symptoms, such as nausea, sweating, shakiness, and anxiety after stopping drinking
- **Tolerance:** The need to drink greater amounts of alcohol to get high

Getting someone to admit he has a problem with alcohol is usually hard. Denial of the disease among alcoholics is the norm. Doctors use a variety of techniques to uncover problem drinking, including:

- Questionnaires (such as the Short Michigan Alcoholism Screening Test)
- Blood tests measuring red blood cell size
- Blood tests measuring a protein called carbohydrate-deficient transferrin
- Tests showing liver damage
- Tests showing decreased testosterone in men

If you have an alcohol-related problem, draw upon the many national and local resources available. The National Drug and Alcohol Treatment Referral Routing Service offers advice via a toll-free telephone number, 800-662-HELP (4357). You or your loved one can speak directly to a representative about treatment, request printed material on alcohol or other drugs, or get information about programs in your state.

Many people find help through Alcoholics Anonymous (AA) support groups. AA groups meet in almost every community. Contact a nearby central office to find times and places of local meetings. Their phone numbers and addresses are listed in local phone directories or go to `www.alcoholics-anonymous.org`.

Facing Prescription Drug Abuse

Prescription painkillers can be effective when supervised by a physician to manage pain. On occasion, though, they can lead to an addiction if they're not managed appropriately by your doctor.

Never take more medications than your doctor ordered. Don't assume that if one pain pill helps, then two (or more!) would be even better. Not true! This dangerous belief can lead to bad side effects and a drug dependence. If your pain isn't sufficiently relieved by the dosage your doctor ordered, call her. Maybe you need a different medication.

Prescription drug abuse is a major problem in the United States. According to the 2005 National Survey on Drug Use and Health, 6.4 million Americans aged 12 and older used prescription medications for nonmedical purposes in the prior 30 days. Of these individuals, an estimated 4.7 million used pain relievers, 1.8 million used tranquilizers, 1.1 million used stimulants, and 272,000 used sedatives.

Based on a survey of hospital emergency rooms, the Drug Abuse Warning Network (DAWN) reports that two of the most frequently abused types of prescription medications are benzodiazepines (anti-anxiety drugs such as Valium, Xanax, Klonopin, and Ativan) and opioid pain relievers (such as oxycodone, hydrocodone, morphine, methadone, and combinations including these drugs). Stimulants such as methamphetamine, Ritalin, or Adderall represent another class of commonly abused medications.

Many people with chronic pain use their medications responsibly and don't become addicted to them. Those who do become addicted to drugs are usually either seeking a euphoric high or to blot out awareness of their problems or responsibilities. In other words, they're not taking drugs for pain, but for other reasons. In reality, strong painkillers are sometimes needed for severe pain, and as long as you work with a good doctor who manages your medications, you usually don't have to worry about becoming a drug addict.

In order to provide appropriate and legitimate monitoring of patients taking opioids, many physicians perform random urine drug tests on their patients to make sure that they're taking the narcotic as prescribed.

Chapter 15

Taking an Alternative Approach to Pain Management

In This Chapter

- Discovering the difference between complementary and conventional medicine
- Checking out the major CAM (complementary and alternative) therapies
- Distinguishing between CAMs that are proven or unproven
- Exploring how to detect unproven remedies

CAM is hot. In the United States, more than a third of all adults use some form of complementary and alternative medicine (CAM). When megavitamin therapy and prayer practiced specifically for health reasons are included in the definition of CAM, the percentage rises to a startling 62 percent. That's nearly two-thirds of the adults in America.

Exploring CAM

CAM is an umbrella term for health practices outside conventional medicine. (*Conventional medicine* is the discipline practiced by medical doctors or doctors of osteopathy and related health professionals, such as physical therapists, occupational therapists, psychologists, and registered nurses.)

Complementary medicine is often used alongside conventional medicine. For example, if you have chronic pain from arthritis, you may use two complementary therapies (massage and exercise) along with physical therapy and nonsteroidal anti-inflammatory drugs (NSAIDs) prescribed by a doctor to treat arthritis pain. And scientists have found that the vitamin folic acid prevents certain birth defects. In addition, a regimen of vitamins and zinc can slow the progression of the eye disease age-related macular degeneration.

Some health-care providers practice *integrative medicine* (or integrated medicine), which is simply both CAM and conventional medicine.

Does CAM really work?

Medical professionals in pain management have become increasingly interested in CAM. For example, when talking about acupuncture, one of your authors, Dr. Kassan, has treated people with chronic pain for years, and he says of CAM, "It's almost mainstream now. As a result, CAM is safe when done properly and can be very helpful for pain."

Another of your authors, Dr. Vierck, has spent 40-plus years as a scientist studying pain. He swears by magnets (for giving him relief for the arthritis in his wrist, even though the relief he experiences may be a *placebo effect*. A placebo effect is when a useless remedy works because you think it'll work. Actually, it does nothing.)

Finally, your third author, Dr. Vierck's sister, Elizabeth Vierck, an experienced information specialist and health writer, says, "My brother's caught up in wishful thinking because he doesn't want to give up golf. Magnets are a lot of hooey."

But, and this is a big but, Ms. Vierck herself takes a dietary supplement twice a day, hoping it'll help her arthritis. So who's thinking wishfully?

Of course, you can make up your own mind about CAM. In many cases, the only harm it can do is to your pocket book, as long as you're well informed and avoid any approaches that may be harmful.

However, one big concern with CAM is that many of its techniques have not been researched and, therefore, don't have science-based credibility. As a consequence, many practitioners of conventional medicine are dubious about using CAM to treat diseases and pain.

Sometimes people use alternative medicine instead of conventional medicine, which can be a very perilous choice. An example of such danger is using nutritional supplements to treat cancer instead of undergoing the surgery, radiation, or chemotherapy your doctor recommends. This idea is bad because it can kill you! Check out Chapter 26, which covers bogus "cures."

Using Dietary and Herbal Supplements

Many people who suffer from relentless pain take dietary supplements to boost their general health and feel better. *Supplements* are highly refined chemicals or plant extracts just like medicines, but supplements haven't been tested for long-term or short-term side effects, interactions with other medications or other supplements, or safety in people with serious medical conditions, such as cancer, heart disease, and liver or kidney failure.

Dietary supplements are sold in grocery, health-food, drug, and discount stores, as well as through mail-order catalogs, TV programs, the Internet, and direct sales.

The law and dietary supplements

Dietary supplements were defined in a law passed by Congress in 1994. A dietary supplement must meet all the following conditions:

- It's a product (other than tobacco) intended to supplement the diet and contains one or more of the following: vitamins, minerals, herbs or other botanicals, amino acids, or any combination of the above ingredients.
- It's taken in tablet, capsule, powder, softgel, gelcap, or liquid form.
- It's not represented for use as a conventional food or as a sole item of a meal or the diet.
- It's labeled as a dietary supplement.

Some supplements act like medicines and can be harmful, depending on what other supplements you take, how much of the supplement you take, and how often you take it. In fact, 17 known supplements cause kidney dysfunction or failure, and several other dietary substances are known to cause toxicity to genes and possibly produce cancer, but lack of regulation prevents labeling of these supplements. In addition, if you take prescribed medicines, too, these drugs should be taken into account before you add any supplements to your anti-pain regimen.

Staying safe with dietary supplements

Keep the following safety points about dietary supplements in mind. They were adapted from information provided by the National Center for Complementary and Alternative Medicine (NCCAM).

- Some ingredients of supplements, including nutrients and plant components, can be toxic. Don't substitute a dietary supplement for a prescription medicine or therapy without talking such a change over with your doctor.
- Tell your health-care providers about complementary and alternative practices you use so that they have a full picture of how you try to manage your health. Better yet, tell them before you start using any supplements.
- Don't take a higher dose of a supplement than listed on the label, unless your health-care provider advises you to do so.
- If you experience any side effects that concern you, stop taking the supplement and contact your doctor. You can also report your experience to the FDA's MedWatch program (`www.fda.gov/medwatch`), which tracks consumer safety reports on supplements.

It's especially important to talk to your provider if you're using supplements and meet any of these conditions:

- You're thinking about replacing your regular medical care with one or more supplements.
- You're taking any medications (whether prescription or over the counter). Some supplements interact with medications.
- You have a chronic medical condition, such as diabetes or arthritis.
- You plan to have surgery. Certain supplements may increase the risk of bleeding or affect anesthetics and painkillers.
- You're pregnant or nursing, or you're considering giving a child a dietary supplement. Supplements can act like drugs, and many have not been tested in pregnant women, nursing mothers, or children.

Understanding how dietary supplements are regulated

The federal government regulates supplements through the Food and Drug Administration (FDA). Currently, the FDA regulates supplements as foods rather than drugs. In general, the laws about putting foods (including supplements) on the market and keeping them on the market are less strict than the laws for drugs.

However, in 2007 the FDA printed a rule requiring manufacturers to evaluate the identity, purity, strength, and composition of their dietary supplements. If dietary supplements contain contaminants or do not contain the dietary ingredient they are represented to contain, FDA would consider those products to be adulterated or misbranded. This is a step — albeit a small one — in the right direction for consumers.

Research to prove a supplement's safety for human consumption is not required before the supplement is marketed, as it is with over-the-counter or prescribed drugs. In addition, the supplement manufacturer doesn't have to prove the product is effective, nor must he prove supplement quality. For example, one study that analyzed 59 preparations of Echinacea found that about half did not contain the items listed on the label.

Glucosamine and chondroitin

Glucosamine and chondroitin sulfate are popular (and controversial) supplements heavily marketed as effective at preventing and treating the damage that arthritis and sports injuries can do to your joints.

Mixing supplements and herbs with medications

Some supplements and herbs can cause serious harm when combined with prescription drugs or other substances. For example, St. John's Wort can increase the effects of some prescription drugs used to treat depression or cause side effects when used with other antidepressants. It can also interfere with drugs used to treat HIV infection or cancer. But you won't have to worry as long as you tell your doctor about the herbs and supplements that you take — or plan to take.

Ginseng is an herb that can increase the stimulant effects of caffeine (as in coffee, tea, and cola). It can also lower your blood sugar levels, creating the possibility of problems when used alongside diabetes drugs.

Ginkgo biloba, another herb, should never be taken with anticoagulant or antiplatelet drugs because it can increase the risk of bleeding. Ginkgo may also interact with some psychiatric drugs and with drugs that affect blood sugar levels.

Both substances are naturally present in your body. Glucosamine is a form of an amino sugar, and chondroitin is part of a protein. They're the building blocks that your body uses to build cartilage. The theory behind using the supplement is that the more building blocks you have, the more cartilage you'll maintain.

The glucosamine you buy in supplements comes from seashells, while chondroitin is derived from animal cartilage. These two supplements are packaged as individual supplements or combined with each other. They're also available in other combinations including MSM (methylsulfonylmethane) as a third ingredient.

A large study by researchers at the National Institutes of Health looked at the effectiveness of glucosamine and chondroitin, the COX-2 inhibitor, Celexecob, and a placebo. (See Chapter 14 for information on COX-2 inhibitors.) The result was that the group of participants as a whole showed no significant differences between any of them. However, for a small group of participants with moderate to severe (rather than mild) pain, glucosamine combined with chondroitin sulfate provided significant pain relief compared with a placebo.

But don't get too enthusiastic about glucosamine and chondroitin. Researchers warn that because of the small size of the group that received the benefit, these results must be backed up by more research.

What's the downside of these supplements? They both may cause gas and diarrhea.

SAMe

The supplement S-adenosyl- L-methionine (SAMe, for short, pronounced "Sammy') is almost as popular as glucosamine and chondroitin, described in the preceding section. This substance is naturally found in all the cells of your body, and it affects cartilage building and other physical processes. Supplemental SAMe is marketed as a pain reliever and an antidepressant. Research supports a possible benefit for depression and pain relief of osteoarthritis.

SAMe appears to be safe and may have fewer side effects than other pain relievers. But, long-term side effects and toxicity studies have not been conducted. In high doses, it may cause mild diarrhea, nausea, gas, and anxiety.

Omega-3 fatty acids

Omega-3 fatty acids are best known for preventing heart disease. However, one way in which they benefit your heart is through their important role as an inflammation fighter. As they reduce inflammation, they also reduce pain associated with it. Several studies demonstrate reductions in joint pain when taking omega 3-fatty acids.

Omega-3 fatty acids are found naturally in fatty, cold-water fish, dark green leafy vegetables, flaxseed oils, and some vegetable oils. Many types of supplements with omega-3 fatty acids are available in pill or capsule form. Fish oil is more beneficial than flaxseed oil.

High dosages of fish oil can cause thinning of the blood, and you can also have burps that taste like fish oil. Not a pleasant experience.

Herbal supplements

Herbal supplements are a type of dietary supplement. They're made up of a single herb or a mixture of herbs. An *herb* (also called a botanical) is a plant or plant part used for its scent, flavor, and/or therapeutic properties. Many herbs have a long history of use and of claimed health benefits.

Just because an herbal supplement is labeled *natural* doesn't mean it's good for you or safe to use. Herbal supplements can act the same way as drugs. After all, poison ivy is natural, too! Herbal remedies can cause medical problems if used incorrectly or taken in large amounts. Because there is rarely any quality assurance testing done on these products, knowing the content of these supplements is impossible. In general, it's safer to utilize products from major manufacturers and to avoid products made in China due to contamination with lead and mercury.

If you look for supplements to ease your chronic pain, there's a good chance that you'll also run into advertising for the following herbs. Marketers may claim they can cure your arthritis or prevent your headaches. Here's the real deal on many popular herbal supplements.

- **Aloe vera:** This plant is used for conditions such as asthma and arthritis. It's sold as ointments, lotions, and pills. Studies show that topical aloe gel may help heal burns and abrasions. Not enough scientific evidence supports aloe vera for any other use.

  Aloe vera used topically (on the skin) doesn't have side effects. Taken orally, however, aloe vera can cause diarrhea and cramping. Also, if you have diabetes, check with your doctor before taking aloe vera because it may decrease blood glucose levels.

- **Black cohosh:** Black cohosh purportedly treats arthritis, muscle pain, menstrual problems, and menopausal symptoms. No scientific studies have found that taking black cohosh is beneficial for any medical use. Side effects can include headaches, stomach discomfort, pain, and serious liver damage.

- **Cat's claw:** Cat's claw is used to treat cancer, arthritis, and other conditions. No scientific studies have found that taking cat's claw is beneficial for any medical use. If you have a compromised immune system or you may become pregnant (or you are pregnant), stay away from cat's claw.

- **Evening primrose oil (EPO):** Evening primrose oil is a fatty acid used for chronic skin conditions and a variety of other health problems, including rheumatoid arthritis. Evening primrose oil may have some benefits for skin conditions. However, no scientific studies have found that taking EPO is beneficial for any other medical use. Side effects are mild and can include stomach problems and headaches.

- **Feverfew:** Feverfew is purported to help with fevers, headaches, and rheumatoid arthritis. This herb may help prevent headaches, although more research is needed. However, insufficient scientific evidence makes it impossible to say that feverfew is helpful for any other medical condition. Feverfew can cause a variety of unpleasant side effects in your mouth, such as inflammation and canker sores. If you may become pregnant (or *are* pregnant) avoid feverfew, as it can cause miscarriage.

- **Ginger:** Ginger is used to treat stomachaches, nausea, and diarrhea, as well as arthritis-related conditions. It may also help relieve nausea. (An old remedy for upset stomach used to be ginger ale — when it actually had ginger in it!) Not enough research has been done to determine whether ginger is effective in treating other health conditions. No serious side effects for ginger have been found. Consuming too much, however, can cause indigestion. Animal studies have shown ginger to be protective against liver toxicity produced by acetaminophen, a commonly used pain medicine.

- **Ginkgo biloba (Gingko):** Ginkgo is purported to help leg pain caused by poor circulation *(claudication),* multiple sclerosis, and ringing of the ears. Gingko has shown promising results for claudication.

  The flip side of its benefit for claudication is that ginkgo has also been associated with bleeding problems, headaches, skin reactions, and other problems.

- **Kava Kava (Kava):** Kava contains kavalactones, which have calming and sedative effects. Many people with pain have tried kava for anxiety and/or sleep problems.

  The U.S. and foreign regulatory agencies have warned that kava can cause serious liver damage. Stay away from it.

- **Peppermint oil:** Peppermint oil allegedly helps indigestion, irritable bowel syndrome, and muscle and nerve pain. Peppermint oil may help with the symptoms of irritable bowel syndrome, but no scientific evidence suggests that it's beneficial for other health problems. Peppermint oil should be used in small dosages. It can cause heartburn.

- **St. John's Wort:** St. John's Wort allegedly helps with depression, nerve pain, and sleep problems. Depression and sleep problems often result from chronic pain. Some scientific evidence suggests that St. John's Wort can help people with mild to moderate depression. However, two large studies showed that the herb wasn't effective in treating major depression.

  St. John's Wort has a number of serious side effects and should be used only with caution and under a doctor's supervision. It may cause sensitivity to sunlight, anxiety, dry mouth, dizziness, gastrointestinal symptoms, fatigue, headache, or sexual dysfunction. St. John's Wort can also interact with other drugs. When combined with certain antidepressants, St. John's Wort may increase side effects, such as nausea, anxiety, headache, and confusion. According to the NCCAM, other drugs that can be adversely affected by St. John's Wort include

  - Indinavir and possibly other drugs used to control HIV infection
  - Irinotecan and possibly other drugs used to treat cancer
  - Cyclosporine, which prevents the body from rejecting transplanted organs
  - Digoxin, which strengthens heart muscle contractions
  - Warfarin and related anticoagulants
  - Birth control pills
  - Some antidepressants

- **Turmeric (Indian saffron):** Turmeric purportedly helps a range of diverse conditions, such as indigestion, liver disease, cancer, and inflammation. It's sometimes tried as a painkiller and as a topical remedy for eczema and wounds. Very little scientific research on turmeric has been done. However, turmeric is considered safe for most adults. It has been demonstrated to be ineffective in irritable bowel syndrome.
- **Valerian:** Although valerian is sold as a sleep aid, research has not shown it to effective for this use. And not enough research has been done to know whether it works for headaches, anxiety, or other conditions. Valerian can cause mild side effects, such as a hungover feeling the day after taking it.

Getting Back to Nature: Naturopathic Medicine

The premise behind *naturopathy* is that your body has natural healing power that establishes, maintains, and restores health. Practitioners work with you to support this power through treatments (such as nutrition and lifestyle counseling), dietary supplements, medicinal plants, exercise, and homeopathy.

Naturopathic physicians are trained in clinical nutrition, botanical medicine, homeopathic medicine, *physical medicine* (therapeutic manipulation of muscles, bones, and spine), *Oriental medicine* (acupuncture), natural childbirth care, psychological medicine, and minor surgery.

Naturopathy appears safe, especially if used as complementary medicine, but the National Center for Complementary and Alternative Medicine (NCCAM) offers several important qualifying points:

- Naturopathy isn't a complete substitute for conventional medical care.
- Some therapies used in naturopathy, may be harmful if they're not used properly or under the direction of a trained practitioner. For example, restrictive or other unconventional diets can be unsafe for some people.
- Some practitioners of naturopathy don't recommend using all or some of the childhood vaccinations that are standard practice in conventional medicine.
- The education and training of practitioners of naturopathy vary widely. Naturopathic physicians may not be licensed to practice in all states, and in some states, the profession is completely unregulated.

- Naturopathy as a whole medical system is challenging to study. Rigorous research on this whole medical system is taking place, but it's at an early stage.
- Naturopathic physicians are trained to know that herbs and some dietary supplements can potentially interact with drugs and to avoid those combinations. To do so, they need to be informed of all drugs (whether prescription or over the counter) and supplements that you are taking.

The American Association of Naturopathic Physicians (`www.naturopathic.org`) has a searchable database for finding naturopathic doctors in your area.

Curing Like with Like: Homeopathy

Homeopathic medicine is built around the belief that "like cures like." Practitioners mix small, highly diluted amounts of substances to cure symptoms. If these substances were given at higher or more concentrated doses, they would actually cause those same symptoms.

The term *homeopathy* was coined by the German physician Christian Friedrich Samuel Hahnemann in 1807. Despite being derided by scientists from the 19th century to the present, homeopathy has become increasingly popular in recent years. Almost a fourth of all allergy/cold medicines launched in the United States in recent years have been homeopathic remedies.

Homeopathic medicines widely used for pain include arnica (mountain daisy, hypericum (St. John's Wort), urtica urens (stinging nettle), ledum (marsh tea) rhus tox (poison ivy) ruta (rue) symphytum (comfrey), and calendula (marigold).

The FDA says homeopathic products are safe because they have little or no pharmacologically active ingredients.

Homeopathic substances contain no detectable ingredients apart from the water or other liquid used to dilute them. Therefore, critics believe that there's no known basis for them to heal. Although some patients report benefits from homeopathic preparations, the large majority of scientists attribute this to the placebo effect. This view was supported by a large review published in the British medical journal *The Lancet* in August 2005.

Assessing Complementary and Alternative Treatments

CAM covers a broad range of medical practices from acupuncture to magnets. We can't cover them all in this chapter, but we do highlight major CAM treatments that may help you with your pain management.

Getting the point about acupuncture

Acupuncture is a strange concept: Someone sticks needles into you to reduce your pain. The method most widely identified with acupuncture involves penetrating the skin with very thin, solid, metallic needles that are then moved by hand or electrical stimulation. The process is not particularly painful — it just feels like a small prick.

Acupuncture is based on the belief that health is determined by a flow of life energy, called *qi* (also spelled ki or chi and pronounced chee). Qi is believed to travel through your body along four invisible paths called *meridians.* The belief is that diet, stress, and many other things block these meridians. When the meridians become blocked, your energy flow becomes unstable, causing injury and disease. To regain balance, acupuncturists stimulate certain points, called *acupoints,* along meridians. (See Figure 15-1 for a view of meridians and their corresponding acupuncture points.)

Others who reject the meridian-blocking idea still support acupuncture because they believe it stimulates the production of *endorphins,* or pain-killing neurochemicals. But whether it's ancient Chinese beliefs or modern science that's right, the point is that acupuncture may help a person in pain, which may be you!

Dr. Kassan says, "Rheumatologists see a lot of patients with problems we can't do anything about, especially chronic pain. We become very frustrated. And this is where acupuncture makes its greatest impact: with patients who have failed conventional treatment."

According to the National Institutes of Health, new research and a lot of anecdotal information have shown that acupuncture can be therapeutic for specific and very different conditions, including addiction, stroke rehabilitation, osteoarthritis of the knee, headache, menstrual cramps, tennis elbow, fibromyalgia, myofascial pain, osteoarthritis, low-back pain, carpal tunnel syndrome, and asthma.

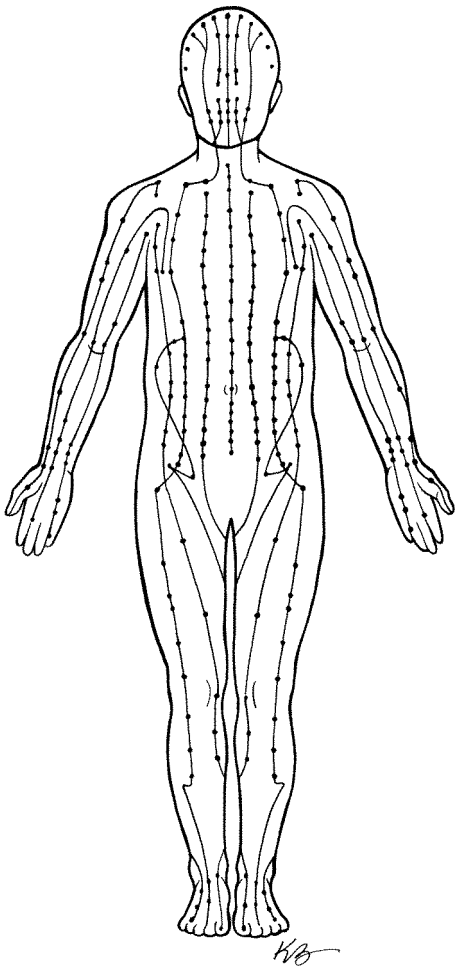


Figure 15-1: Acupuncture meridians.

Acupuncture is generally safe and won't harm you unless you use it to replace necessary medical treatment. However, be sure to select a reputable acupuncturist.

Many medical doctors are trained in acupuncture. About 40 states have established training standards for acupuncture certification, but they have varied requirements for obtaining a license to practice acupuncture. Two organizations provide searchable databases to help you find a practitioner certified in acupuncture: The National Certification Commission for Acupuncture and Oriental Medicine (`www.nccaom.org/find.htm`) and the American Academy of Medical Acupuncture (`www.medicalacupuncture.org`).

Don't rely on a diagnosis of disease by an acupuncture practitioner who doesn't have substantial conventional medical training.

Although acupuncture is usually safe, be sure to go to a practitioner who is diligent about sterilizing needles or who uses disposable ones. Possible dangers with reused needles are infection, nerve damage, and punctured organs.

Acupressure uses the same basic concepts as acupuncture, only without the needles. Putting pressure on the acupoints with your hands, feet, or knees is a form of massage known as acupressure or shiatsu. You can perform acupressure on yourself, or a loved one can learn the basics.

Calming down with biofeedback

Biofeedback uses your mind to control your body. It's a technique in which you use equipment to measure your brain activity, breathing, heart rate, blood pressure, skin temperature, and/or muscle tension (see Figure 15-2). By watching these measurements, you can find out how to change them by relaxing or holding pleasant images in your mind. Some psychologists and other therapists use biofeedback with reportedly good results.

During a biofeedback session, a trained practitioner monitors your heart rate, blood pressure, and skin temperature using electrical sensors. The sensors measure your body's response to stress and feed the information back to you on the monitor or through auditory cues.

Through biofeedback, you discover how to associate your pain with physical habits, such as muscles tensing or holding your breath. For example, you may figure out that your headaches come from tensed muscles.

You then discover how to relax specific muscles to prevent or stop your headaches. The goal is to produce these responses on your own without the help of technology.

The Biofeedback Certification Institute of America (BCIA) has a searchable database at `www.resourcenter.net` that you can use to find a qualified biofeedback therapist.

Although biofeedback is considered safe, talk to your doctor if you or a loved one has depression, severe psychosis, diabetes, or other endocrine disorders before using biofeedback.

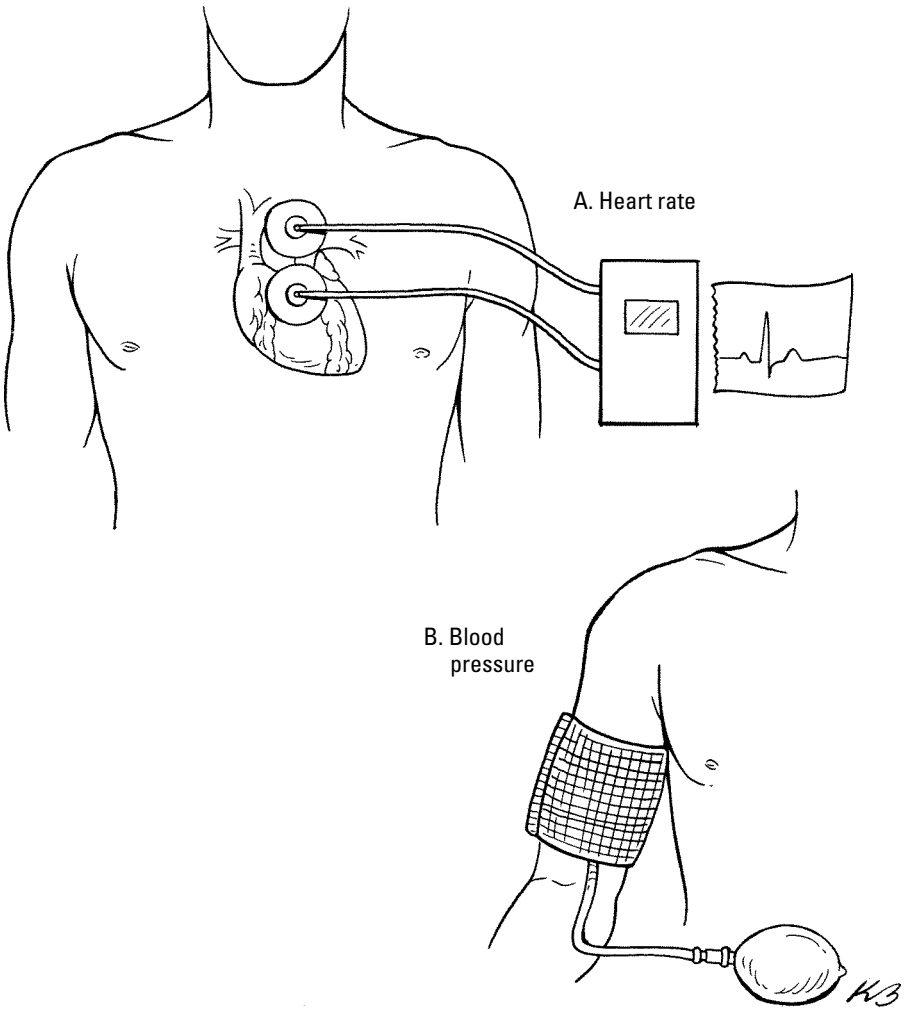


Figure 15-2: How biofeedback technology works.

Boning up on osteopathy

Osteopathy focuses on diseases that begin in the musculoskeletal system. The theory behind osteopathy is that all the body's systems work together, and instability in one system causes instability and pain in other parts of the body. Some osteopathic physicians practice osteopathic manipulation to reduce pain, restore function, and promote health and well-being. Osteopaths focus on joint, muscle, and nerve problems, such as back, neck, and head pain.

Osteopathy emphasizes a holistic approach to medicine and the use of a range of manual and physical therapies. The goal of the osteopathic physician is to boost the body's own recuperative powers by treating musculoskeletal or other types of dysfunction. A doctor of osteopathy (D.O.) inspects your posture, how you walk, and how you sit. The D.O. also checks to see whether your joints can move through their full range of motion and also looks at your body's symmetry.

Manipulating the spine, arms, and legs doesn't help every medical condition. However, because of their training, D.O.s can also treat conditions in conventional ways when appropriate.

A D.O. is also licensed to perform surgery and prescribe medication. Like an M.D., an osteopath completes four years of medical school, can practice in any specialty of medicine, and is licensed by the state. However, osteopaths receive an additional 300 to 500 hours in the study of hands-on manual medicine and the body's musculoskeletal system.

Osteopaths who want to specialize can become board certified by completing a two- to six-year residency within the specialty area and passing the board certification exams.

The American Academy of Osteopathy (`www.academyofosteopathy.org`) has a searchable database you can use to find a D.O. near you.

Getting cracking with chiropractic care

Chiropractic is a medical system that focuses on the relationship between your body's structures (primarily the spine) and how they function and how that relationship affects health. The goal of chiropractic is to normalize the relationship between your body's structure and function when it's out of whack.

Chiropractic professionals are doctors of chiropractic, or D.C.s. Chiropractors complete a four-year course in a chiropractic college, and must pass national and state examinations. Many people visit chiropractors for treatment of low back pain.

Chiropractic includes spinal manipulation, diet, exercise, X-rays, and other therapeutic techniques. Spinal manipulation is a method of adjusting the spinal cord using hand pressure, twists, and turns.

The premise behind chiropractic is that changes in the normal relationships between the bones of the spine (vertebral bodies) or joints can result in health problems in other areas of the body; consequently, manipulation of these areas may correct these changes and improve function.

Some practitioners also believe that abnormal spine or joint positioning may cause nerve damage or compression, muscle spasm, soft-tissue adhesions, or the release of toxic chemicals from damaged soft tissues. These conditions may be improved with manipulation. Scientific research backing up these theories is rarely reported in medical journals, although it does show up in chiropractic journals. Some people report relief from chiropractic techniques.

The safety of chiropractic is controversial. The most common side effects are stiffness, headache, and fatigue. Some evidence indicates that chiropractic can increase the chance of having a stroke. If you're at high risk for a stroke or have any of the following risk factors, stay away from manipulation of the neck: use of oral contraceptives, use of blood thinning medications, or high blood pressure.

In addition, if you or a loved one has any of the following conditions, be sure to use caution and talk to your doctor before using chiropractic, because it may cause bone fractures or nerve damage: a bone infection, cancer involving the bone, prior vertebral fractures, severe degenerative joint disease (osteoarthritis), osteoporosis, or ankylosing spondylitis.

Try to find a chiropractor whose practice is limited to conservative treatment of back pain and other musculoskeletal problems. Look for chiropractors who are members of the American Chiropractic Association (`www.amerchiro.org`), or the Canadian Academy of Manipulative Therapists (`www.manipulativetherapy.org`).

Getting hip to hypnosis

Hypnosis has been used since ancient times to relax the mind, reduce pain, and promote health. Hypnosis causes a relaxed state of mind in which the individual is open to reasonable suggestions. This aspect of the technique has made it the brunt of many comedy routines and TV dramas.

You can't be made to do something when under a hypnotic trance that you wouldn't do normally. However, you can use the suggestibility caused by hypnosis to your physical and mental benefit.

For example, you can work with a trained therapist to find out how to put yourself into a hypnotic state (see Chapter 21). You may also decide to use a therapist on an ongoing basis.

To treat chronic pain, the therapist gives you suggestions to help reduce your perception of pain and relax your tense muscles (which add to the pain), and so on.

Hypnotherapy has not been studied extensively for safety. The World Health Organization cautions that people with psychiatric illnesses, such as schizophrenia, manic depression (bipolar disorder), multiple personality disorder, or antisocial personality disorders, should not use hypnosis.

There's no national accreditation or licensing for hypnotherapists in the United States, but many different organizations provide certification for hypnosis therapists. One such organization is the National Board for Certified Clinical Hypnotherapists (`www.natboard.com`).

Chapter 16

Considering Surgery: The Last Resort?

In This Chapter

- Opting for surgery
- Choosing the right surgeon
- Identifying different types of surgery used for chronic pain
- Considering surgery when you're older
- Preparing for surgery

Your chronic pain may be so bad that you're totally fed up and desperate. You'd do just about anything to lessen the agony, including letting a surgeon cut into you while you're unconscious. Or maybe your doctor has told you that you *need* surgery. Alternatively, perhaps you simply want to know all your options for managing your pain, including surgical choices. Whatever led you to reading this chapter, you're probably approaching the idea of surgery with considerable trepidation. We don't know anyone who says, "Okay, I'll have surgery. No big deal." It's always a big deal.

But for many, surgery actually is a great option that can have stunning results. One of your authors (Elizabeth Vierck) has had two hip replacement surgeries, as well as surgery on both feet, all problems caused by arthritis. She says, "Fifty years ago, I'd be walking with two canes or in a wheelchair by now. Instead, I walk a few miles on most days, hike in the mountains, bicycle, and do water exercise four times a week. I'm not pain-free, but have a lot less pain than before the surgeries, and I'm active, best of all." A true testimonial for the surgery choice!

Benefits of surgery for those over age 65

Research conducted by the Agency for Healthcare Research and Quality has shown surgery can be a boost to older people in pain. Its study showed that, despite the risk of complications, the quality of life improves for older people after having knee replacement surgery. Older patients reported less pain and better physical function after surgery than younger patients.

Additional research confirmed the value of total knee replacement surgery in a study of patients whose average age was 65 years. After four years, nearly 90 percent of patients had a good to excellent outcome. After five years, 75 percent had no pain, 20 percent had mild pain, 3.7 percent had moderate pain, and only 1.3 percent had severe pain. These are good numbers!

Making the Decision

Most surgeries for pain are *elective.* In other words, the choice is really up to you. Surgery for chronic pain is usually not an emergency. Your life isn't in danger. You have time to find out as much as possible about the surgery and the surgeon and to review your options. You also have time to get a second opinion (or more, if need be). No rush decisions are required, which is good.

All surgery has risks and requires a recovery period ranging from days to months, depending on the type of procedure and your general health status. Outcomes can vary considerably, from thrillingly successful to not so great.

One of your authors (Dr. Kassan) cautions, "As a general rule, don't consider surgery until you've tried all other approaches, including medicines, physical therapy, and other techniques we discuss in this book. Even then, have surgery only when you feel that a not-so-great surgical outcome can't be worse than the pain you're in at present." He also warns, "There is an exception to this advice: If you have any neurological signs, such as numbness, weakness, or loss of bowel function, talk to your doctor about these symptoms right away."

You and your primary care doctor should exhaust all other pain-relieving options before you even consider surgery or meet with a surgeon.

Your primary care physician is usually a good starting point to learn about surgery. For example, your doctor will know what type of surgery you may need and which surgeon you should interview for your operation, such as an orthopedic doctor, neurosurgeon, or general surgeon.

Although your doctor can refer you to a specific surgeon by name, also do some investigating on your own to make sure that person is a good fit. Before you meet the surgeon, think about issues you need to discuss:

- **Does my particular condition respond well to surgery?** For example, surgery for back pain is controversial. Many medical experts suggest that most back pain will eventually ease up or go away completely without surgery. And some spinal surgeries can lead to other problems, such as collapsing of the vertebrae above where the surgery was done or below the area that was operated on. You should discuss these types of issues with your primary care doctor, as well as the surgeon.
- **What results can I expect from surgery?** Ask such questions as, "Will my pain go away entirely?" or "If my pain will only be reduced, about how much pain will I still have?" or "Will my pain probably be reduced by 80 percent, 50 percent, 10 percent, or some other percentage?"
- **What lies ahead for me if I do *not* have surgery now?** Several things can happen. If you don't have surgery, your condition may worsen. Alternatively, depending on your medical problem, the condition may improve on its own. Or it may stay about the same. Find out which situation applies in your case.
- **Are there any emerging surgical techniques that may help even more or that would require less recovery time and may be worth waiting for a year or two down the road?**
- **Are there other nonsurgical treatments that I haven't tried yet to ease my pain?** Besides your doctor's response, this question also requires an honest answer from you. For example, have you carried out all the recommendations of your physical therapist? Do you take your medications as prescribed and on schedule? Do you control your weight? If not, now is a good time to start!

Checking Out a Surgeon's Resume

Two important attributes to look for in a surgeon are specialized training and a lot of experience. Be sure to find out about your surgeon's qualifications.

Obtain the following types of information about the surgeon's credentials and experience before you sign up to lie down on that operating table:

- **Is your surgeon certified by a surgical board approved by the American Board of Medical Specialties (such as the American Board of Orthopaedic Surgery, the American Board of Colon and Rectal Surgery, or another national surgical board)?** Board-certified surgeons have successfully completed training and passed exams for their specialty. If the surgeon or his group has a Web site, this information is usually included there.

- **Does the surgeon have the letters FACS after his name?** If so, the doctor is a Fellow of the American College of Surgeons. Fellows have passed a test of their surgical training and skills; they've also committed to high standards of ethical conduct. Doctors with FACS after their name are proud of this credential and often include the designation after their name in the Yellow Pages of the phone directory.
- **Is the surgeon board certified?** Most minimally invasive spine surgeries for pain control, such as disc decompression or spinal cord stimulation are performed by board-certified anesthesiologists or physiatrists with extra training in pain medicine. These physicians do not have the FACS designation (see preceding bullet), but have specialized training specifically in pain medicine, which may include a year of formal fellowship training.
- **Does the surgeon operate regularly?** You're looking for a surgeon who operates at least several times a week.
- **How many times has he performed the specific surgery you need in the past year?** Studies suggest that surgical outcomes are better when a surgeon has performed a surgery many times.

  So how many is many? We don't have a definite answer to this question. As a general rule, your surgeon should perform an operation like yours at least every few weeks, and much more often would be better.

- **Does the surgeon get good reviews from commercial services?** Check out sites such as bestdoctors.com (`www.bestdoctors.com`) and healthgrades.com (`www.healthgrades.com`).
- **Does the surgeon practice at a highly reputable, accredited hospital?** You want one that has a Gold Seal of Approval from the accreditation organization called The Joint Commission (`www.qualitycheck.org`) or those who make U.S. News and World Report's Best Hospitals list (`www.health.usnews.com`).

Knowing what to ask the surgeon

Interview at least two surgeons when you're considering surgery. Remember the surgeon isn't going to be your new best friend, so don't be put off by a brusque and busy manner. More importantly, does he have a lot of experience with the surgery you're considering? In other words, find a surgeon whose specialty is the specific procedure that you're going to be having. For example, if you're going to have your neck fused, pick a surgeon who performs neck fusions a hundred or more times per year.

Your author, Dr. Kassan, says that the best surgeons are usually the ones who are busiest. As a result, you may not get into see the surgeon of your choice right away.

If you have to wait to see a popular surgeon, ask to be put on the doctor's waiting list. Also, ask to be put on the cancellation list in case someone cancels her appointment. You may not get much notice, but you also may get your appointment much faster.

When you meet the surgeon, ask these questions, recommended by the National Institutes of Health:

- What type of surgery is recommended?
- Why do I need surgery?
- Can another treatment be tried instead of surgery?
- What if I don't have the surgery?
- How will the surgery affect my health and lifestyle?
- Are there any activities that I won't be able to do after surgery?
- How long will it take to recover?
- How much experience has the surgeon had doing this kind of surgery?
- Where will the surgery be done — in the hospital, the doctor's office, a special surgical center, or a day surgery unit of a hospital?
- What kind of anesthesia will be used? What are the side effects and risks of having anesthesia?
- Is there anything else I should know about this surgery?

You may want to create your own list of questions that relate to your specific case. Write down your concerns *before* you see the doctor. Ask the most important questions in case you run out of time — that way, at least the doctor has addressed those issues. Take notes on what the doctor says, in case you forget later. (You think you won't, but sometimes people do!)

Getting a second opinion

Many people worry that if they get a second opinion about surgery, they'll hurt their doctor's delicate feelings. Don't worry: Second opinions are standard medical practice, and getting them gives you several advantages. They're a good way to get expert advice from another doctor specializing in your particular medical problem. And second opinions can reassure you that your decision to have surgery is the right one. The opposite can also be true; the other doctor may just stop you from having unnecessary surgery. Medicare, many Medicaid programs, and many private health insurance companies help pay for a second opinion.

When getting another opinion, do the same upfront research that you did for the first surgeon and ask the second surgeon the same questions that you asked the first one (from the "Making the decision" and "Knowing what to ask the surgeon" sections, earlier in this chapter) so that you can compare answers.

How do second opinions work? If both doctors agree that your surgery is probably a go, you may choose to go to either doctor for the surgery. If the second surgeon doesn't come to the same conclusion as the first, you may want to see a third surgeon to break the tie. You should also get the opinion of your primary care doctor.

Before going for a second opinion, have your medical records sent to the second surgeon so that you won't have to repeat any tests. Also, if you've had recent X-rays and the evaluating doctor will probably need to see them, call the clinic (or wherever the X-rays are located) and tell the staff you want to check out your X-rays. Give them at least a few days notice.

Profiling Major Types of Pain-Relieving Surgery

Many conditions cause chronic pain, so many types of surgery are available. They range from procedures to implant electrical equipment to reduce your pain to surgery to replace entire joints. In the following sections, we cover major surgeries performed to relieve pain, but check with your doctor about specific surgeries available for your particular condition. New surgical procedures and technologies appear all the time; make sure that you're up on the latest and greatest options for your specific condition.

Spinal cord stimulation (SCS)

Spinal cord stimulation (SCS) is a nondestructive, surgical approach to reversible pain relief. This therapy is used to control such chronic pain conditions as neuropathic pain, post-herpetic neuralgia, complex regional pain syndrome, low back pain, pain that remains after back surgery (failed backs), and Raynaud's disease. (Check Part II for information about these conditions.) In fact, SCS is often the last resort for these conditions and provides welcome relief when all other approaches fail. The success rate for SCS is a stunning 50 to 70 percent, depending on the cause of pain.

In SCS, a surgeon installs a little generator and a *lead* (wire) under your skin. The generator sends electrical currents through the lead to your spinal cord. (You'll probably feel a tingling sensation.) These currents act like a jamming device. Installing the equipment is usually a simple outpatient procedure, and you'll have a small incision.

Two types of SCS systems are available — one type is placed totally inside your body, and the other type uses a remote control and sends radio frequency signals to communicate with a receiver in the body.

Implantable drug delivery systems

Implantable drug delivery systems send pain-relieving medications, such as morphine or other drugs, directly to receptors in the spinal cord. A major advantage is that smaller doses of medication are required to gain relief because you're receiving a steady dose.

The system is made up of a pump and *catheter* (a thin, flexible tube) surgically implanted under the skin. The pump is inserted just above or below the belt line. A catheter runs from the pump to the spinal cord where it delivers medication, usually an opioid. The pump releases medication at a set rate and eventually expands out and bathes pain receptors all along the spinal cord.

Some health problems are particularly amenable to drug delivery systems. If you or a loved one has any of the following conditions, implanted drug systems may help:

- Failed back surgery syndrome
- Complex regional pain syndrome (CRPS)
- Chronic abdominal pains
- Failed neck surgery syndrome

Morphine is usually used in implantable drug delivery systems. However, some people can't tolerate the side effects of morphine, but may be able to use other drugs such as Demerol, Dilaudid, methadone, Fentanyl, or sufentanil. (See Chapter 14 for more information on these drugs.) New drugs, such as Prialt, derived from the toxin of a Pacific cone snail, show promise but are currently extremely expensive.

If you've used an implantable drug delivery system for awhile, you may develop tolerance to the drug delivered to your spine, or you may develop another condition that does not respond to opioids. If you have such a response, your doctor may try other medications such as local anesthetics.

Nerve blocks

Nerve blocks are injections of an anesthetic into or near a pain-conducting nerve. The procedure prevents pain signals from reaching the spinal cord or brain. A local anesthetic temporarily halts the transmission of pain signals in peripheral nerves.

Nerve blocks can be single injections or continuous infusions. They can relieve pain temporarily, for a few weeks, or several months.

According to the Cleveland Clinic, nerve blocks may help if you suffer from any of the following conditions:

- Neck pain
- Low back pain
- Sciatica resulting from herniated discs
- Lumbar canal stenosis
- Complex regional pain syndrome (reflex sympathetic dystrophy)
- Peripheral vascular disease
- Shingles pain
- Myofascial pain syndrome
- Cancer pain

Spinal fusion

Spinal fusion joins together two or more vertebrae with bone grafts, metals rods, or other hardware. If you have injured your vertebrae, have slipped discs, or curvatures of the spine, spinal fusion may be an option for you.

The surgery results in limited motion in the area of the fusion and may cause instability further up and down the spine. If you have spinal fusion surgery, you may be much more active than in the past, but if you don't stay in condition, you may still have pain.

Facet neurotomy

The purpose of a facet neurotomy is to destroy the root of a spinal nerve that is causing pain. The procedure is always considered a last resort because it can cause complete sensory loss to the destroyed nerve and can also lead to loss of motor function. However, it can also give major pain relief to some patients.

Minimally invasive disc procedures

Small to moderate-sized disc herniations and tears in the discs of the vertebrae can now be treated in ways that are far less invasive than previous surgeries. Many of these procedures are performed by pain medicine physicians and include the following:

- Devices such as mechanical instruments, laser tools, coblation tools (a type of radiofrequency energy), and high-pressure contained water jets can be used to repair discs. A radiofrequency probe, called an Intradiscal Electrothermal Therapy (IDET), can be used to repair tears in discs.
- Specialized tools can be inserted through a tube (endoscope) into discs. Then the tools are used through the scope to make pain-relieving repairs.

Surgery for cervical disc disease

If you have cervical (neck) disc disease, you may want to consider several surgical options. *Cervical disc disease* is caused by degeneration of the discs in the spine, narrowing of the spinal canal, arthritis, and, in rare cases, cancer or meningitis. Symptoms of the condition include pain in your neck or shoulder, tingling and numbness in your arms, and weakness in your arms or hands.

Several surgical procedures can relieve cervical pain. According to the American Association of Neurological Surgeons, they include

- **Anterior cervical discectomy (ACD):** ACD is widely performed to treat chronic neck pain. A disc (or discs) and bone spurs are removed from neck vertebrae. The surgery relieves pressure on one or more nerve roots or on the spinal cord.
- **Anterior cervical corpectomy:** This operation is performed together with anterior cervical discectomy. One or more parts of your vertebrae are removed, and then the space between the vertebrae is fused.
- **Posterior microdiscectomy:** This procedure is performed for a bulging disc on the side of the spinal cord. The surgeon carefully moves a nerve root to the side to free the offending disc.
- **Posterior cervical laminectomy:** In this procedure the surgeon uses a small incision in the middle of your neck to remove bone spurs or disc material.

Joint replacement

Some readers may remember an old '70s television show, "The Bionic Woman", in which many body parts of the injured Jaime Sommers were replaced, giving her incredible speed and mobility. Some people with joint replacement consider themselves bionic. Of course, joint replacement won't enable you to run so fast that people can't even see you, but it can often enable you to walk without pain once you recover, which sounds pretty good to people suffering from severe joint pain.

Joint replacement is the removal of a diseased joint and its replacement with an artificial one, called a *prosthesis.* The medical term for the procedure is *arthroplasty.* Over the last couple of decades, tremendous advances have been made in arthroplasty for knees and hips. The following are the most frequently performed joint replacements.

- **Hip replacement surgery** is one of the most successful orthopedic surgeries. It's evolving from a major surgery with a long recovery time to a less invasive procedure with a faster return to normal functioning. Regardless of the technique used, the process involves taking out diseased parts of the joint — the femur and acetebellum — and replacing them with artificial parts that allow smooth motion of the hip.

  If you have hip replacement surgery, you and your surgeon will decide whether your new hip will be fastened to your healthy bone using cement or something called *biologic fixation,* which involves giving your bone time to actually grow into the prosthesis. Your surgeon may also want to use a combination of methods. The advantage of cemented replacements is that you can go back to your normal activities soon after surgery.

- **Hip resurfacing** is a newer technique that enables the surgeon to remove less bone during a total hip replacement procedure. The femoral head, neck, and femur remain in your joint, allowing preservation of as much of the hip as possible. Resurfacing keeps a large portion of the hip joint intact for you to have total hip replacement surgery at a later date if needed.

- During **knee replacement surgery,** damaged bone and cartilage are taken from your thighbone, shinbone, and kneecap, and the areas are then reshaped. The surgeon inserts an artificial joint (*prosthesis*). As with hip replacement surgeries, knee replacements have benefited from new, minimally invasive surgical techniques. The procedure can be performed without large incisions, allowing for a quicker recovery than in the past. It also means you'll have less scar tissue.

Preparing for surgery if you have fibromyalgia

If you're having a major surgical procedure and you also have fibromyalgia or a similar chronic disease, talk with your surgeon and anesthesiologist about techniques to help you reduce a flare up of symptoms that often occurs after surgery. These techniques are adapted from materials developed by the Oregon Fibromyalgia Foundation (www.myalgia.com).

- If you'll have an endotracheal tube during surgery, ask for a soft neck collar to wear during surgery to minimize neck hyperextension.
- Ask that your arm with the intravenous line be kept near your body, not away from your body or over your head.
- Request a pre-operative opioid pain medication that you can take about 90 minutes prior to surgery. Pre-operative opioids can minimize the widespread body pain that you're already experiencing due to your fibro.
- Ask for a long-acting local anesthetic to be infiltrated into your incision — even though you'll be asleep during the procedure. This anesthetic minimizes pain impulses reaching your spinal cord and brain, which in turn drive central sensitization.
- You'll need more post-operative pain medication, and it'll usually need to be longer-acting medication. In most cases, opioids should be regularly administered or self-administered with a PCA pump (patient-controlled analgesia).

Most fibromyalgia patients require a longer post-operative convalescence, including physical therapy.

Recovering from Surgery

When you know in advance what to expect after surgery, you'll be less scared and more able to plan ahead for a successful recovery. Knowledge is power! Ask your surgeon how long you'll be in the hospital and find out what kind of supplies and equipment you'll need when you go home. Also ask your surgeon how much post-operative pain to expect and what kinds of activities you'll be able to do after surgery. For example, ask when you can take daily walks around the block again or when you can lift your 25-pound grandchild again safely.

Also, ask how long it will be before you can go back to work or start regular exercise. Find out whether you'll need any special equipment when you return to work. You don't want to do *anything* that will slow down your recovery! If you have other types of chronic pain in addition to the reason why you're having surgery, tell your surgeon and the health professionals helping you with rehabilitation. For example, not being able to perform physical therapy exercises after surgery may greatly impact your recovery.

Who can help on the Web

A number of great online resources are available for researching surgeries and surgeons. Start with the American College of Surgeons (`www.facs.org/index.html`; click on "Public Information" and then click on "Search for Members of the American College of Surgeons") to find surgeons who are members.

Also check with the American College of Medical Specialties (`www.abms.org/login.asp`) to find out whether the surgeon you're considering is certified in his specialty:

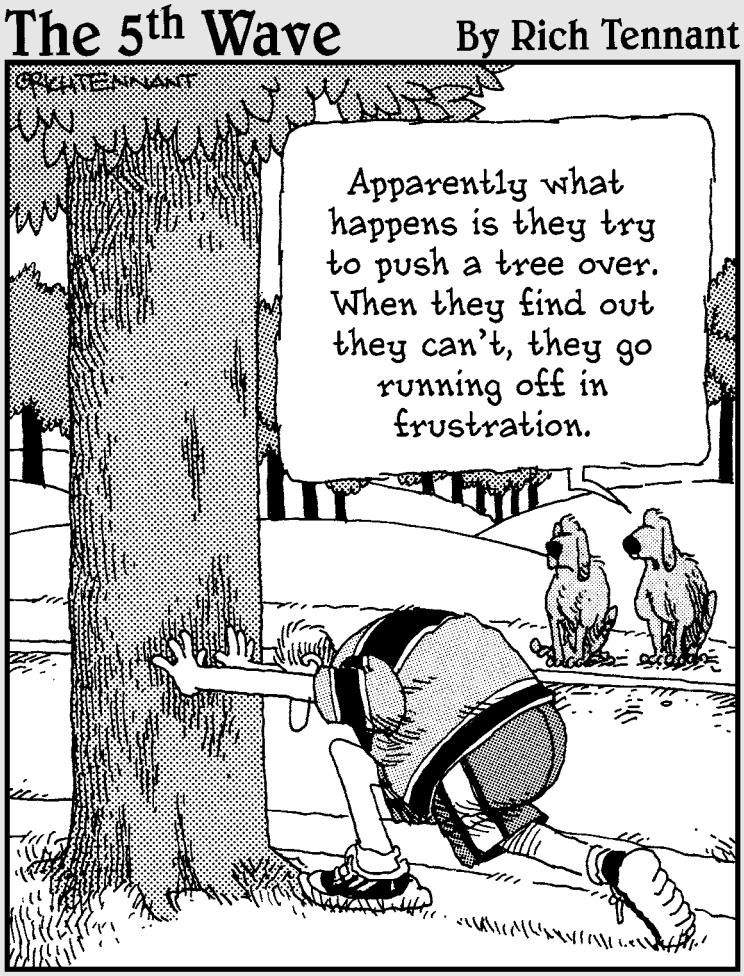
The following Web sites also provide interactive services where you can find board-certified surgeons in your area.

- American Academy of Orthopedic Surgeons, `www.aaos.org`
- American Association of Neurological Surgeons, `www.aans.org`
- American Pediatric Surgical Association, `www.eapsa.org`
- Society of American Gastrointestinal Endoscopic Surgeons, `www.sages.org`
- Society of Reproductive Surgeons, `www.reprodsurgery.org`

When you have surgery, remember that it's normal to have pain afterward. It even has a name: *post-surgical pain*. It will be awhile before you know how much pain relief you're going to have as a result of the surgery because the post-surgical pain will dominate for awhile. Many people also have pain due to inflammation and/or muscle spasms after surgery. You'll also have pain at the site of the incision and in the area where the operation was performed. Your body has had a major assault, and these reactions to surgery are all normal. As your body heals, this discomfort should decrease. If it doesn't, be sure to discuss your situation with your surgeon and primary care doctor.

Part IV

Managing Your Pain with Lifestyle



In this part . . .

In this part, you discover how to manage your pain with your lifestyle. We show you how to track and manage that pain and discuss how good nutrition, deconditioning, and sleep all affect your level of chronic pain.

We also take a look at how pain can be heightened or reduced by how you think and how your body reacts to that thinking and how to alleviate stress in your life.

Chapter 17

Tracking and Avoiding Pain Triggers

In This Chapter

- Identifying tools to track your pain
- Understanding how gadgets can help you
- Discovering good body mechanics
- Tracking how pain affects your life

Have you ever been sitting in your doctor's office when she asks you how intense your pain has been, and you suddenly blank out? Maybe you say, "Uh, maybe a 7 when it started. Oh, maybe a 3 now. Uh, well, okay, maybe it's more of a 5," you stammer. You're confusing your doctor and embarrassing yourself, but you can't help it. This so-called doctor-visit amnesia is a common phenomenon. It happens to most of us, so don't feel bad. (Just plan ahead, so you can hopefully avoid it!)

Many people grit their teeth, bear the pain, and avoid keeping track of the details. They don't remember or have any sort of record of what they were doing on the day the pain was its worst, nor do they know what was going on when the pain started in the first place. But, as the saying goes, the devil is in the details.

Tracking the minutiae of your individual chronic pain can help you and your doctor tame that wild demon. For example, if you honestly rate your maximum pain on a scale of 1 to 10 for a week at the end of every day, you may find that it is ever-so gradually going down. It may be subtle, but it means that your treatment is working.

This chapter provides you key suggestions for evaluating the intensity of your pain and also tracking and managing that pain. If you share this information with your loved ones, caregivers, doctors, and other health professionals, they'll better understand the impact your chronic pain has on you and be more adept at helping you manage it.

Tracking Your Pain

Medical research has shown that if you measure the level of your pain, and you also record the location of your pain, how long it lasts, and other characteristics, such as how it's affecting your quality of life, you'll have the most reliable gauge of your pain. And this information can really help you and your doctor.

The following sections provide you with a wealth of materials you can use to track your pain and improve its management.

Describing your pain

Are you at a loss for what words to use to describe your pain at its worst? One reason for your pain amnesia may be that people can't remember exactly how pain felt when they feel better again. It's over, and they know that it hurt, but they just can't recollect how it felt. (This is nature's way of keeping you sane!) When you're in severe pain, look at the following list and see which words best describe your pain so that you can report this information to your doctor later:

Aching	Burning	Buzzing	Crampy	Crushing
Cutting	Deep	Dull	Electric	Itching
Knot-like	Gnawing	Lightning-like	On the surface	Piercing
Pinching	Pins and needles	Prickling	Pounding	Pulling
Pulsing	Sharp or stabbing	Shooting	Stretching	Tender
Tight	Zapping			

Recording your pain

A pain log can help you identify your particular pain triggers. (*Pain triggers* are things in your life — such as too much exercise or too little sleep — that set off a pain cycle.) When you know what your own personal pain triggers are, you can deal with them more proactively.

Keeping a pain record can also help you and your doctor assess your pain and evaluate how well your medications and other treatments are working. And it can help you keep track of your pain management goals and whether you're reaching them. (We discuss goal setting in the "Taking Control"

Detect someone else's pain with nonverbal cues

If you're helping another person develop his pain diary or you want to explain his pain to a health professional, you may find it difficult to get a true picture of how he feels. It's often hard to tell what's going on, even when you know someone is in pain. Sure, he hurts, but how bad is it?

In fact, many people won't tell you, particularly if they're part of an older generation or naturally stoical. However, people in pain also display nonverbal clues to how they're feeling. You can use these clues developed by the National Institutes of Health to tell whether someone else is in pain:

- **Vocal complaints:** Moans, groans, grunts, cries, gasps, or sighs
- **Facial grimaces and winces:** Furrowed brow, narrowed eyes, tightened lips, dropped jaw, clenched teeth, distorted expression
- **Bracing:** Clutching or holding on to things during movement
- **Restlessness:** Constant or intermittent shifting of position, rocking, intermittent or constant hand motions, inability to keep still
- **Protecting:** Clutching or holding the affected area
- **Self soothing:** Rubbing and massaging the affected area of the body

section, later in this chapter.) If you suffer from chronic pain, you should be recording it at regular intervals to track your improvement and how well your treatments are working, as well as times when you worsen.

Many methods for keeping a record of your pain are available, and we describe several in the following sections. This way, you have no excuse because you should be able to work with at least one method here.

For example, if you don't like to keep handwritten notes, try using a picture log. Figure 17-1 shows one we really like, developed by the American Chronic Pain Association. Make copies of the form and then circle the number under the pictures that most apply to you.

Also consider combining methods — for example, using both this picture method and the quality of life scales in Figure 17-3.

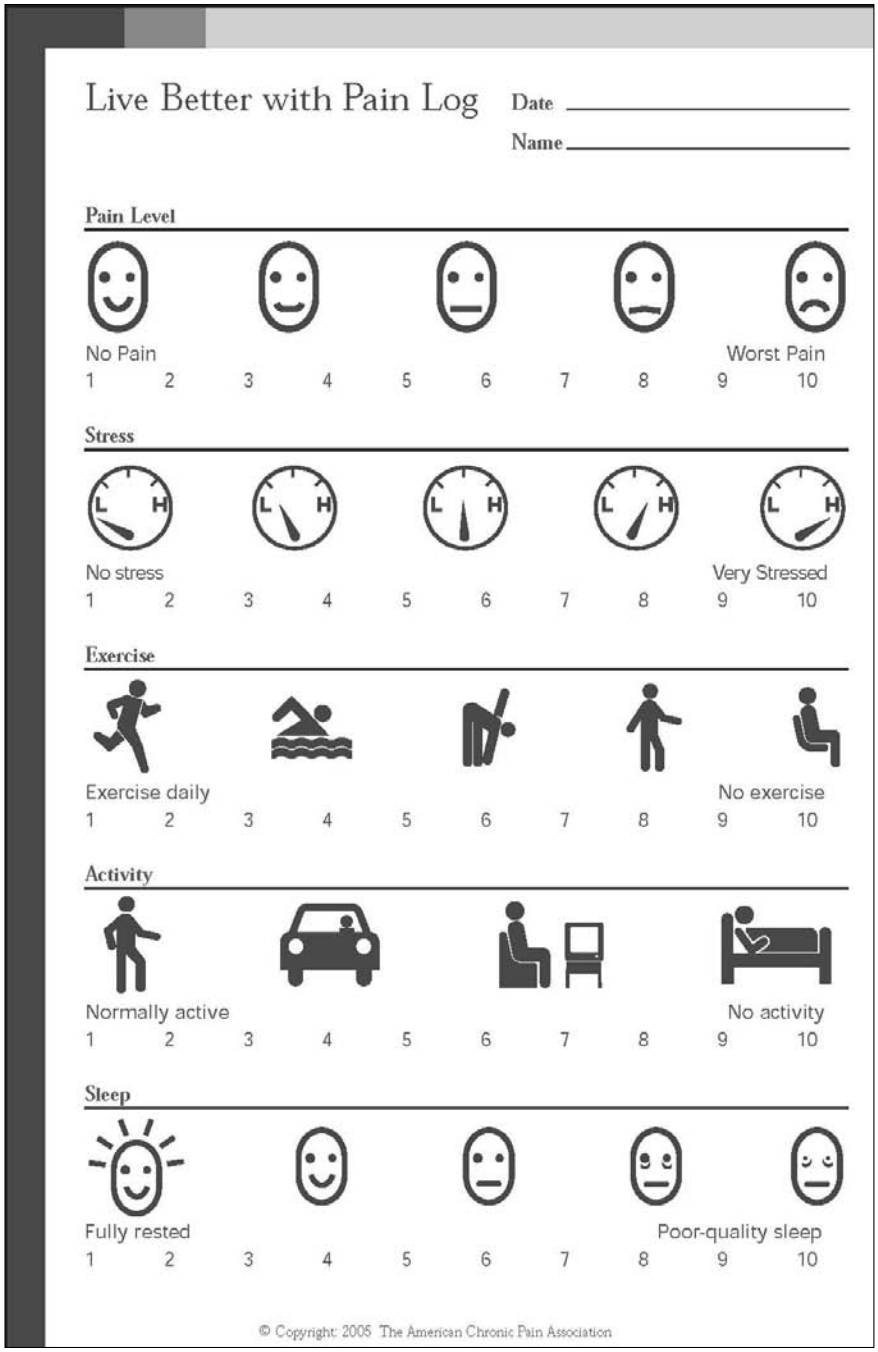
Keeping a diary

A diary can help you track your pain. A student notebook or a pad of paper and a folder both work well.

Keep in mind that the more details that you include in your notebook, the better for you and your doctor.

Be sure to answer these questions in your pain diary:

- Exactly where does it hurt? Is your pain limited to one spot, or does it move around to other parts of your body?



Live Better with Pain Log

Date _____

Name _____

Pain Level

No Pain — Worst Pain

1 2 3 4 5 6 7 8 9 10

Stress

No stress — Very Stressed

1 2 3 4 5 6 7 8 9 10

Exercise

Exercise daily — No exercise

1 2 3 4 5 6 7 8 9 10

Activity

Normally active — No activity

1 2 3 4 5 6 7 8 9 10

Sleep

Fully rested — Poor-quality sleep

1 2 3 4 5 6 7 8 9 10

Figure 17-1: Live Better with Pain log.

Courtesy of American Chronic Pain Association.

Appetite

Normal appetite — No appetite

1 2 3 4 5 6 7 8 9 10

Mood

Cheerful & calm — Depressed, anxious

1 2 3 4 5 6 7 8 9 10

Interaction/isolation

Lots of interaction with family & friends — Always alone

1 2 3 4 5 6 7 8 9 10

Alcohol Use (drinks each day)

None — 1 or 2 — 3 or 4 — 5 or 6 — 7 or more

1 2 3 4 5 6 7 8 9 10

Finances

No money worries — Serious money worries

1 2 3 4 5 6 7 8 9 10

Finding your environmental pain triggers

Some people's pain worsens when they eat certain foods or they're under stress. Others find weather changes greatly exacerbate their pain. Heavy lifting can trigger pain in some people. Some contorted positions (for whatever reason that you're contorted!) can zap your body with pain. Once you've identified your environmental triggers, you can start working on limiting their effects on your life!

Following are some basic suggestions for limiting some common pain triggers:

- Avoid lifting more than 15 to 20 pounds whenever possible. Extra weight can trigger pain in many people.
- Falls can be pain generators, and some people suffer for years from a seemingly minor slip and fall. Keep your house and driveway debris-free and watch where you're walking (hopefully not into a pothole!) when away from home. If you have small children or grandchildren, watch out for the tiny items they spread around that are too easy to trip over.
- When the weather is bad, you can't somehow transform a cold, snowy day into a sunny day at a tropical beach. But you can dress warmly, be careful, and decrease the probability of ratcheting up your pain quotient.
- Sometimes foods trigger pain. Track what you eat to find out whether spicy foods, caffeinated drinks, milk, or other types of food put you in Painland, a place where you don't want to be. If so, avoid those foods.
- If you're under a lot of stress, find some destressing activities. Do something fun or just take a nap — whatever works for you.

- What does the pain feel like? Is it a stabbing, throbbing, or aching pain, or would you describe it in another way?
- How strong is the pain? Use a 1 to 10 scale, with 0 for no pain and 10 for the worst that you can possibly imagine. You may want to use the scale at the top of Figure 17-1. In addition, the next section, "Using pain scales to determine pain intensity," provides the address for a Web site where you can download and print scales for free.

  Do not amplify your pain on the pain scales. For example, a 10 usually means that the pain sufferer has been in the emergency room getting IV narcotics. People who say their pain is a 20 are frequently viewed as not being truthful and are prone to exaggeration, which may negatively impact pain care. Consider recording a range of daily pain instead of simply picking a number.
- How frequent are your pain episodes? (For example, are they several times a day or week or some other frequency?) Do these pain episodes occur only when you get up in the morning, or whenever you've been resting for awhile? Or is the pain constant and unremitting?
- How long does each pain episode last? Do you have it all the time, on and off, the same all day long, or is it worse at a particular time?

- Do you have more than one type of pain? For example, you may have some constant aches, as well as a shooting pain in your shoulder that comes and goes.
- What are your pain triggers, if you know? What activities or times of day seem to set off the pain, make it worse, or make it better? For example, did you carry a heavy suitcase through the airport yesterday, and now you're paying for it with major pain? Did you stop taking a pain medication? Have you been avoiding exercise or over-exercising? (Yes, some people do exercise too much and for too long!)
- What pain medications are you taking, and how often do you take them?
- Is the medication giving you pain relief?
- If you get relief from the medication, how long does it last?
- Do you have any other symptoms associated with pain, such as sweating, loss of appetite, or insomnia?

Using pain scales to determine pain intensity

Pain scales are frequently used by health-care professionals who work with people in pain when they need to know how bad it hurts. You may decide to use a pain scale by itself or along with a diary to describe your pain intensity. (See the preceding section for more on a pain diary.) The National Institutes of Health provides free and downloadable pain scales on the following Web site: `http://painconsortium.nih.gov`. Click the Other Resources link and then click Pain Intensity Scales.

The pain scales include the number scale, the visual scale, the categorical scale, and the pain faces scale. People usually prefer one scale over the other:

- On the number rating scale, you explain how much pain you're having by choosing a number from 0 (no pain) to 10 (the worst possible pain).
- The visual scale is a straight line. The far left equals no pain, and the far right end equals horrible (the worst) pain. You mark on the line where your pain is.
- The category scale has four categories: none, mild, moderate, and severe. You circle the category that best describes their pain.
- The faces scale uses six faces with different expressions of pain on each face. You choose the face that best describes how you are feeling. This rating scale is easy to use by people from age 3 and up.

Using body diagrams to show where it hurts

A body diagram to describe *where* your pain is and whether it moves around can help your doctor greatly. Copy the body diagram in Figure 17-2. For each part of your body where you have pain, draw an outline that includes the pain area on the body diagram. Use different colored pencils or pens to describe pain that's inside or outside your body. For example, you can use green if the pain is inside your head and blue if it's on the top of your head.

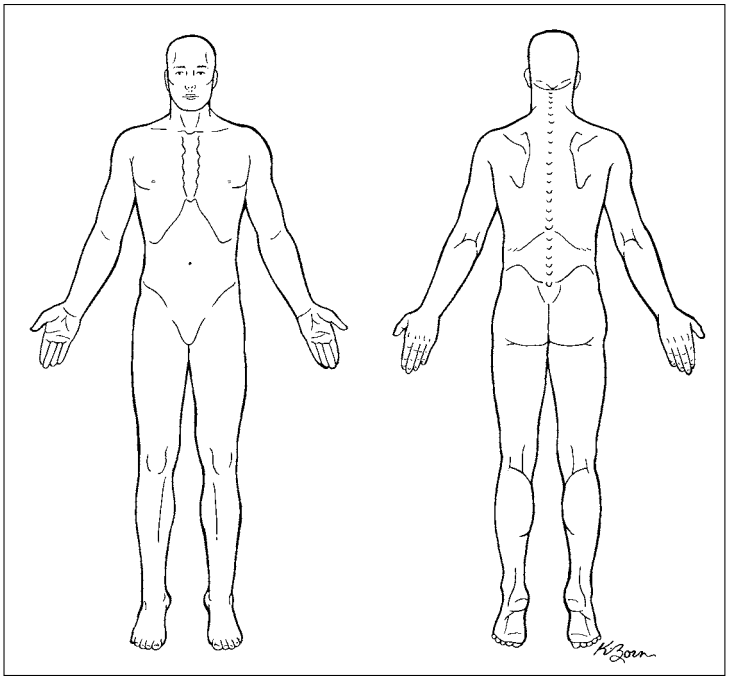


Figure 17-2: Body diagram.

Measuring your quality of life

Chronic pain affects all areas of your life. The staff at the American Chronic Pain Association say it's important to look at not just your physical level of pain, but also how much your pain limits your ability to live a full life. The organization's Quality of Life Scale, shown in Figure 17-3, takes into account your ability to work, enjoy your family, and participate in social activities. The ACPA suggests that you download the scale, print it, and show it to your doctor and other members of your medical team.

Taking your pain records to your doctor

After you create a pain diary and other pain tracking records of your choice (described earlier in the "Tracking Your Pain" section), you can describe to your doctor just what your pain is like and how it changes with different treatments. But how do you relay this information to your doctor during your 15-minute (or less) visit? Creating a summary of all your lists can help you accurately portray your pain to her. Your summary of all the careful records you've been keeping should make the following points:

- When did the pain start? For example, did it begin suddenly or come on gradually?

- Did a specific event seem to set off the pain?
- What does the pain feel like? If you're having trouble describing it, use the list of pain descriptors provided in the "Describing your pain" section, earlier in this chapter.

Quality of Life Scale
A Measure of Function
For People With Pain

0 Non-functioning	Stay in bed all day Feel hopeless and helpless about life
1	Stay in bed at least half the day Have no contact with outside world
2	Get out of bed but don't get dressed Stay at home all day
3	Get dressed in the morning Minimal activities at home Contact with friends via phone, email
4	Do simple chores around the house Minimal activities outside of home two days a week
5	Struggle but fulfill daily home responsibilities No outside activity Not able to work/volunteer
6	Work/volunteer limited hours Take part in limited social activities on weekends
7	Work/volunteer for a few hours daily. Can be active at least five hours a day. Can make plans to do simple activities on weekends
8	Work/volunteer for at least six hours daily. Have energy to make plans for one evening. Active on weekends
9	Work/volunteer for at least six hours daily. Have energy to make plans for one evening. Active on weekends
10 Normal Quality of Life	Go to work/volunteer each day Normal daily activities each day Have a social life outside of work Take an active part in family life

Courtesy American Chronic Pain Association

Figure 17-3: Quality of Life Scale.

- How intense is the pain on most days? This point is where the pain scale in Figure 17-1 that you choose comes in handy.
- Where is the pain on your body? Refer to the body chart shown in Figure 17-2, earlier in this chapter.
- What seems to trigger the pain or make it worse?
- What, if anything, makes the pain better?
- Does your pain affect your ability to carry out daily activities?
- Does your pain affect your mood and sense of well-being?
- Do you feel depressed or anxious?

Your doctor will probably ask you about past and present medical problems or injuries that may have a role in causing or worsening the pain. (For a complete list of the things you should discuss with your doctor, see Chapter 13.) And, of course, your doctor will give you a physical examination.

Developing a Pain Management Plan

Work with your professional anti-pain team to create your pain management plan and then be sure to write it down. (For more information on anti-pain teams, see Chapter 13.) Post your plan somewhere you'll easily see it, such as on your refrigerator or on your nightstand. You also may want to make a copy of your plan and keep it in your pain diary or folder.

Here's a list of the type of items to include in your plan:

- **Goals:** List your goals and update the list regularly. (See the "Getting smart about goals" section, later in this chapter.)
- **Medications:** List the medications you take, the dosage for each drug, and when you take them. You may want to make copies of the medication log in Figure 17-4 and insert your own medication information. (See Chapter 14 for information about the medications frequently used to manage pain.)
- **Pain triggers:** List your pain triggers and your strategy for avoiding them.
- **Exercise and stretching:** List the type of exercises you're doing and plan to do. (See Chapter 19 for information about exercise appropriate for you if you have chronic pain.)
- **Rest:** Plan to make rest and adequate sleep part of your daily routine. (See Chapter 20 for information on getting adequate sleep and rest.)
- **Other healthy habits:** List other healthy habits you'll practice, such as maintaining a healthy diet. (We list many throughout this book.)

- **Questions:** List any questions you have for your anti-pain team. (See Chapter 13 for information about forming your anti-pain team.)
- **Doctor's names and contact information:** Keep this information handy.

Name of Medication	Date Started	Dosage	How much and when	Effects Experienced (reduced pain, sleeplessness, etc.)	Side Effects (nausea etc.)	Name of Prescribing Doctor	Name of Pharmacy

Figure 17-4: Medication log.

- **Rehabilitation plan:** List any special exercises or techniques you're using to lessen your pain and build up strength and stamina.
- **Contact information for your physical and/or occupational therapist and pharmacist:** Include names, addresses, and phone numbers.
- **Contact information for other members of your health-care team such as your fitness instructor or dietician:** Include names, addresses, and phone numbers.

Taking Control

Once you develop a pain management plan with your doctor and other members of your anti-pain team, be sure to use it. A plan that you don't use isn't any good, even if you've got the best doctors in the world!

An important part of making the plan work is to focus on your health:

- Take care of yourself by eating a balanced diet, exercising regularly, and following your pain management plan.
- Be positive and stop negative thinking (see Chapter 21).
- Laugh and smile a lot. (Learn some jokes, read a funny book, or take the kids to an amusement park; see Chapter 22 for more ideas).
- Surround yourself with positive people.
- Enjoy activities with family and friends.

Getting smart about goals

After you're keeping track of your pain, you're ready to set some goals to use in your pain management plan. Select your greatest area(s) of concern and then use the following techniques to set goals to deal with those issues.

Set realistic and achievable pain management goals. If your goals are out of reach (such as a total cure or being pain-free), it's almost impossible to achieve them, so you'll feel discouraged. Conversely, if your pain management goals are too low (too pessimistic), then you'll be selling yourself short. Avoid both errors!

A surefire way to make smart goals is to use the following SMART system, which means your goals are specific, measurable, attainable, realistic, and timely.

- **Specific:** You have a much greater chance of accomplishing a specific goal than a general goal. One way to set a specific goal is to ask the six W questions:

- **Who:** Who is involved?
- **What:** What do I want to accomplish?
- **Where:** Where do I want to accomplish it?
- **When:** When should the goal be reached?
- **Which:** Which requirements and constraints must I pay attention to?
- **Why:** Why I am doing this? (List the specific reasons, purpose, or benefits of accomplishing the goal.)

For example, a general goal is, "Feel less pain." A specific goal is, "Join the pool and go to aqua exercise three days a week, to increase flexibility."

- **Measurable:** Choose a goal with measurable progress so that you can actually see and feel the change occur. When you measure your progress, you stay on track, reach your target dates, and experience the exhilaration of achievement that spurs you on to continued effort required to reach your goals.

  An example is, "My goal is to walk three blocks without stopping by June 1." When June 1 arrives and you find yourself walking down the fourth block without stopping, you've surpassed your goal! Good for you!

- **Attainable:** Set goals that make you stretch a little, but that that you also can realistically reach. If your goal is to lose 10 pounds in a week, that's unrealistic. But losing a pound a week is something you can achieve and also feel great about.

- **Realistic:** Realistic means do-able. Make a plan that makes the goal realistic. For example, a goal of totally giving up "empty calories" is a formula for failure if you love sweets and treats and eat them regularly. It may be more realistic to set a goal of eating an apple in the afternoon in place of your usual oatmeal cookie. You can then work toward reducing empty calories gradually, a much more reasonable goal.

- **Timely:** Set a timeframe to achieve your goal, such as a week from today, in three months, or by your daughter's graduation. Putting a target on your goal gives you something to work toward and to celebrate when you achieve it. Without a time limit, you have no urgency to start taking action now. Time should be measurable, attainable, and realistic.

Using a contract to monitor progress

Using pain records is a great way to track your progress toward your goals. Many pain programs and counselors also recommend making a contract with yourself to set and work toward your goals. They find that making a personal commitment makes it more likely that you'll follow through on your goals. For example, your contract might look something like this:

I agree for the next three months to:

- Take my medications every day.
- Walk for 20 minutes.
- Stretch for five minutes before and after walking.
- Get at least seven hours of sleep every night.

Sidestepping Pain Triggers

When you're aware of your personal pain triggers, you can deal with them more proactively. You may already know that chewing bubble gum gives you headaches, jogging makes your knees swell, or eating spicy food is a no-no for your irritable bowel syndrome.

You may also discover your triggers by tracking your pain. Keeping a diary, using pain scales, or using a similar technique — all described earlier in this chapter — work because they make you pay attention to your body and your environment. And when you pay attention to your body and the world around you, you'll have an easier time identifying what makes your pain worse or better.

Make a checklist of your pain triggers and then develop your strategies for avoiding them. For example, if you've identified using a backpack is a trigger for your neck pain, make it your goal to stop using one and instead purchase a tote bag on wheels. (A better choice: Stop carrying around so much stuff!)

Using handy gadgets

Literally hundreds of assistive products can help people adjust to chronic pain of all types. We like to call these products handy gadgets. They're also known as *assistive devices, assistive technology,* or *adaptive devices*.

These gadgets help people with chronic pain accomplish the activities they've always done but must now do differently. One of their biggest advantages is that they can help people avoid pain triggers. These handy gadgets include the following:

- **Aids for daily living:** Gadgets to help with activities of daily living, such as bathing, carrying items, getting dressed, and managing personal hygiene. For example, if you love to garden, consider pruning shears especially designed for individuals with arthritis, carpal tunnel syndrome, or similar problems. If you have trouble moving from a seated position, some products can help considerably, such as lift chairs that enable people to sit comfortably and safely and get up easily.

- **Computers:** Gadgets, software, and accessories that enable people with limitations to use desktop and laptop computers and other kinds of information technology. For example, software and hardware that enables sight-challenged people to read text in large fonts or that converts text to speech may be just what you need.
- **Controls:** Gadgets that enable people with limitations to start, stop, or adjust electric or electronic devices. For example, a one-handed camera gives you the ability to operate the zoom lens. Some products enable people with chronic pain and limitations to drive or ride in cars, vans, trucks, and buses.
- **Housekeeping:** Gadgets that assist in cooking, cleaning, and other household activities. They include everything from adapted appliances to smart homes, which use computers to control appliances and other parts of the house remotely or to respond automatically to the people living in it. Without flicking a switch, smart homes do everything from filling bath tubs half full with water of a predetermined temperature to lifting cupboards up and down so that they will be at the most appropriate position for different people.
- **Recreation:** Many gadgets and products help people with chronic pain with their leisure and athletic activities. For example, a knitting needle holder that enables you to knit with one hand, a glove that can help you grasp the handles of pool cues, and The HandBike, a hand-propelled bicycle for people with problems in their lower bodies or with spinal cord injuries, are all products that may work well for you.

You can identify many gadgets through ABLEDATA, a government program that provides an Internet database on assistive devises and rehabilitation equipment available from domestic and international sources. ABLEDATA (`www.abledata.com`) doesn't sell products listed on the database, but it provides information on how to contact manufacturers or distributors of the products.

Maintaining the right body mechanics

When you have chronic pain, learning the right body mechanics enables you to move in a way that avoids further injury and triggering of more pain. Body mechanics are related to *biomechanics,* which, among other things, is the study of how your body reacts to its own weight and the environment's gravity.

Why do you need good body mechanics? People with chronic pain often sit, stand, and walk in very awkward and even rigid positions to avoid irritating the painful parts of the body. The result can be new pain in a new area of the body, which is the result of awkward positioning. Learning how to keep your body in the right position can help protect your skeleton, organs, and soft tissues and allows you to use your body in a safe way.

Different professionals, including physical and occupational therapists, can teach you good body mechanics. (See Chapter 13 for information about physical and occupational therapists and the many services they provide.) In addition, you may want to consider a practitioner in one of the following methods. They are trained in body mechanics:

- The **Feldenkrais method** is a system that gives people a greater understanding of their bodies. The method uses movement and awareness, and is thought of as a complementary and alternative technique, but we include it here because of its value for learning good body mechanics.

  The Feldenkrais Method is used by people who want to reduce their pain or limitations while walking and moving around. Many people feel that the method improves movement-related pain in their backs, knees, hips, or shoulders. It also can lead to better recovery for people who have had strokes. To find out more about Feldenkrais go to `www.feldenkrais.com`. To find a class near you, click Practitioners/Classes and Events and then Find an ATM class. (ATM stands for Awareness Through Movement.)

- The **Alexander Technique** is an educational system with the intention of teaching practitioners to recognize and overcome bad habits in their posture and movement. As with the Feldenkrais Method, the Alexander Technique is thought of as a type of complementary and alternative technique. Students of the technique are taught to stand, walk, and sit in ways that are not stressful on the body. To find out more about the Alexander Technique, go to `www.alexandertech.com`. To find practitioners near you, click the Find a Teacher link.

Chapter 18

Nutrition and Weight Control

In This Chapter

- Discovering how a healthy diet decreases pain
- Understanding the principles of healthy eating
- Shunning trigger foods
- Maintaining a healthy weight

I keep trying to lose weight, but it keeps finding me!"

"I'm on a seafood diet. I see food, and I eat it."

"Inside some of us is a thin person struggling to get out, but she can usually be sedated with a few pieces of chocolate cake."

Probably more jokes are told about the struggle to lose weight than any other topic, including blondes! That's because losing weight is such a universal phenomenon and so ridiculously difficult for most people that almost everyone can relate to it. Even the string beans of the world get the jokes because they know numerous people who've tried countless diets to no avail. Yet weight control and good nutrition are both possible. In fact, they're inextricably linked. In addition, weight control and good nutrition also directly affect your level of chronic pain. Too many pounds equal a higher level of pain, and some foods can actually trigger pain.

Healthy nutrition is a very important topic for anyone who has chronic pain. Because, as Carol Ann Rinzler says in *Nutrition For Dummies* (Wiley), "Food is life. All living things, including you, need food and water to live. Beyond that, you need good food, meaning food with the proper nutrients to live well." And when you have chronic pain, living well is a priority.

This chapter focuses on following healthy diet guidelines and keeping your weight under control, which, in turn, can help tame the wild lion of your chronic pain into an annoying kitty.

Paying Attention to Nourishing Your Body

Are you malnourished? Your answer may be, "Are you kidding? My T-shirts are XL!" We hear you! Yet it's very common to be both overweight *and* malnourished. Not the starving-in-a-poor country kind of malnourished, but malnourished nonetheless.

You may be malnourished if you have any of the following food issues:

- **A diet deficient in nutrients because it's unbalanced:** For example, do you shun fruits and vegetables, thinking they're reserved for children or aging hippies or because you just don't like them? Do you consume a lot of sweets and soda? We know one 20-something-year-old who goes to college full time and works two jobs. Her diet consists of colas (love that sugar and caffeine!) and candy bars. If scenarios such as these apply to you, you may be malnourished.
- **A diet deficient in nutrients because you have an eating disorder:** Eating disorders are severe disturbances in the way an individual eats, such as a woman who's eating so little that she's literally starving herself. Or conversely, binging on food (and maybe purging, too) is another form of an eating disorder. All eating disorders can cause serious malnourishment and health problems.
- **A diet deficient in nutrients because of a medical problem:** Some medical problems dramatically affect nutrition. For example, people with kidney problems must restrict the amount of protein they eat, causing shrinking of muscle tissue, a buildup of fluids (*edema*), anemia, and other medical problems. Another example: People with a severe allergy to gluten can develop a deficiency in vitamin B6, which is essential to good health. For example, vitamin B6 is needed for more than 100 enzymes involved in protein metabolism. It's also essential for red blood cell metabolism.
- **A diet deficient in nutrients because of medications you take:** Some medicines block the absorption of nutrients. For example, if you have an ulcer or acid reflux and have been taking acid-reducing drugs for a long time, they can cause vitamin B12 deficiency. Your body needs vitamin B12 to help maintain healthy nerves and red blood cells.

  In addition, some drugs are known to *lower* vitamin C levels, such as estrogen and also aspirin, if taken frequently.

If any of these issues apply to you, then you may be malnourished because your body is lacking one or more key nutrients. Here are some signs of malnutrition:

- Loss of appetite
- Weight loss or a very thin body structure
- Lack of energy
- Dull hair, skin, and eyes
- Swollen abdomen
- Water retention

If you have any of these symptoms, discuss them with your doctor who may draw some blood from you to test for deficiencies caused by lack of adequate nutrition.

Healthy Eating

The key principle of a healthy diet is to eat a well-balanced variety of wholesome foods so that you'll take in all the nutrients required for good health and disease prevention. Probably the best nutritional advice comes from Dr. Walter Willett and his colleagues at the Harvard School of Public Health (HSPH).

Dr. Willett's premise is that your diet should consist mostly of health-promoting foods and drinks, which you eat frequently. Foods that aren't health-promoting should be eaten far less often and in small amounts. "Duh," you say! "That's pretty obvious!" Well, Dr. Willett made this simple concept even simpler by recommending health-promoting foods that you can (and should) eat a lot of and the foods you should limit.

Dr. Willett organizes his nutrition guidelines into levels similar to the government's food pyramid. For our purposes, we give you the amounts in each level in a checklist that you can copy and use for meal planning.

Each level that Dr. Willett specifies has its own special significance:

- **Level 1:** Exercise daily and control your weight. (See Chapter 19 for information on exercise.)
- **Level 2:** Whole-grain foods are healthy carbohydrates your body needs for energy. Eat them at most meals. Whole grains contain the essential parts of the grain's seed or the equivalent. Examples of generally accepted whole-grain foods and flours are amaranth, barley (lightly pearled), brown and colored rice, buckwheat, bulgur, corn and whole cornmeal, millet, oatmeal and whole oats, popcorn, quinoa, whole rye, whole or cracked wheat, wheat berries, and wild rice.

Stay away from anything made with "white" flour. All the good nutrition has been refined right out of the grain!

Level 2 also includes plant oils. Because most people get one-third or more of their calories from fats, they're in the first level of Willet's guidelines. However, the fats you eat should be health promoters. Stay away from trans fats, animal fats, and palm, palm kernel, and coconut oils. Replace them with olive or canola oil. Flaxseed and nut oils are also great for your heart and for fighting inflammation. Fried foods are on the forbidden list, along with margarines, unless they contain an ingredient called *sitostanol,* a plant sterol that lowers cholesterol absorption. Benecol, Take Control, or other margarine-like spreads include this ingredient.

- **Level 3:** Produce (vegetables and fruits) make up the third level. Men should eat nine servings of fruits and vegetables a day, and women should eat seven servings. Eating lots of fruits and vegetables can help prevent many chronic diseases. They're also great for your digestive system. Because they're low in calories and high in fiber, fruits and vegetables are great foods for weight control, particularly if you cut back on high-calorie foods.

Fruits and vegetables also have *phytochemicals,* non-nutritive chemicals that have protective or disease preventive properties. These chemicals have been dubbed super foods, because they're thought to be remarkable health boosters.

By sampling one food of every color a couple of times a day, you're more likely to eat the recommended five to nine servings of vegetables and fruits every day. For example, at lunch you could have a salad with 1 cup of green spinach, and the following sprinkled on top: 1 tablespoon chopped white onion, 1/2 cup of red tomatoes, 1/2 cup of yellow pineapple chunks, orange slices equivalent to half an orange, and 1/2 cup of blueberries.

- **Level 4:** Nuts and legumes are the fourth level. They should be enjoyed one to three times daily. Nuts and legumes are excellent sources of protein, fiber, vitamins, and minerals.

Nuts are often overlooked as the elegant source of protein that they are. Yes, nuts are high in fat, but the fat is heart-healthy and may help lower low-density lipoproteins. In fact, nuts are recommended as part of the DASH (Dietary Approaches to Stop Hypertension) diet, a dietary plan supported by the National Heart, Lung, and Blood Institute and clinically proven to significantly reduce blood pressure. Legumes are healthy, too, and include many vegetables, such as string beans, lentils, dried beans, and peas. The DASH diet recommends four to five servings per week of nuts, seeds, and legumes.

Would you like some nuts with that?

The FDA recommends eating up to 1.5 ounces of nuts daily. Here are some tips:

- A handful of nuts equals about 1-ounce.
- On average, a 1.5-ounce serving is equivalent to about 1/3 cup of nuts.
- In terms of protein 1/3 cup of nuts or 2 tablespoons of peanut butter equals about 1 ounce of meat.

Legumes are low in fat, high in protein, and absorb the flavor of spices and herbs. Beans and other legumes have many nutrients important to prevent heart disease, cancer, and obesity. They're also high in complex carbohydrates, fiber, vitamins, and minerals.

When lentils are eaten with rice, they become a complete protein, which means that they contain all the amino acids that you need in your diet. Many classes of dry beans are available in the United States, including black beans, black-eyed peas, chickpeas, cranberry, and Great Northern, kidney, lima, navy (pea), and pinto beans.

- **Level 5:** Fish, poultry, and eggs are important sources of lean protein, and you should eat them up to two times a day. Lean animal proteins are healthful proteins. The best choices are fish, shellfish, skinless lean chicken or turkey, low-fat or fat-free dairy (such as skim milk and low-fat cheese), egg whites (no yolks), and egg substitute.
- **Level 6:** You need dairy or calcium supplements one to two times a day. Dairy products are great sources of protein but can contain a lot of saturated fat. In fact, three glasses of whole milk have as much saturated fat as 13 strips of cooked bacon! No-fat or low-fat dairy products are great. You can also get your calcium from other sources, such as broccoli and soybeans.
- **Level 7:** Remember the old joke? If it tastes good, spit it out! Most of us love the way fat, starch, and sweets taste. But, stay away from these foods as much as possible. Eat them only occasionally for special treats. Here's why:
  - Red meat, and butter: Foods in these two categories contain lots of saturated fat, which is very bad for your cardiovascular system and is also high in calories.
  - White rice, white bread, potatoes, white pasta, soda, and sweets: These foods are also forbidden because they are empty calories. In other words, they're high in calories, but have absolutely no nutritional value. Notice that even potatoes are restricted, so potatoes and butter are really no-no-nos!

Getting the truth about nutrition

A lot of confusing information about nutrition appears on the Web, in the media, and in bookstores. The Nutrition Source cuts through all that, providing clear tips for healthy eating and dispelling nutrition myths along the way. Go to its Web site at `www.hsph.harvard.edu/nutritionsource/index.html` to find out what you should eat and why.

Cutting Back on Calories to Avoid Obesity

Due to the lack of activity that often accompanies chronic pain, you can easily gain weight and even become obese. Putting on unnecessary pounds can become a serious problem even if it was never an issue in the past. In other words, even if you were a Skinny Minnie or a Slim Jim before chronic pain struck, you're not immune to becoming super-sized when you have chronic pain.

Being super-sized is a big health risk. Obesity can cause early death, strokes, diabetes, heart disease, and blood clots that can break off and travel to the lungs, in addition to causing a large number of other life-threatening conditions.

If you have chronic pain and are inactive, you should not keep eating the same amount of calories as you did before pain became a permanent intruder in your life.

And here's more bad news: Weight gain can happen sooner than you may think. Therefore, cut down on overall calories and adjust your eating habits whenever you reduce your activity level.

Maintaining a Healthy Weight

To live as well as possible with chronic pain, your weight should be under control. That means you're not too fat or too thin.

The formula for weight control is calories in = calories out. If the amount of calories you take in equals the amount that you spend through daily activity and exercise, your weight will remain the same. If the amount of calories is more than your activity and exercise expenditure, you'll put on weight. If the amount of calories is less than you spend, then you'll lose weight.

So, weight loss is basically a process of eating less and exercising more. A pound of body weight is equal to 3,500 calories. If you eat 500 fewer calories less per day than the amount you need, you'll lose 1 pound per week. The same rule applies to exercise. If you exercise the equivalent of another 500 calories per day — such as exercising on an elliptical machine for 30 minutes — and also eat 500 fewer calories a day, you'll lose two pounds. (Exercising can also be great for chronic pain!)

One way to judge whether you're overweight, underweight, or in a normal range is by using a number calculated from a person's weight and height called the *Body Mass Inde*x (BMI). To determine your own BMI, check out the table at the Centers for Disease Control at `www.cdc.gov/nccdphp/dnpa/bmi/index.htm`.

Avoiding Trigger Foods

If you have food allergies or intolerances that trigger your chronic pain, taking those foods out of your diet can bring relief. If you're allergic or intolerant to a food (and maybe you don't know it because you've had a reaction that wasn't severe), eating this food can increase your chronic pain level.

If you have a *food allergy,* your immune system reacts to a protein that it thinks is poison. In the most extreme cases, your body reacts with swelling, hives, asthma, or other symptoms of an allergy.

Ninety percent of all food-allergic reactions are caused by one of eight foods:

- Lactose in milk
- Eggs
- Peanuts
- Tree nuts, such as walnuts and cashews
- Fish
- Crustacean shellfish
- Soybeans
- Gluten (found in wheat and some other grains)

The Food and Drug Administration (FDA) now requires food labels to clearly state if products contain any proteins from these foods.

A *food intolerance* is a problem with the body's metabolizing certain foods. Milk lactose and wheat gluten are common triggers. If you're sensitive to these foods, your symptoms can include gas, bloating, abdominal pain, and headaches.

Some people don't realize that they have a food intolerance. Try eliminating milk or wheat from your diet for at least one week and see whether you feel better. If you do, you may have a food intolerance.

Nodding Yes to Nibbling

Now is your chance to eat all day long! Nibbling throughout the day has many health benefits, such as reducing the symptoms of diabetes, lowering cholesterol, and reducing the chance of heart disease. Nibbling can also help you control your weight as long as you keep the portions under control.

Here's the catch. You have to give up those large three square meals a day.

Here's why: In 1989, researchers led by Dr. David J. A. Jenkins, a professor at the University of Toronto, conducted a study in nibbling. In the study, seven men ate food equaling 2,500 calories a day. For two weeks, they ate the way most Americans do — three meals a day. Then for another two weeks, they ate the same amount of calories in 17 snacks throughout the day.

The results were reported in *The New England Journal of Medicine.* The nibblers' diet had the benefit of reducing cholesterol levels and low-density lipoprotein (the bad one). Nibbling also caused the release of smaller amounts of insulin and evened out its secretion, preventing the yo-yo effects of surges of insulin after large meals.

Try to eat many small meals throughout the day rather than three large ones. Just remember, though, that when you nibble, you need to stay away from those saturated fats and empty calories. Focus on grains, fruits and veggies, and lean protein.

Chapter 19

Getting Physical: Flexibility, Strength, Endurance, and Balance

In This Chapter

- Reversing deconditioning
- Discovering how to exercise even though you have chronic pain
- Looking at key exercises for people with chronic pain

Is this scenario familiar to you? So many areas of your body are sore that you find yourself trying to protect the painful parts and avoid moving in ways that make you hurt more. You're moving like a stick person, *and* you're limping to lessen the pain. Also, when you're sitting down, you slouch over to guard your hurting joints and muscles. You say to yourself (often), "Forget exercise. It just hurts too much!"

Here's another scene that you may recognize. You're exhausted from your chronic pain (which may be caused by any condition included in this book). And your fatigue is accompanied by the blahs. In other words, you're totally worn out and a little depressed. "I can barely move," you say. "How could I possibly go to the health club?" (Or go for a walk, or do the exercises that the physical therapist gave you.)

Situations like these cause a cascade effect throughout your body that results in a physical state known as *deconditioning.* For example, if you limp on your left leg, it throws off your right leg, which is now carrying most of the burden). And, if you're overweight, the excess pounds intensify the stress on the other leg. Or, if you're a couch potato and avoid all types of exercise, you quickly get out of shape, which makes your chronic pain worse and exacerbates the fatigue and depression.

This chapter covers how to prevent deconditioning through exercising and also offers you the best exercises for people with chronic pain.

Why exercise?

Research has shown that exercise achieves the following good outcomes. Exercise

- Reduces many types of pain
- Promotes a healthy weight
- Strengthens muscles and bones
- Lubricates joints
- Increases endurance
- Helps insomnia
- Prevents hypertension
- Prevents heart disease
- Reduces the risk of diabetes
- Raises good cholesterol and lowers bad cholesterol
- Boosts the immune system
- Improves overall health
- Relieves symptoms of depression
- Promotes self-confidence
- Reduces the risk of injury by improving flexibility and bone mass

Turning Around Deconditioning through Physical Therapy

When your movement is very limited for an extended period (weeks, months, or longer!), you develop a physical state that the health community calls *deconditioning*. The way you move, the way you protect the sore parts of your body, the way you hold your body, and the amount of exercise you get all affect the overall condition of your body.

If you're deconditioned, it's important to work on reversing this state. Deconditioning makes it much more likely that you'll have health problems, such as coronary artery disease and some types of cancer. In fact, research has shown that physical inactivity doubles the chance of getting coronary artery disease. Conversely, regular exercise helps protect you from colon and some cancers of the breast, endometrium, and ovaries.

One of the best things you can do when you have chronic pain and you're starting an exercise program is to work with a qualified physical therapist. (For a description of what physical therapists do and how to find a qualified professional, see Chapter 13.) The goals of physical therapy (PT) are to get your body functioning again, relieve your pain, and teach you how to keep up the recovery on your own.

A physical therapist can help you turn around your deconditioning and make you stronger and more flexible than ever. You'll also have more endurance. In

addition, PT can also boost your self-confidence. Having more strength, flexibility, endurance, and better balance will make you proud of your abilities. You've done yourself a very big favor and accomplished something really major.

When you start working with a physical therapist, he'll also play an important role in helping you set your exercise goals. He'll evaluate your condition and design an exercise program appropriate for your pain level, abilities, and condition.

Exercising Right for Your Pain Condition

Many people despise exercise of all types and find every excuse not to do it. Describing working out in her magazine, *O*, Oprah Winfrey, purportedly the richest woman in the world, said: "There's no easy way out. If there were, I would have bought it. And believe me, it would be one of my favorite things!" So, you may be rich or poor, a star or an average Joe or Jane, but you still have to get moving or live with the unhappy consequences of a deconditioned body.

The No. 1 rule for exercise and chronic pain is to do as much as you can as often as you can. As you probably know all too well, exercise can cause *a little* pain, particularly when you're first starting out after a long period of inactivity.

The reason why you sometimes feel pain when you start exercising is that it causes small injuries to the soft tissues of your body. As the injuries heal, your tissues get stronger, helping you become conditioned! So, if you feel *a little* pain during or after exercise, don't let it stop you. Keep going. In general, more exercise means less pain unless you've overdone it, which is another matter. Be sure to build up your exercise program gradually to prevent doing too much and too soon.

An important rule concerning chronic pain and exercise is to try to experience all four of the major types of exercise on a regular basis:

- Endurance
- Strength
- Flexibility
- Balance

Performing all four types helps you rebuild your body and become fully conditioned. Sure, it's okay to do just a little bit in each of the four types when you're first getting started, but do be sure you cover all four categories.

The following sections offer key details about the four important categories of exercise.

Exercising for endurance

If you have trouble climbing stairs or walking more than a few blocks, your body probably needs to build up endurance. Endurance exercise, which is another name for aerobic exercise, builds stamina. Endurance exercise increases your heart rate and breathing. It's also great for your cardiovascular system and lungs. Endurance exercise is the key to becoming conditioned.

When beginning endurance exercise, start slowly and build up gradually. A good rule is to work up gradually to 30 minutes of endurance exercise a minimum of four times a week.

Endurance exercise includes such activities as bicycling, walking, running, swimming, rowing, skating, and working out on equipment, such as elliptical trainers or stair-step machines.

Building up strength

Strength exercises accomplish what they claim in their name: They make you stronger. This type of exercise also helps you control your weight because, happily, it speeds up your metabolism. Strength exercises also give you the vigor for a more active life, and they help you complete tasks such as carrying groceries or performing your endurance exercises more easily!

To get the benefits of strength training, exercise all your major muscle groups at least twice a week. But — and this is very important! — don't exercise the same muscle group two days in a row. Doing strength exercises too often can end up harming rather than helping you.

Here are a few strength-training exercises to consider:

- **Weights:** Perhaps the most well-known method of strength training is using weights, which are sold in most sports and department stores and are available in health clubs. You can also use soup cans or water bottles filled with equal amounts of fluid. It's important to get instruction from your physical therapist or a qualified trainer on the proper way to lift weights.
- **Resistance bands:** *Resistance bands* are giant rubber bands that you pull against (resist) to strengthen certain muscle groups. Resistance bands are more convenient than most weight-lifting gear, and they're also inexpensive and easily carried in a purse, pocket, or small bag. Resistance

bands come in different levels, from easy-to-stretch to progressively more difficult. Ask your physical therapist or a qualified trainer how to use resistance bands.

- **Pilates:** The goal of the Pilates program is to build strength in the core of your body. Pilates teaches body awareness, good posture, and easy, graceful movement. The program emphasizes proper breathing, correct spinal and pelvic alignment, and complete concentration on smooth, flowing movement. Pilates classes use machines called *reformers* or floor mats. Many instructional video programs are available, but if you're a beginner at Pilates, it's important to start by getting instruction from a well-trained professional. A great resource is *Pilates For Dummies* (Wiley) by Michelle Dozois.

Gaining flexibility

A program of stretching can do wonders to reverse stiffness and soreness. Stretching and moving your joints and supporting tissues through their full range of motion promote flexibility, which, in turn, helps to hold back deconditioning and its result: increased pain.

You need to stretch properly, so be sure to get your instruction from a well-trained professional. The techniques in the "Exercises for Conditioning" section, later in this chapter, include some important movements that you can do at home.

If you do these exercises regularly, you can prevent overly tight muscles. Do your stretching exercises after performing your endurance and strength training, and when your muscles are warm.

Getting balanced

Loss of balance is common for people with chronic pain conditions, leading to falls and difficulty walking. Here's the good news: Strength and balance exercises overlap, so one exercise can work for both problems. (For more on strength exercises, see the section "Building up strength," earlier in this chapter.) Balance exercises build up your leg muscles. Any of the lower-body exercises for strength in the next section are good for balance.

Exercises for Conditioning

The following exercises can help you prevent deconditioning. If you're a beginner or you haven't exercised for awhile, you can expect to have sore muscles for the first week or two of your exercise program.

If the soreness doesn't go away or you're hurting so much that you're not exercising, be sure to talk this issue over with your physical therapist and/or doctor. Most importantly, if any of these exercises cause moderate to severe pain, then stop right away and wait to do the exercise again only after you talk to your physical therapist or doctor.

Keep in mind that breathing correctly is important during all exercise. Exhale during the initial movement and inhale slowly when returning to the original position. Never hold your breath during any exercise. Be smooth and deliberate in all your movements. Don't bounce while stretching or performing any exercise.

Biceps curl

The biceps curl, shown in Figure 19-1, strengthens your upper-arm muscles.

Here's how you do a biceps curl:

1. **Sit in an armless chair or on a bench with your feet flat on the floor, spaced apart so that they are even with your shoulders.**
2. **Hold hand weights, soup cans of equal weight, or a resistance band in each hand with your palms facing your hips.**

   Your arms should be straight down at your side.
3. **Take 3 seconds to lift your left hand weight toward your shoulder by bending your elbow; as you lift, turn your left hand so that your palm is facing your shoulder, holding the position for 1 second.**

   Do not use your upper arm!
4. **Take 3 seconds to lower your hand to the starting position.**
5. **Pause and then repeat Steps 3 and 4 with your right arm.**
6. **Alternate until you have repeated the exercise 8 to 15 times on each side.**
7. **Rest and then do another set of 8 to 15 alternating repetitions.**

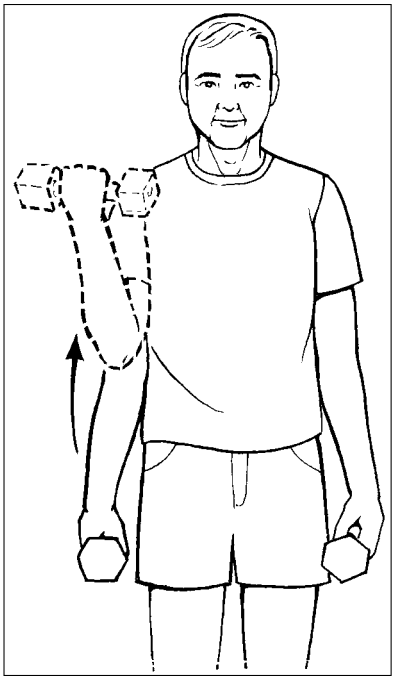


Figure 19-1: The biceps curl.

Here are some tips to follow when doing a biceps curls:

- You can do this exercise while standing.
- Keep your elbows glued to your sides all the way through the exercise.
- Avoid rocking back and forth.
- Don't bend your wrist. Keep it straight with your forearm.
- Don't let the weight pull your arm down when lowering it. Let it down slowly resisting its weight.
- Do not lift the weights higher than your neck.

Chair stands

The chair stand exercise, shown in Figure 19-2, strengthens the muscles in your stomach and thighs. Here's how it works:

1. **Sit toward the middle or front of a chair and lean back so that you're in a half-reclining position, with your back and shoulders straight, knees bent, and feet flat on the floor.**

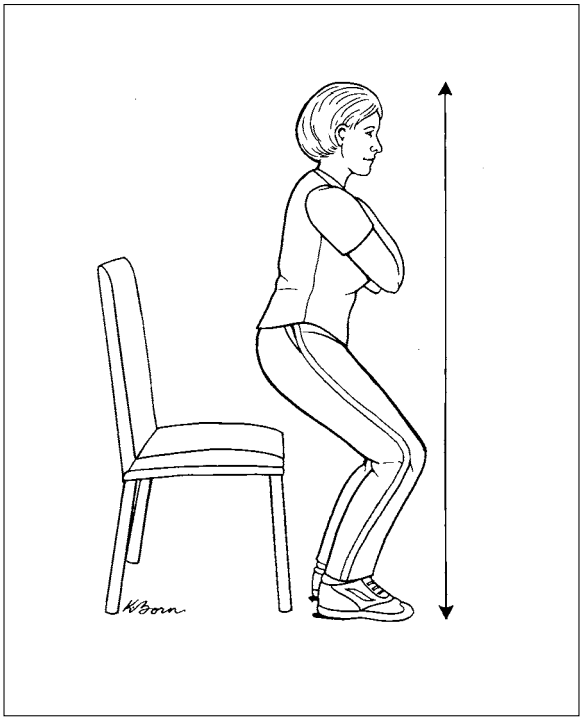


Figure 19-2: The chair stand exercise.

2. **Cross your arms and put your hands on your shoulders.**
3. **Keeping your head, neck, and back straight, bring your upper body forward and then stand up slowly.**
4. **Sit back down slowly and return to your original position.**
5. **Repeat four to six times; build up gradually to 8 to 12 repetitions.**

   Your goal is to do this exercise without using your hands as you become stronger.
6. **Repeat 8 to 15 times.**
7. **Rest; then repeat 8 to 15 times more.**

You should feel your abdominal muscles working as you do this exercise.

Here are some tips to follow when doing chair stands.

- Be sure not to lean forward with your shoulders as you rise.
- Don't sit down too quickly.
- Don't lean your weight too far forward or onto your toes when standing up.

Arm raise

Arm raises, shown in Figure 19-3, strengthen your shoulder muscles. Here's how you do the arm raise exercise:

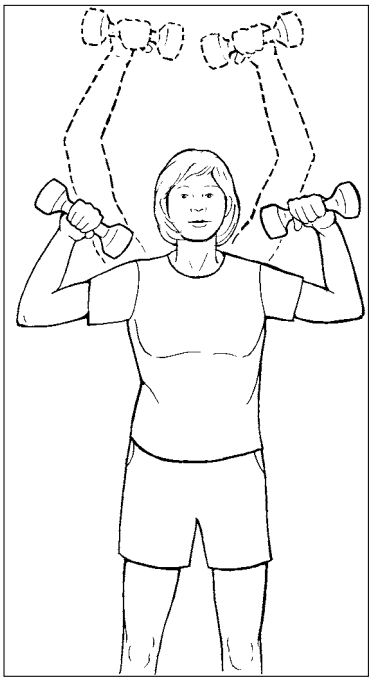


Figure 19-3: Arm raise

1. **Sit on a chair and place your feet flat on the floor, spaced apart so that they're even with your shoulders.**
2. **Hold a 1- to 2-pound weight or a soup can with one hand and raise your right arm until the elbow is straightened; hold for 5 seconds.**

3. **Lower your arm slowly.**
4. **Repeat ten times with each arm.**

Two other important arm exercises are similar to this one, but you move your arms in front of you or to the side.

- **Arms in front:** Sit in a chair. Hold the weights straight down at your sides, with your palms facing inward. Take 3 seconds to lift your arms in front of you, keeping them straight and rotating them so that your palms are facing upward. Stop when your arms are parallel to the ground. Hold the position for 1 second. Take 3 seconds to lower your arms so that they're straight down by your sides again. Pause. Repeat 8 to 15 times. Rest; do another set of 8 to 15 repetitions.
- **Arms to the side:** Sit in a chair. Hold the weights straight down at your sides, with your palms facing inward. Take 3 seconds to lift your arms straight out, sideways, until they're parallel to the ground. Hold the position for 1 second. Take 3 seconds to lower your arms so that they're straight down by your sides again. Pause. Repeat 8 to 15 times. Rest; do another set of 8 to 15 repetitions.

Plantar flexion

The plantar flexion exercise, shown in Figure 19-4, strengthens the ankle and calf muscles. You can use this exercise for developing balance following the instructions in the "Getting balanced" section, earlier in this chapter.

Here's an example of how to do it:

1. **Stand straight, feet flat on the floor, holding on to the edge of a table or chair for balance; take 3 seconds to stand as high up on tiptoe as you can; hold for 1 second, and then take 3 seconds to slowly lower yourself back down.**

   As you become stronger, do this exercise first on your right leg only, then on your left leg only, for a total of 8 to 15 times on each leg.

2 **Repeat this exercise 8 to 15 times; rest a minute and then do another set of 8 to 15 repetitions.**

3. **Rest a minute and then do another set of 8 to 15 alternating repetitions.**

You can also use ankle weights if you feel strong enough.

Figure 19-4: Plantar flexion.

Knee flexion

The knee flexion exercise, shown in Figure 19-5, strengthens muscles in the back of your thigh. You can use this exercise for developing balance following the instructions in the "Getting balanced" section, earlier in this chapter.

Here's how it works:

1. **Stand straight.**

   If you need to, you can hold on to a sturdy table or chair for balance.

2. **Slowly bend one knee as far as possible so that your foot lifts up behind you; hold position for 1 second.**
3. **Slowly lower your foot all the way back down to the floor.**
4. **Repeat with your other leg for a total of 8 to 15 times on each leg.**
5. **Rest a minute and then do another set of 8 to 15 alternating repetitions.**

Figure 19-5: Knee flexion.

You can also use ankle weights for this exercise.

Hip flexion

The hip flexion, shown in Figure 19-6, strengthens your hip and thigh muscles. Here's how it works:

1. **Stand straight.**

   If you need to, you can hold on to a sturdy table or chair for balance.

2. **Slowly bend one knee toward chest, without bending waist or hips, and hold this position for 1 second.**
3. **Slowly lower your leg all the way to the floor.**
4. **Repeat with your other leg for a total of 8 to 15 times on each leg.**
5. **Rest a minute and then do another set of 8 to 15 alternating repetitions.**

You can use this exercise for developing balance following the instructions in the "Getting balanced" section, earlier in this chapter. You can also use ankle weights for this exercise.

Figure 19-6: Hip flexion.

Hip extension

The hip extension, shown in Figure 19-7, strengthens the buttock and lower-back muscles. Here's how to do it:

1. **Hold on to a table that's 12 to 18 inches away from you.**
2. **Slowly lift one leg straight backward and hold for 1 second.**
3. **Slowly lower your leg.**
4. **Repeat with the other leg for a total of 8 to 15 times on each leg.**
5. **Rest a minute and then do another set of 8 to 15 alternating repetitions.**

You can use this exercise for developing balance following the instructions in the "Getting balanced" section, earlier in this chapter. You can also use ankle weights for this exercise.

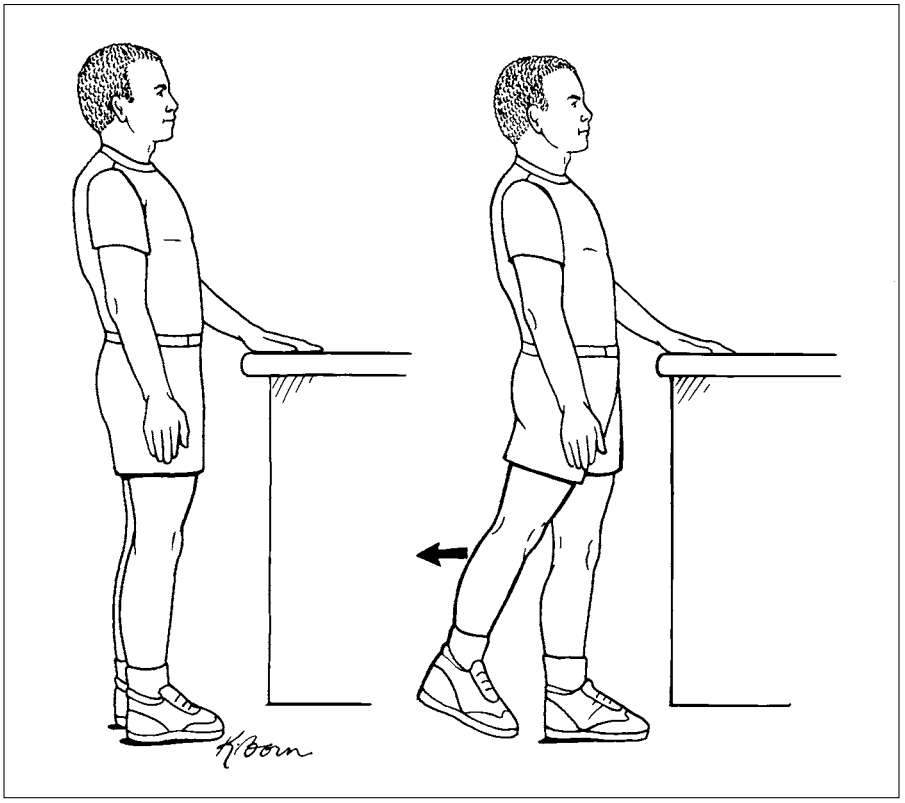


Figure 19-7: Hip extension.

Hamstring stretch

This exercise, shown in Figure 19-8, stretches your hamstrings, which are the mid-rear thigh muscles.

You can do this exercise many different ways. Here's one way!

1. **Lie with your back and head flat against the floor.**
2. **Bend your knees and place both feet on the floor.**
3. **Straighten your right leg and point your toes.**

   Your left knee should be on the floor, slightly flexed.
4. **Slowly raise your right leg toward the ceiling, keeping your leg straight. Extend your leg until you feel a stretch in your right hamstring; hold stretch for a count of 8.**

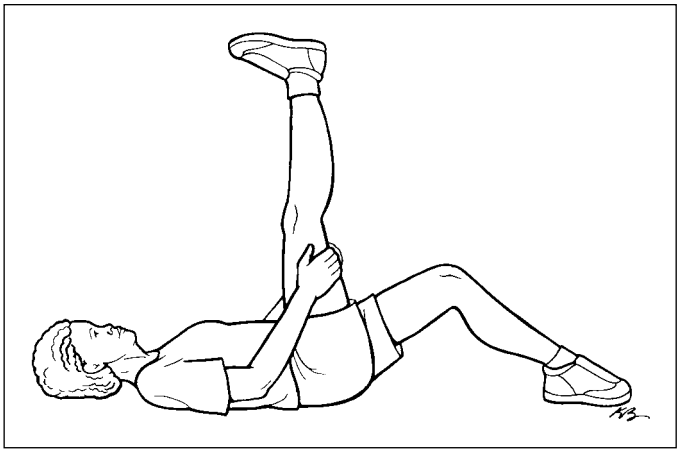


Figure 19-8: Hamstring stretch.

5. **Repeat on your left leg.**
6. **Repeat three times on each side.**

Here are some tips to follow when doing the hamstring stretch exercise.

- Do not do this exercise if you have pain radiating down your leg, or you have a bulging disc or herniated disc.
- Keep your head and back against the floor.
- Don't lift your leg too quickly when preparing to stretch your hamstring.

Thigh and calf stretch

The thigh and calf stretches, shown in Figure 19-9, stretch your thigh and calf muscles. Here's how to do them:

The thigh stretch:

1. **Hold on to something for balance; standing on one leg, grasp the foot of the other leg.**

   Keep your knee pointing down.
2. **Pull up your leg with light pressure; hold your foot in this position, behind you for 30 seconds and then relax.**

   You should feel the stretch in the front of your thigh.
3. **Repeat this stretch three times for each side.**

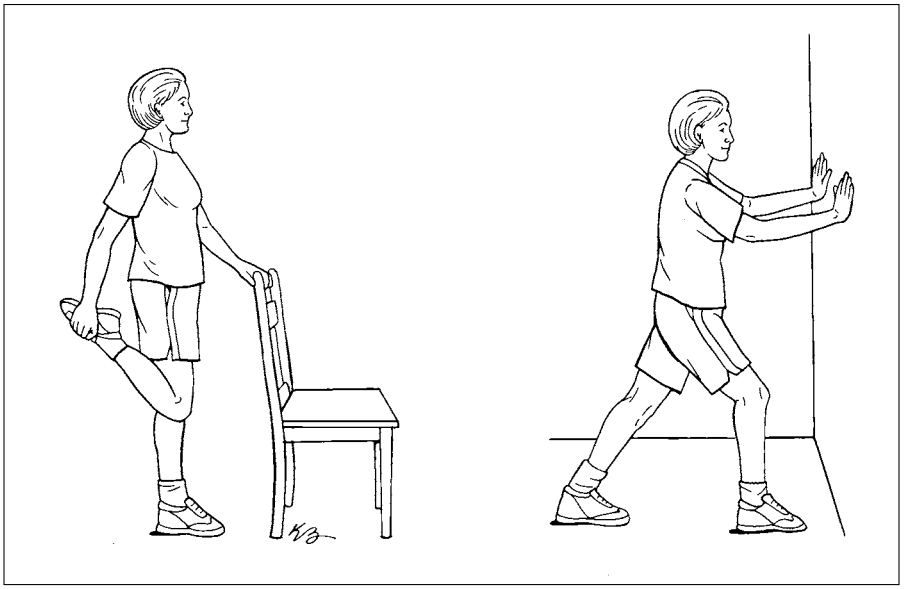


Figure 19-9: Thigh and calf stretches.

Here are some tips to follow when doing the thigh stretch:

- Be careful not to arch your back.
- You do not need to pull your leg up all the way to your buttocks.

The calf stretch:

1. **Rest your hands on a wall at about shoulder height and place one foot forward in a lunging position.**
2. **Stand upright, making sure that both toes are facing forward and your heel is on the ground.**
3. **While keeping your back leg straight, lean toward the wall.**

   You should feel the stretch in the calf of your back leg.

Here are a couple of tips to follow when doing the calf stretch:

- Don't stick your bottom out.
- For a deeper stretch, try bending your back knee so that you're sitting down with your weight over the back leg.

Neck exercises

Neck exercises can help relieve pain and stiffness in your neck. They strengthen your neck muscles and keep them flexible. They can also help reduce the frequency and severity of your headaches. You can do these exercises every half hour throughout the day to prevent neck strain.

To do neck exercises, gently tense your neck muscles for a few seconds in each position. If you do them every day, the neck movements will increase your muscle strength.

Here's what you do:

- **Tilt from front to back:** Tilt your head slowly back, far enough so you can look up, and hold for 5 seconds. Return slowly to front position. Repeat five to ten times.
- **Rotate head from side to side:** Slowly turn your head as far as you can and hold for 5 seconds . Return your head to the center. Move your head in the opposite direction. Repeat five to ten times.
- **Tilt from side to side:** Keep your head straight as you slowly tilt it over to the side and hold for 5 seconds, as shown in Figure 19-10. (Don't go so far that you touch your ear with your shoulder.) Return your head to center position. Move your head to your opposite shoulder and repeat five to ten times.

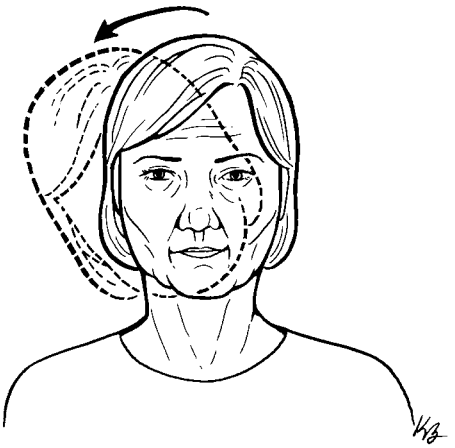


Figure 19-10: Head tilt.

Achieving balance!

Would you like to ace the balance class? You should have someone stand next to you when you do this! Do your strength exercises for the lower body and hold on to your support with only one hand. Eventually hold on with only four fingertips, then three, and so on. Then try not holding on at all. Finally, when you're ready, don't hold on at all, and also keep your eyes closed.

Other ways to build up your balance are to stand on one leg or use a wobble board. Of course, do not try these exercises without the guidance of a physical therapist or other exercise professional. (As well as gaining the approval of your medical doctor.)

Another great way to develop balance is to try Tai Chi, which is a martial art in China and a popular movement in the West. Classes in Tai Chi are widely available in the United States and offer increased balance and flexibility when aerobic exercise isn't possible or desirable.

Chapter 20

Tackling Fatigue

In This Chapter

- Pondering the importance of sleep in your daily life
- Considering specific sleep problems
- Mapping your sleep patterns
- Creating strategies to ratchet up your hours of sleep time

If you have chronic pain (and maybe chronic stress as well), getting enough sleep may be a major challenge for you. You may toss and turn while trying to get to sleep, and then once you're "there," sudden jabs of pain jolt you awake. Or you may have other sleep problems, such as sleep apnea or restless legs syndrome. Whatever the causes, a sleep deficit can impair your thinking and memory and make you groggy, affecting your alertness, causing your energy levels to plummet, and also making you downright grumpy. In addition, loss of sleep and the weariness it causes can even make you accident-prone, resulting in injuries, accidents, and crashes.

Finally, sleep loss can make you more sensitive to pain, according to the National Sleep Foundation. One study found that sleep deprivation caused by continuous sleep disturbances throughout the night increased spontaneous pain and impaired the body's ability to cope with painful stimuli.

This chapter discusses major sleep problems that can cause or aggravate pain and what you can do about them.

Losing Sleep Is a Bad Thing

Sleep is a daily period of rest, during which you're inactive and experience different levels of consciousness. If you're getting adequate sleep, you spend about one-third of each 24-hour day (give or take an hour) in this rest state.

The science of sleep is still in its infancy, and researchers have a limited understanding of the biological function of sleep. However, it is known that a lot goes on inside your body while you sleep. For example, during different stages of sleep, the body temperature changes, breathing and heart rhythm slow and then return to normal, and blood flow to the brain increases. In addition, hormone levels change. In addition, growth hormone increases during the first two hours of sleep. (So, when you were a kid and your mother told you that you had to go to sleep so you'd grow, she wasn't kidding!)

Sleep happens in stages: rapid eye movement (REM) sleep and nonrapid REM (NREM) sleep. Adults spend about 20 percent of their sleep time in REM and 80 percent in NREM sleep. Elderly people spend less than 15 percent of their sleep time in REM sleep.

Most dreams occur during REM sleep. During REM sleep, your eyes move back and forth rapidly. However, your muscle activity is very quiet during this sleep stage.

Microsleeps are quick, involuntary episodes of sleep when you're otherwise awake, and they can be another sign of sleep deprivation. They last from 2 seconds to 2 minutes, and you may not even be aware that you're having them. Symptoms include blank stares, nodding your head, and closing your eyes for much longer than it takes for a normal blink. Microsleeps are dangerous. While experiencing them, you can't take in what is going on around you, such as Stop signs when you're driving.

How much sleep is enough?

How much sleep you need depends on your individual physical needs, and no magic number applies to all people. However, most adults need 7 to 8 hours of sleep each night, according to the National Sleep Foundation. Children need more sleep than adults; for example, babies need 16 to 18 hours a day of sleep, and preschool children sleep 10 to12 hours a day. School-aged children and teens need at least 9 hours of sleep a night. (They're still growing, after all.)

The elderly need about the same amount of sleep as younger adults — between 7 and 8 hours each night. As people age, they tend to go to sleep earlier and get up earlier than in previous decades, and they may nap more during the day.

If you feel drowsy during the day, even during boring activities, you haven't had enough sleep, according to the National Sleep Foundation. In addition, if you normally fall asleep within 5 minutes of lying down, you're probably sleep-deprived.

Fatigue and chronic pain

Fatigue, a common problem for people with chronic pain, is dangerous when combined with driving. Falling asleep at the wheel causes at least 100,000 crashes and 1,500 deaths each year, according to the National Highway Traffic Safety Administration. Close to half of American adult drivers drive while drowsy, and nearly two out of ten admit to falling asleep at the wheel, according to a 2002 poll conducted by the National Sleep Foundation. If you have trouble keeping your eyes focused, if you can't stop yawning, or if you can't remember driving the last few miles, you're probably too drowsy to drive safely.

A lack of sleep is bad for your health because you may lose important time in one of the two major stages of sleep. In addition, one of sleep's major functions is to aid mental functioning. (The parts of the brain that control learning and memory are still active during sleep.) Studies show that people who are taught mentally challenging tasks perform significantly better after a good night's sleep.

Lack of adequate sleep can also:

- Make it tough to mentally focus
- Slow your reaction time
- Make you irritable
- Increase the chances that you'll be overweight or obese (Yes! Not sleeping enough can make you fat!)
- Put you at risk for depression and diabetes
- Increase your risk for high blood pressure and heart disease
- Magnify alcohol's effects on your body

Chronic Pain and Sleep Problems

Chronic pain and the sleep problems it causes can make you hurt even more. For example, if you're exhausted from coping with your migraines, and on top of that you toss and turn all night, the result can be even worse migraines. (And you thought they couldn't get any worse! Wrong!)

The major forms of sleep problems, described in the following sections, are sleep apnea, insomnia, sleepwalking, restless legs syndrome, narcolepsy, snoring, teeth grinding, and *hypersomnia* (sleeping too much).

Resources for getting enough rest

From information centers to sleep labs, the following organizations are great resources for managing sleep problems:

American Academy of Sleep Medicine (AASM), 1 Westbrook Corporate Center, Suite 920, Westchester, IL 60154; phone 708-492-0930, fax 708-492-0943; Web site `www.aasmnet.org/AboutAASM.aspx`. AASM is the professional society of the medical subspecialty of sleep medicine. AASM membership consists of more than 7,000 physicians, researchers and other health-care professionals. AASM specializes in studying, diagnosing, and treating disorders of sleep and daytime alertness, such as insomnia, narcolepsy, and obstructive sleep apnea. AASM sponsors a site called `http://sleepcenter.org` that provides lists of medical sleep centers by state.

American Insomnia Association (AIA), 1 Westbrook Corporate Center, Suite 920, Westchester, IL 60154; phone 708-492-0930; Web site `www.americaninsomniaassociation.org`. AIA is a patient-based organization that assists and provides resources to individuals who suffer from insomnia. The AIA encourages the formation of local support groups.

American Sleep Apnea Association, 1424 K St. NW, Suite 302, Washington, DC 20005; phone 202-293-3650; Web site `www.sleepapnea.org`. The ASAA is a nonprofit organization dedicated to reducing injury, disability, and death from sleep apnea and to enhancing the well-being of those affected by this common disorder. ASAA's Sleep Apnea Support Forum sponsors live chat groups on various issues, such as sleep apnea in children.

National Sleep Foundation (NSF), 1522 K St. NW, Suite 500, Washington, DC 20005-1253; phone 202-347-3471; Web site `www.sleepfoundation.org`. NSF sponsors public education and awareness initiatives, such as *National Sleep Awareness Week* and *Drive Alert . . . Arrive Alive*.

Restless Legs Syndrome Foundation, 1610 14th St. NW, Suite 300, Rochester, MN 55901; phone 877-463-6757 (toll-free), 507-287-6465; Web site `www.rls.org`. The Restless Legs Syndrome Foundation is a nonprofit organization that provides the latest information about the condition. The Web site provides an online community.

Sleep apnea

Apnea is Greek for "without breath." People with sleep apnea snore loudly, and they actually stop breathing for brief periods during sleep. Breathless episodes can last for a minute or longer and can occur hundreds of times during sleep. During apnea spells, your brain wakes you up so that you'll restart breathing. It's sort of like jump-starting your brain, but the result is nonrestful sleep. Sleep apnea causes fatigue and drowsiness during waking hours and can cause chronic morning headaches, as well as cluster, tension, and migraine headaches.

Sleep apnea affects more than 12 million Americans, according to the National Institutes of Health. The condition is more common in men, men and women who are overweight, and those age 40 or older.

The standard treatment for sleep apnea is use of a *continuous positive airway pressure (CPAP) machine.* A CPAP machine is about the size of a shoebox. A flexible tube connects the machine to a mask or other device you wear during sleep. CPAP machines work by pushing air through your airway passage at a pressure that doesn't cause snoring.

If you have sleep apnea, or think you may have it, add an ear, nose, and throat doctor *(otolaryngologist)* to your health-care team. She can also help you choose the right CPAP machine for you.

Insomnia

Insomnia is a lack of sleep or fitfull sleep when the chance for restful sleep is present — such as when you're wide awake at 2 a.m. watching the shopping channel on TV or reading historical novels because you just can't get to sleep.

Insomnia can be temporary or chronic. Most people have had insomnia at least several times in their lives, usually during stressful periods. Symptoms include difficulty falling asleep or waking up during the night and not being able to go back to sleep. As with sleep apnea, insomnia can cause chronic morning headaches, as well as cluster, tension, and migraine headaches. For treatment of insomnia, see the "Getting Some Shuteye the Natural Way" and "Knocking Yourself Out with Medications" sections, later in this chapter.

Sleepwalking

During *sleepwalking* (somnambulism), people perform actions as if awake, but they're actually asleep. Sleepwalking usually occurs during deep non-REM sleep. About 1 in 6 people sleepwalk, and the condition is more common in children and teenagers than adults. Some medications, such as Ambien (used to treat sleep disturbances), are associated with sleepwalking.

Sleepwalkers don't remember their actions. So, if you're a sleepwalker, you may wander around your neighborhood or clean out your basement while asleep, and you'd never know it unless someone woke you up during your sojourn. Sleepwalking most often afflicts stressed or anxious people and those with a family history of the condition.

If there's a possibility of injuring yourself during sleepwalking, taking antidepressants, such as trazodone (Desyrel), or an anti-anxiety drug, like clonazepam (Klonopin), which is sometimes used to treat seizures, may be a necessity.

Snoring and snoring partners

Snoring is noisy breathing during sleep. It's the result of a blockage to the free flow of air during breathing, which causes structures at the back of your mouth to strike each other and vibrate. Forty-five percent of adults snore at least occasionally, and 25 percent are habitual snorers, according to the American Academy of Otolaryngology. Men are most at risk for snoring. Being overweight or obese is another major snoring risk factor.

You and/or your sleep partner may snore away every night or occasionally. Snoring often causes disturbed and restless sleep, resulting in fatigue the next day.

Snoring has many possible causes, including the following:

- Relaxation of throat muscles, due to aging
- Inflammation of the nose and/or throat due to colds, allergies, and related problems
- Alcohol or medications that loosen the muscles of the throat
- Anatomical problems, such as nasal polyps or a deviated septum in the nose
- Blockage by cysts, tumors, or excess fatty tissue in the throat (the latter is due to being overweight)

Don't sleep on your back, which causes the soft tissues in the back of your throat to block your airway. Many people are successful with the "tennis ball technique" in which you attach a tennis ball to the back of your night clothes. You won't be able to lie on your back, forcing you to turn on your side. Eventually, you'll naturally sleep on your side, and you can dump the ball.

Don't underestimate the negative impact of snoring on a relationship. A snoring partner can wake you up often or keep you from getting any sleep. The result is drowsiness and irritation — and sometimes, it's separate bedrooms or even a separating couple.

Fortunately, you're not doomed to lifelong snoring. Instead, consider the following suggestions to reduce your risk for snoring.

- Lose weight if you're overweight, which will reduce fatty tissue in your airway.
- Consider a specially designed pillow for snorers, available in retail or online stores. One option is the Sona Pillow available at `www.sonapillow.com` and some retail stores.

- Elevate the head of your bed four inches, which causes your tongue and jaw to move forward and out of snoring position. Try placing rolled up towels under the head of the mattress to raise it.
- Avoid alcohol at night. Alcohol worsens snoring.
- Avoid sedatives before bed. Sedatives relax throat muscles.
- Avoid high-fat dairy products or soy milk before sleeping. They can cause mucus buildup in your throat, blocking air passages and causing snoring.
- Try nasal decongestants, but stay away from antihistamines. *Decongestants,* which increase mucus flow, can help clear your air passages. However, *antihistamines,* which dry up the mucus, relax the throat muscles, leading to snoring. (Some people take Benadryl or Tylenol PM, which contain antihistamines. These drugs help you fall asleep, but increase your risk for snoring!)
- A number of devices can help keep your airway open. Ask your dentist or otolaryngologist about them.

Surgery can open blocked airways by removing structures such as tonsils or fatty tissue blocking them. A new outpatient surgery called *palatal implantation* involves putting small plastic implants into the soft palate. Scar tissue forms around the implants, hardening the soft palate in the back of the throat so that it does not vibrate.

Restless Legs Syndrome

If you have Restless Legs Syndrome (RLS), you have an uncontrollable desire to move your legs constantly. You may also have strange feelings in your legs such as a creeping or crawling, cramping, burning, tingling, soreness, or pain. RLS is particularly uncomfortable when you're trying to fall asleep. It can cause sleeplessness and daytime fatigue. RLS affects about 10 percent of adults.

If your legs twitch and jerk spasmodically, you may have a sleep condition called *periodic limb movements* (PLMS). If you have this problem, your leg movements may be severe enough to awaken you.

According to the National Center on Sleep Disorders Research, Restless Legs Syndrome is underdiagnosed yet treatable. The key treatment for RLS is taking a dopaminergic drug, such as L-Dopa, which increases the levels of a neurotransmitter called dopamine in the central nervous system. Other treatments include opioids, mild tranquilizers, anticonvulsants, and iron supplements.

Narcolepsy

Narcolepsy is extreme daytime drowsiness and sudden attacks of REM sleep while still awake. Insomnia, dreaming while awake, and a condition called *sleep paralysis* (the inability to perform voluntary movements either while falling asleep or when waking up) are also symptoms.

Narcolepsy affects both sexes equally and develops with increasing age. The condition may be caused by a deficiency in *hypocretin,* a substance that helps to regulate sleep cycles.

Some medications improve the constant lapsing into sleep that people with narcolepsy suffer from. Some examples of meds that may help this condition are

- Stimulants, such as Methylphenidate (Ritalin), and amphetamines, such as Adderall, the main drugs prescribed for narcolepsy. They act on the central nervous system to help people stay alert and awake during the day. Stimulants are effective, but may have strong side effects, such as nervousness and heart palpitations.
- Antidepressants, such as protriptyline (Vivactil) and fluoxetine (Prozac) help narcolepsy by suppressing REM sleep.
- Sodium oxybate (Xyrem), a central nervous system depressant, can control symptoms that some people with narcolepsy have, such as episodes of *cataplexy,* a condition characterized by weak or paralyzed muscles. But sodium oxybate has unpleasant side effects, such as nausea and urinary incontinence.

If you have narcolepsy, don't drive, skydive, or take any other actions that may be dangerous if you suddenly fell asleep. You may want to wear a medical alert charm to notify others if you have a narcolepsy spell. (MedicAlert charms are available through `www.medicalert.org`.)

Teeth grinding

Some people unknowingly grind their teeth at night, a habit known as *bruxism.* This relatively common condition is like the nervous habit of tapping your foot or twisting a lock of hair, but you're asleep while you're doing it. Eight percent of adults grind their teeth at night, and more than a third of parents report symptoms of bruxism in their children.

Among other things, bruxism can cause chronic facial, mouth, and/or jaw pain and damage to the teeth and gums. It can greatly reduce the quality of your sleep and also cause headaches. Sleep apnea and bruxism often go hand and hand, and in those cases, treating your sleep apnea can reduce episodes of bruxism. Whether or not you have sleep apnea, the standard treatment for bruxism is an oral device designed by a dentist to protect your teeth.

Hypersomnia

Do you feel compelled to nap a lot during the day? In fact, do you sometimes feel so compelled to nap that you have to leave important activities, such as work or a conversation with your best friend, to take a nap? You may have *hypersomnia,* which are recurrent episodes of excessive daytime sleepiness or oversleeping at night that don't result in feeling rested.

According to the National Sleep Foundation, up to 40 percent of people have some symptoms of hypersomnia from time to time.

Why are you getting too much shuteye? The cause may be one or more of the following:

- Sleep deprivation
- Excessive use of tranquilizers
- Being overweight
- Drug or alcohol abuse
- A head injury, tumor, or neurological disease, such as multiple sclerosis
- A genetic predisposition to hypersomnia
- Prescription medications, including opioid narcotics, sedatives, antidepressants, muscle relaxants especially Soma, and anticonvulsants

The medical treatment of hypersomnia includes prescribed stimulants, antidepressants, or two newer medications: Provigil, a drug that keeps you awake (used for performance enhancement by military pilots and soldiers), and Xyrem, used for treating people with narcolepsy who have episodes of *cataplexy,* a condition characterized by weak or paralyzed muscles. CPAP machines can also be helpful. (See the earlier section on sleep apnea for more on these devices.)

Charting Your Sleep Patterns

In order to detect what type of sleep problems you have, keep a sleep diary for a couple of weeks. Each morning, jot down such things as the quality of your sleep, how long you slept, and how often you woke up. Also, note whether you snored (ask your partner or use a tape recorder) and how loudly, whether you were tired during the day, how many naps you took, and so on.

Be sure to note anything unusual, such as feeling drowsy during an activity you usually enjoy (such as playing tennis) or falling asleep in class. Also note all medications and all alcohol or other mind-altering substances you take. (Be honest! This list is only for *your* eyes!) Track these events for a couple of weeks if you can. Then check your diary to see what your sleep patterns are. Summarize your diary for your doctor and anyone else helping you with your sleep problems.

Getting Some Shuteye the Natural Way

Whether your problem is chronic pain by itself, a sleep disorder such as insomnia or sleep apnea (see sections on these topics earlier in this chapter), or a combination, proven practices can aid your search for restful sleep, if not solve the problem. Make these practices part of your daily regimen until they become regular habits like brushing your teeth and washing behind your ears.

- Go to sleep and get up at the same time each day, even on weekends.
- Don't nap! It can keep you awake at night.
- Develop a regular bedtime schedule. Every night, about half an hour to an hour before you go to bed, do the same ritual so that your body knows it's time to sleep. For example, walk your dog, set the coffee to start perking at 6 a.m., brush your teeth, and then read (nothing scary or violent!) for ten minutes before turning off the light.
- Avoid exercising within three hours of your bedtime.
- Don't eat large meals close to bedtime.
- Remember the old coffee lover's joke that "Sleep is a symptom of caffeine deprivation." Don't consume products that contain caffeine after dinner. Caffeine is found in coffee, tea, cola, and chocolate.
- Be moderate in drinking alcohol.
- Use your bed only for sleeping, sex, and reading no longer than 15 minutes before you go to sleep. No TV! No page-turner novels!

Knocking Yourself Out with Medications

Sometimes you may need a little help from prescribed medications to get to sleep. The following list covers the major types of drugs used to help people sleep.

- **Benzodiazepines** are part of a class of drugs called hypnotics. These drugs include Klonopin, Valium, Restoril, Prosom, Xanax, and Ativan. In addition to being sleep aids, benzodiazepines are also used to stop teeth grinding. These habit-forming drugs should be used only under doctor supervision. Benzodiazepines can cause withdrawal and rebound insomnia.
- **Nonbenzodiazepine** hypnotics include Ambien, Sonata, and Lunesta. These habit-forming drugs should be used only under doctor supervision. Nonbenzodiazepine hypnotics can cause withdrawal and rebound insomnia.
- **A melatonin receptor stimulator,** Ramelteon (Rozerem), was approved in July 2005 and is in a class all by itself. Ramelteon does not produce dependence or rebound insomnia.

Chapter 21

Treating Pain and Stress Using the Power of Thought

In This Chapter

- Overcoming stress-inducing thoughts
- Challenging your negative thoughts
- Adopting new ways of thinking

Did your mother ever say to you (or maybe you say it to your own children), "Don't believe every little rumor that you happen to hear." In the same spirit, consider this tip: Don't believe all the negative or panicky thoughts you may have about your chronic pain. In fact, you may find that your internal grumbles about your pain are actually making it a whole lot worse.

People with chronic pain often have distorted, extreme, or negative thoughts about their condition. For example, when Jim gets a migraine aura, his thoughts are often "I'm going to become deathly ill!" or, "I know that the pain is going to eat me up alive." But migraines don't kill, and they don't devour people either. In addition, such thoughts aren't helpful when you have chronic pain, and they can actually kick the pain up a few notches, the opposite of what you need.

Numerous studies have shown that paying attention to your thoughts about pain can really help you. Identifying thoughts that reflect internal inaccurate or negative beliefs and replacing them with new positive ones can help you experience your pain more realistically — and usually less painfully. In this chapter, you find steps to help you treat your pain using the power of thought.

Understanding the Pain/Stress Link

Pain causes stress, which in turn causes more pain and more stress and so on, in a downward negative spiral.

How you interpret or appraise your pain directly influences how your pain feels. For example, doctors know that any two patients with identical damage shown on their x-rays do *not* experience pain the same way. Each person has their own experiences, beliefs, and physical condition that influence how they feel pain. Once you discover your underlying thinking that affects *your* pain, you'll gain better control over it.

The writer Natalie Goldberg aptly says in her book *Wild Mind,* "Stress believes that everything is an emergency." The thoughts that you have under the stress of pain are often exaggerated because your body and your mind both think they're in the middle of a red alert, so sound the pain klaxons! But with chronic pain, red alert is the opposite of what you want.

Recognize that stress is heightened or reduced by how you think and then how your body reacts to how you think. For example, if every time you awaken with stomach pain you think, "This is going to be *another* bad day," then your negative expectation will *cause* the bad day to happen, just like you anticipated. On the other hand, try thinking, "I'm going to try some things to make me feel better," such as taking your medicine or soaking in a hot bath.

When you think positive thoughts, the result is often that you do feel better. You're not as stressed, and your pain lessens.

Decreasing Stress Using Your Thoughts

Use this tactic. Observe, identify, and write down your automatic thoughts about your pain. Carry a pen and paper with you so that you can jot them down as you go about your daily activities.

Automatic thoughts are habitual thoughts that spring to mind, and you often accept them unquestioningly. But many people in chronic pain have negative automatic thoughts that need a serious spring cleaning! Use the advice in this chapter to revamp your automatic thoughts.

Following are some examples of automatic thoughts:

- **Catastrophic thinking:** "I know this stomach flare-up means I have cancer, not just irritable bowel syndrome." Or, "I'll never be able to travel again because of my stomach problems."
- **All-or-nothing thinking:** "I can't do sports anymore, so there's no point in exercising at all." Or "I can't stand for long periods of time any more, so that means that I can't do any work at all."
- **Fortune telling** (predicting the future with a negative outcome): "By next year, I'll be in a wheelchair." Or "This new medicine will never work."

- **Labeling:** "All doctors hate people with fibromyalgia." Or "I move slowly because I'm old. All old people move slowly."
- **Mind reading:** "If I tell my fellow churchgoers that I get migraines, they won't let me join the choir." Or "My friends have given up on me because I'm disabled."

These thoughts and others like them add to your pain, just like in football when three or four players pile on the guy with the ball. Don't pile on to your pain!

Notice what happens to your body when automatic thoughts occur. Do your muscles tense up? Does your posture become more stooped? Do you clench your teeth or wring your hands? Or pace around? These stress responses may occur when you have these negative thoughts, and they amplify your pain. Once identified, they're easier to change.

Challenging Negative Thoughts

Don't automatically accept your negative automatic thoughts. Instead, ask yourself whether they're really valid. Are they realistic? Are they based on fact?

For each negative thought, ask yourself these questions.

- Are my thoughts exaggerated?
- Could my thoughts be distorted?
- Are my thoughts overly negative?
- Are there any positive aspects to my thoughts? For example, if I have a headache today, is it just a minor one?

While you're challenging your thoughts, don't chastise yourself if any of them seem out-of-whack. Blaming yourself just adds to the stress and pain.

For all the negative automatic thoughts and their challenges you identify, create new beliefs to replace them with that could change your thinking. For example, Fred, age 83, has a bad knee and thinks of himself as old and decrepit. But Fred could think of himself as a healthy older person (which he is) who happens to have one bad knee. (The other one is still just fine.)

Creating New Automatic Thoughts

Replace your old negative thoughts with new ones. Here's an example of more positive thinking. "When I'm in pain, I can still do a lot. I can work on my craft project. I can also call my friend in my chronic pain group." Another example: "When I'm in pain, I can do more than sit in front of the TV. Instead, I can do a crossword puzzle or read the newspaper, and use my brain." Practice using these new thoughts in place of the old ones.

Many good techniques are effective at reducing stress, such as distraction, framing, and expressive writing, all which can effectively counter your negative thoughts. Read about these techniques in Chapter 22.

Adopting new thoughts as habits

Keep it up, and your new thinking patterns will become habitual. Changing your thoughts can be hard but doable! And it's well-worth every effort you make, because these new thoughts will often translate into considerably less pain.

Your new thoughts should be based on reality. For example, if you were just diagnosed with cancer, saying to yourself, "I'm getting better and better every day in every way," isn't appropriate. Your mind will respond with something like, "I'm *not* getting better, I'm getting worse!"

Instead, use thinking that is more along the lines, of "I'm going to do everything I can to become as healthy as possible." This thought is positive and realistic.

Challenge Your Thoughts worksheet

To work on challenging your negative thoughts, copy the worksheet in Table 21-1 and keep notes for a couple of days (or longer). This process can help you develop new patterns of thinking.

First write down the event that has set off the negative thought, then the thought itself, and, last but not least, a positive statement that you're going to use instead.

Use the example in Table 21-2 as a guide.

Table 21-1 Challenge Your Thoughts Worksheet

Event	*Negative Thought*	*New Thought*

Using thought-control resources

These resources can help you think more clearly and more positively:

The Albert Ellis Institute (AEI), `www.albertellisinstitute.org`: AEI's network of therapists practice an action-oriented therapy that teaches individuals to examine their thoughts, beliefs, and actions and replace self-defeating thoughts with more life-enhancing alternatives.

Cognitive Behavioural Therapy For Dummies (Wiley) by Rob Willson and Rhena Branch: This helpful book shows you how to identify and change unhealthy modes of thinking.

Table 21-2 Challenge Your Thoughts Example

Event	*Negative Thought*	*New Thought*
Cleaning up around the house	It hurts too much. I can't do anything. I'm a mess.	Well, I'll just break up the chores into small steps, and I'll reward myself by sitting down for five minutes every time I complete a small chore. I can make it fun!

Chapter 22

Relaxing, Praying, and Creating

In This Chapter

- Understanding the major types of stress
- Easing your stress levels
- Self-hypnotizing stress away
- Rubbing out stress with self-massage

When you have chronic pain, you're also very stressed out, and too much stress is bad for your body. Stress causes clenched muscles, an upset stomach, and — at its peak — a heart beating so fast you can feel the thump, thump, thumping in your chest. Even when things are at an even keel, if you are overly stressed, you still feel awful. And when a situation heats up, then watch out! You're in stress overdrive.

In this chapter, we share many ways that you can minimize stress — and therefore the pain — in your life.

Exploring Stress

Stress is the feeling that the demands in your life are greater and stronger than your physical and personal abilities and resources to cope with them. It's the condition you experience when you feel that you've lost control of your health or your circumstances. When you're stressed out for whatever reason, your body releases the same hormones into your bloodstream that would be pumped out if you were being chased by a big black bear. Stress sets off your body's fight-or-flight response, as if you had to either fight that furry beast or run as fast as you can away from it.

Stress hormones speed up your heart and breathing. In addition, as your body prepares for battle, your muscles tighten. Your liver secretes glucose so that your body will have needed fuel to either struggle in place or run like crazy. Your body also produces sweat to cool itself down. These examples are only a few body processes in full play when you're having a major stress attack.

Sizing up stress

If you're stressed out, you're not alone! One-third of Americans live with extreme stress, and nearly half of Americans (48 percent) believe that their stress has increased over the past five years, according to a 2007 poll conducted for the American Psychological Association (APA).

Chronic pain also causes stress, and your pain can elicit physical and psychological stress symptoms. For example, the APA poll showed that many people experience both physical symptoms (77 percent) and psychological symptoms (73 percent) that are directly related to stress in the last month.

Physical symptoms that the poll respondents reported were fatigue (51 percent); headache (44 percent); upset stomach (34 percent); muscle tension (30 percent); change in appetite (23 percent); teeth grinding (17 percent); change in sex drive (15 percent); and feeling dizzy (13 percent).

Psychological symptoms reported included irritability or anger (50 percent); nervousness (45 percent); a lack of energy (45 percent); and sadness, or feeling as though you could cry (35 percent). In addition, almost half (48 percent) of Americans report lying awake at night due to their excessive stress levels.

Many people cope with stress in unhealthy ways. For example, four in ten Americans (43 percent) say they overeat or eat unhealthy foods to manage their stress, while about one-third (36 percent) skipped a meal in the last month because of stress. Those who drink (39 percent) or smoke cigarettes (19 percent) were also more likely to engage in these unhealthy behaviors during periods of high stress.

Some people cope with their stress in more positive ways; for example, significant numbers of Americans report listening to music (54 percent); reading (52 percent); exercising or walking (50 percent); spending time with family and friends (40 percent); and praying (34 percent). These behaviors are the kind you should emulate!

Stress doesn't occur solely in response to immediate dangers, such as rampaging bears. Just as a person can have chronic pain, she can have chronic stress. Long-term challenges, such as coping with chronic pain, can produce a low-level, long-term stress that simply wears you out and wears you down. That's why you need to work on easing your stress levels.

The American Psychological Association (APA) has identified three major types of stress: acute stress, episodic acute stress, and chronic stress. Your chronic pain can cause one or all three of these forms of stress, which are described in the following sections.

Acute stress

When you experience a traumatic event, acute stress is your instantaneous response. You may have been injured or witnessed a violent event. You may have been fired or betrayed. Whatever the incident, your initial response was

fear and a feeling of vulnerability. Fortunately, acute stress is brief and usually doesn't do extensive physical and emotional damage *unless* it turns into the longer-lasting response of episodic acute stress or chronic stress.

Interestingly, acute stress, such as a near-miss automobile accident, actually temporarily relieves chronic pain ostensibly due to the release of endorphins.

Episodic acute stress

This type of stress usually occurs for Type A personalities. Type As are said to be excessively competitive, aggressive, impatient, and have a harrying sense of time urgency.

Constant worrying can also cause this type of stress. Worrywarts, for example, see disaster around every corner. If you're constantly worrying about your chronic pain or other major stressors in your life, then you need to chill out!

The symptoms of acute and episodic acute stress are the same. However, if you have the symptoms during episodic stress, they usually last longer than symptoms triggered by acute stress alone.

These symptoms include

- Persistent tension headaches
- Migraines
- Hypertension (high blood pressure)
- Chest pain
- Heart disease

Chronic stress

Chronic stress is the grinding strain that wears you down, day after day, year after year. Chronic stress results when you feel trapped by a miserable situation. It's the stress of poverty, of working in a despised job, of living in a war zone. And far too often, it's the stress of chronic pain.

According to the APA, a terrible aspect of chronic stress is that you can actually get used to it. It starts to feel like your situation is hopeless, and it's just the way things are. You don't realize that things could actually change for the better. The APA literature on chronic stress says, "People are immediately aware of acute stress because it is new; they ignore chronic stress because it is old, familiar, and sometimes, almost comfortable."

Coping with Stress and Pain

Wouldn't it be great if you could just inhabit a stress-free zone and eliminate all your troubles from your life? Say good-bye to the jitters and the stomach aches. And especially say goodbye to the relentlessness of it all!

But when you have chronic pain, you have to deal every day with the stress it creates. The best approach is to curb the stress as much as you can and when you can. Fortunately, numerous techniques can help you alleviate stress. From meditation to yoga, the techniques described in the following sections can help reduce both your stress and pain.

Using guided imagery

Guided imagery can help you use your imagination to calm the stress that reality brings to your life every day. This technique involves creating positive images, sounds, smells, tastes, and feelings with your mind. An instructor — in person or on audiotape — guides you through the process of forming your own imagery. One commonly used technique is to imagine a safe, comfortable place, such as a beach on a pleasant clear day or a peaceful chapel in the autumn woods.

Guided imagery is frequently used in hospital settings due to the success of a study conducted at the Cleveland Clinic in the mid-1990s. Clinic researchers found that employing guided imagery reduced their patients' anxiety and pain, as well as their use of narcotic medication both before and after surgery. The technique has become so popular that Kaiser Permanente, a major health maintenance organization, provides patients and the public with free downloads of guided imagery to use during medical procedures and for overall wellness (`http://members.kaiserpermanente.org/redirects/listen`). Guided imagery tapes are also widely available through bookstores and the web.

Meditating through the hurting

Meditation is a group of techniques rooted in spiritual traditions. Many people use meditation for stress and pain reduction and to promote wellness. When meditating, you use one of a range of techniques, such as repeating a word over and over again (a *mantra*) or paying attention to your breathing. These approaches help focus your attention and quiet down your stress-related thoughts. No one really knows how it works, but for many people, meditation leads to physical relaxation, pain reduction, and psychological balance.

All techniques used for meditation have four elements in common:

- A quiet location with as few distractions as possible
- A comfortable posture
- A focus of attention, such as an object in the room
- A feeling of letting go so that any distractions come and go gently, and your focus does not remain on them

Here's a sample meditation exercise to try at home:

1. **Find a peaceful place where you'll be free of interruptions.**
2. **Choose a focus word, a phrase, or an image you find relaxing.**

   Examples of words are "grace" and ooohmmm." (Some practitioners believe that the mantra should be syllables or words that have no meaning to you. That is why many people use "ooohmmm" or "aaaaummm.")

   Example of phrases you can use are "May I be well," or "May I have patience and gratitude." Examples of images to concentrate on include statues of a spiritual figure or a photograph of the sun.
3. **Sit quietly in a comfortable position.**

   The easiest posture is a comfortable sitting position, with your spine straight and erect. If you lie down, you'll probably fall asleep, and you can't meditate when you're unconscious!
4. **Close your eyes and relax your muscles, starting at your head, working down your body to your feet.**
5. **Breathe slowly and naturally, focusing on your breathing or a word, phrase, or image; continue for 10 to 20 minutes.**

   If your mind wanders, that's OK. Gently return your focus to your breathing and to the word, phrase or image you've previously selected.
6. **After the time is up, sit quietly for a few minutes with your eyes closed; then open your eyes and sit in silence for a few more minutes.**

Relaxing your breathing

Stress causes rapid, shallow breathing. If you slow down and deepen your breathing, you can reduce the effects of stress. Here's one frequently used approach to achieve this goal:

1. **Inhale.**

   With your mouth closed and your shoulders relaxed, inhale as slowly and deeply as you can, to the count of six. At the same time, push your stomach out. Allow the air to fill your diaphragm.

2. **Hold.**

   Keep the air in your lungs as you slowly count to four.

3. **Exhale.**

   Release the air through your mouth as you slowly count to six.

4. **Repeat the inhale-hold-exhale cycle three to five times.**

Driving to distraction

Multitasking is good, but many people take it too far and ratchet up their stress to bad levels that increase their chronic pain.

You can concentrate on only so many things at one time: organizing your To-Do List for the next day, preparing dinner, finding your son's soccer gear, all the while talking to your mother on the phone. Multitasking too much is a setup for burning the rice! When your brain is crowded with too many tasks, attention to some things will inevitably drop off. You can turn around this principle and use it in a positive way to manage pain.

Sidetrack your mind away from your hurting by focusing on things that compete for attention in your brain. The approach is called *distraction.* The idea is to find activities that you can be totally absorbed in. Try the activity at least an hour every day and see how you feel.

For example, Elizabeth Vierck (one of your authors) had a difficult hip replacement surgery and subsequently spent a week transfixed by her husband's fish tank, watching the clown fish swim in circles. It was fun. It was soothing. And it helped ease the pain. Other people have tried activities like learning to count to 400 in Chinese or teaching a child a hobby, such as sewing or whittling.

Here are a few other ideas that may help you distract yourself from your pain:

- Read or listen to a book or listen to music.
- Do Sudoko puzzles, crosswords, or jigsaw puzzles.
- On your computer, go to `http://zefrank.com` to play games, draw flowers, or practice meditation by watching a flower move slowly across your screen.
- Take up creative pursuits, such as needlework, painting with acrylics, or learning carpentry.
- If you're physically fit enough, take up a new activity, such as golf or bocce ball.

- If you don't have a pet, consider adopting a puppy or kitten. (Or an adult dog or cat, which are usually already trained and less stressful!) They demand attention, are by nature distracting, and are also entertaining and funny.

Using self-hypnosis

The goal of self-hypnosis is to draw your attention away from your pain and help you relax. You can also use it to change negative thoughts. In fact, if you try this stress-reduction technique, make sure that you use only positive words and images throughout your self-hypnosis experience.

You may want to consult a certified hypnotherapist to teach you specific techniques for using self-hypnosis for pain reduction. The National Board for Certified Clinical Hypnotherapists has an online directory available at `www.natboard.com`. In addition, many self-hypnosis instructional programs are available for purchase on audio through bookstores or online.

Keep in mind that hypnosis typically involves four stages: induction, deepening, suggestion, and termination.

- In the *induction stage,* you achieve a deep state of relaxation.
- The second stage, *deepening,* involves increasing your hypnotic state.
- The third stage is *suggestion.* Tell yourself soothing phrases that will help your pain, such as "The muscles of my back are totally relaxed."
- *Termination,* where you end the hypnosis, is the last stage of the process.

The following steps walk you through a self-hypnosis script to try. You'll want to have about a half hour available.

1. **Find a quiet, comfortable spot where you can avoid distractions.**
2. **Choose a suggestion that will help your pain. Whisper it silently to yourself.**

   For example, try something like, "My muscles are relaxing, and I am calm" or "I feel warmth soothing my joints."
3. **Take a deep breath, hold the breath for a count of three, and then exhale with a sigh; repeat three times.**

   Let go all your tension when you breathe out.
4. **Take another deep breath through your nose, hold for a count of five, and let it go through pursed lips; repeat three times.**

   Really let go on the exhale, releasing all your body tension. You should begin to relax.

5. **Repeat to yourself the suggestion you chose in Step 1 and imagine yourself in that state.**

   For example, if you say to yourself, "My body is relaxing," imagine yourself as relaxed, with your arms and legs limp.

6. **Focus on the spots on your body where you have pain.**

7. **Deepen your hypnotic state.**

   You can try several techniques:

   - Repeat to yourself, "I am going deeper and deeper into a hypnotic state."
   - Use imagery: Tell yourself that your eyelids are getting heavier and heavier. Imagine this wonderful feeling.

   Repeat the suggestion to yourself several times.

8. **Tell yourself that you're coming out of your trance and give yourself a positive message.**

   For example, "I will count from one to five. When I reach five, my eyelids will open, and I will be wide awake and relaxed, and I will be in less pain.

Healing with your own hands: Self-massage

Of course, you'd probably prefer to have a professional give you a massage than do it yourself. Who wouldn't? But, if you're like most people, you don't always have the time or money to see a massage therapist. Self-massage is a great option at these times. (If your insurance covers massage, consider yourself lucky! But you still may want to do self-massage in between your appointments with a therapist. It will help keep those sore muscles relaxed!)

The idea behind self-massage is to rub and stroke the areas on your body that a massage therapist would stroke, concentrating on the most painful areas. You probably do some self-massage without even thinking about it — rubbing your head when you have a headache, stroking your shoulders after hunching over a keyboard all day, or massaging your sore feet after a long hike.

Following are some self-massage ideas to help you get started. You also may want to get a massage therapist to instruct you in these moves. See Chapter 13 for information on how to find a licensed therapist.

- **Back massage:** Find a tennis ball and sit in a straight back chair. Place the tennis ball on any sore spots on your back. Lean into the chair. Lean your back into the ball. Take ten deep breaths. Repeat at least once more.
- **Head massage:** Spread your hands out on your scalp. Massage in a clockwise motion, beginning at your hairline and moving backward to the nape of your neck. Take deep breaths and massage as you breathe. Change direction.
- **Foot massage:** Wash your feet and put a light coat of lotion or oil on them. Sit on a comfortable chair and rest one foot on the thigh of the other leg. Thread the fingers of one hand through the toes of your foot, spreading out your toes. Place the palm of your hand against the bottom of your foot. Rotate the joints of your forefoot back and forth for one minute with the palm of your hand. Repeat with the other foot.

  Next, hold your ankle with one hand and gently rotate your foot with the other hand. Start with small circles and make then increasingly larger. Switch directions. Repeat with the other foot.
- **Neck massage:** Clasp your fingers behind your neck, pressing the heels of your palms into your neck on either side of your spinal column. Move the heels of your hands up and down slowly.

  Then place the fingers of your right hand on the muscle along the left side of your neck just below the base of your skull (the trapezius muscle). Press into that muscle, tilt your head to the left, and rub downward toward your shoulder. Repeat three times and then switch sides.
- **Shoulder squeeze:** Cross your arms over your chest and grab a shoulder with either hand. Squeeze each shoulder and release three times. Move your hands down your arms, squeeze, and release.

Praying and using other spiritual techniques

Prayer can be a powerful pain reducer for those who practice it. A *USA Today* poll found that 59 percent of its respondents reported that they used prayer to control pain. Of the people who use prayer for pain, 90 percent said it works well, and 51 percent said it works "very well." Many people find that repeating a word or prayer many times is soothing. Choose a prayer that will work best for you based on your religious beliefs.

Some people who worry a lot say that it helps to give over their problems to God or a higher power to solve. By letting go of your problems, you can work toward relaxing.

Ironically, many people find that when they pray, solutions to their problems suddenly occur to them. Before praying, the intense worry was blocking the answers that they sought.

Journaling for wellness and pain management

Many people find that writing their thoughts in a journal relieves their stress and helps them manage their pain better. The concept behind journaling for stress relief and pain management is to write specifically about your thoughts, feelings, and frustrations on your pain, health, and related issues. Journaling also includes writing about positive things. For example, maybe your pain condition has brought you closer to your family or you've started a new hobby to replace old ones you can no longer perform. Write down the positives as well so that you can celebrate the good!

Think of your journal as a nonjudgmental best friend or therapist, to whom you can pour your heart out. Also, keep in mind that your journal should be different from your pain diary. (For information about keeping a pain diary, see Chapter 17.) Think of your pain diary as a spreadsheet where you keep details about your pain and overall health, while your journal is an open and honest conversation with yourself.

Journaling can be done with pen and paper or on a computer. If you're a perfectionist, let it go! Don't worry about using correct grammar or spelling or perfect penmanship. Journaling is for your eyes only.

Laughing through your stress and pain

"There's nothing like a good laugh." How many times have you said that to yourself (or your best friend) after a particularly good joke? The great editor Norman Cousins famously discovered the therapeutic effects of laughter when he developed heart disease and arthritis. He described his laughter-as-therapy approach in the 1979 book *Anatomy of an Illness.*

While the pain-ridden Cousins was in the hospital, he watched Marx Brothers films. "I made the joyous discovery that ten minutes of genuine belly laughter had an anesthetic effect and would give me at least two hours of pain-free sleep," he reported. Cousins said that "Laughter is inner jogging."

Tips to bring humor into your life

Laugh more and feel better! Watch comedy on DVD, TV, and even on your computer. Most TV comedy shows include highlights of popular episodes on their Web pages. For example, the site for the late-night host, Jay Leno, shows the clip "Impressing Ed Asner" from one of his episodes in which a spry 90-year-old woman does a dance routine that ends with her doing impressive splits. Watch this piece, and not only will you laugh in pure delight at the enthusiasm of the performer, you'll also cheer in awe. (And, you will forget your pain, if only for a minute.)

Here are a few more ideas:

- **Go to comedy clubs.** Most large cities have comedy clubs featuring standup comics. Many acts are top-notch; most great comedians, such as Jerry Seinfeld and Tim Allen, got their starts in comedy clubs.
- **Read or listen to funny books.** Many good comedy writers can tickle your funny bone: Steve Martin, Woody Allen, Whoopi Goldberg, and Ellen DeGeneres, to name just a few. You can also listen to them on CD while in your car. A great resource for purchasing CDs designed for laughs is Laugh.com at `http://laughstore.stores.yahoo.net`.
- **Check out funny things wherever you go and whatever you do.** If the comic section in your local paper doesn't interest you, try the Web. Some funny sites are `www.funny2.com`; `www.ahajokes.com`; `www.comedycentral.com/jokes/index.jhtml`; and `www.knock-knock-joke.com`.
- **Be funny.** Make yourself and other people laugh. If it doesn't come naturally, take a class from the Laugh Tour (`www.worldlaughtertour.com`; 1-800-NOW-LAFF). They travel around the country teaching people to laugh. Or read the classic and still great *How To Be Funny* by Steve Allen, (Prometheus) the founder of late-night TV.

Since Cousins' time (he died in 1990), the power of laughter as an anecdote for pain and stress has caught on around the world. The Laughter Tour (`www.worldlaughtertour.com`) is very popular in rehab centers and long-term care facilities. The Laughter Arts and Science Foundation (`www.laughterfoundation.org`) supports and creates programs that capitalize on laughter to promote harmony in the world. The Association for Applied and Therapeutic Humor (`www.aath.org`) is a network of laughter authorities and enthusiasts. And the International Society for Humor Studies (`www.hnu.edu/ishs`) is a scholarly and professional organization dedicated to the advancement of humor research.

Interest in laughter is based in part on its positive effects on health and pain reduction. For example, using laughter-provoking movies to gauge the effect of emotions on cardiovascular health, researchers at the University of Maryland School of Medicine in Baltimore showed that laughter is linked to the healthy functioning of blood vessels. Laughter appears to cause the tissue that forms the inner lining of blood vessels, the *endothelium,* to dilate or expand in order to increase blood flow — a very good thing!

When the same group of study volunteers was shown a movie that produced mental stress, their blood vessel linings constricted, reducing blood flow — a very bad thing.

Other research has shown that laughter

- Lowers blood pressure
- Increases vascular blood flow and oxygenation of the blood, which assists healing
- Exercises your diaphragm, abdominal, respiratory, and other muscles
- Reduces levels of stress hormones in your body, which surge when you feel stress, anger, or hostility. These hormones cause all sorts of harm in your body: They can suppress your immune system, obstruct your arteries, and raise blood pressure.
- Increases natural killer cells (such as T and B cells) that destroy tumors and viruses

Humming through your stress and pain

Using music to soothe pain isn't a new phenomenon. The medical community recognized its success during the first and second world wars, when nurses used music with wounded soldiers in veterans' hospitals.

More recently, U.S. researchers tested the effects of music on 60 patients who had endured years of chronic pain. Those who listened to music reported decreases of up to 21 percent in their pain levels and up to 25 percent in depression levels, compared to those who did not listen to music. They had suffered from osteoarthritis, disc problems, and rheumatoid arthritis for an average of more than six years.

Music is an individual taste. What soothes one person may jangle the nerves of another. But if listening to the music of your choice gives you relief from pain and stress, then we say, "Listen up!"

Playing with crayons and clay: Art therapy

Art as a healing tool is mainstream in medicine. In a 2004 survey, the Joint Commission on Accreditation of Healthcare Organizations found that about 2,000 hospitals nationwide offer some kind of art programming or therapy (including music).

Recent research has underscored the benefits that practicing art can have for pain reduction and other symptoms. A study of cancer patients published in the *Journal of Pain and Symptom Management* found that participating in art programs reduces uncomfortable symptoms in cancer patients. The researchers found reductions in eight of nine symptoms: pain, tiredness, depression, anxiety, drowsiness, lack of appetite, well-being, and shortness of breath. Nausea was the only symptom that didn't change as a result of participating in the program.

You don't have to be a gifted artist to practice art for pain reduction. In fact, the purpose is to paint as you did as a child — to be distracted by the process of creating something from within yourself. Use any medium you want, including crayons, clay, or colored pencils.

To try your hand at art to reduce pain, you may want to start by locating an art therapist in your local area. Contact the American Art Therapy Association, Inc., 5999 Stevenson Ave., Alexandria, VA 22304; phone 888-290-0878; e-mail `info@arttherapy.org`.

Part V

Understanding Pain Throughout the Life Cycle

"What I do know is chronic pain isn't contagious. Unless your child has it."

In this part . . .

In this part, we give you practical advice on detecting and managing chronic pain during three stages of the lifecycle: childhood, the later years, and during the end of life. Pain during each of these stages requires different treatments and solutions than during adulthood. For example, the types and dosages of drugs that you can give a child with chronic pain differ greatly from those an adult can take. And the same is true people over age 65.

So, if you have a child with chronic pain, if you or a loved one is over age 65, or if you (or a loved one) have a terminal illness, this part is for you.

Chapter 23

Pain in Children

In This Chapter

- Understanding children's experience of pain
- Identifying chronic illness in your child
- Considering children's pain meds

If you have a child in chronic pain, you're all too familiar with the heartbreak and challenges of seeing a kid who's hurting. And you're not alone — many other parents know exactly how you feel. The American Pain Society estimates that 15 to 20 percent of children are affected by chronic pain. Many experts say that this number actually is an underestimate because a lot of pain in kids goes undiagnosed.

Many conditions, including cystic fibrosis, chronic headaches, and cancer, cause chronic pain in children. But kids experience the pain these conditions cause much differently than adults. For example, until about age 3, children don't think abstractly about pain and have no experience to draw on to realize that the pain of a needle prick will go away fast. To the child, it hurts right now! And it hurts a lot! And, that's really, really scary!

This chapter gives you tips to detect the severity of your child's pain and covers the medicines commonly used to treat pain in children.

Understanding How Children Experience Pain

Until the last few decades, pain was often ignored in infants. It's incredible to think about now, but physicians believed that infants didn't feel pain as intensely as older children or adults do (or they believed that babies didn't feel pain at all). The medical profession assumed that an infant's nervous system was just not mature enough to transmit pain the way that an older child's or an adult's does. But the truth is that infants can feel pain. However, they don't know how to tell you about pain and don't show it the same way that adults do.

Resources

The following resources may be useful when your child suffers from chronic pain:

The American Academy of Family Physicians (AAFP), P.O. Box 11210, Shawnee Mission, KS 66207; phone 800-274-2237, 913-906-6000; Web site `http://familydoctor.org`. AAFP's Parents and Kids section on its Web site provides information about health conditions that affect children. Its Find a Family Doctor page provides an interactive directory of family physicians by state.

KidsHealth, Web site `www.kidshealth.org`. KidsHealth provides health information about and for children from before birth through adolescence. KidsHealth has separate areas for kids, teens, and parents.

American Academy of Pediatrics, 141 Northwest Point Blvd., Elk Grove Village, IL 60007; phone 847-434-4000; Web site `www.aap.org/parents.html`. The Parenting Corner of the AAP offers many helpful hints on a broad array of topics. In addition, you can search its database to locate a pediatrician.

Children also don't have any life experience to draw on to compare one type of pain to another. In addition, a child's pain may be ignored because she may not be able to tell an adult about it — she doesn't have the words to describe "pain in the sinuses" — or she may try to hide her pain because she's afraid of the events that may be set in motion if she does talk about it.

For example, maybe the last time she complained about something that hurt, her dad took her to the doctor's office, and a very tall stranger drew blood from her arm — and the idea of going to the doctor's office and going through that ordeal again is a lot scarier than the headache she's having at the moment.

Whether a child feels pain in relationship to a chronic illness and how she expresses it depends on the individual child and the disease process. For example, some children with juvenile rheumatoid arthritis have pain, and some other (luckier) kids don't. Some children will also keep playing in spite of their pain, while others withdraw or scream bloody murder — and they all have the same level of pain.

Measuring Pain in Children

With so many ways that a child can respond to pain, how do you tell what's really happening with your kid? Fortunately, health professionals have developed methods for measuring pain in children:

- **Self-reported (subjective) pain,** which is assessed by asking questions and using scales. (Experts say that children 6 to 7 years and older are as accurate as adults at assessing pain using self-reporting methods.)

- **Physiologic measures of pain,** noted by signs such as elevated blood pressure and sweating.
- **Behavioral signs of pain,** observed by contorted facial expressions and crying.

Measuring self-reported pain

To make it easier for your child to describe her pain and help you determine how much pain your child is experiencing, try one of the following techniques. To use these measures, your child must be talking and able to answer questions — it won't work on baby!

- Ask your child to draw or describe the color of her pain. Give your child a box of crayons and some paper and ask her to draw her pain. Children's pain drawings are usually very detailed and emotionally powerful, and they often use red or black to draw areas where they feel the most pain.
- Use the chips game to determine pain. *Note:* For this method, your child must be able to understand that adding one thing to another thing results in creating something bigger. Use four identical chips — poker chips or checker pieces are fine. Tell your child that you want to talk to her about the pain she's having right now. Then line the chips across (not up and down) in a row on a kitchen table, tray, or other flat surface.

  Starting at the far left, describe the chips to your child. Say something like, "This chip is a little hurt." (If your child doesn't understand the concept of "hurt" very well, use words she does understand, such as "This chip is a *little* owie.") Point to the next chip and say "This chip is *more* hurt." Point to the next one and say "This one is *a lot* of hurt." Then point to the last one and say, "This chip is the *most* hurt you can have!" Then ask your child, "Show me how many chips you feel like right now?"

  Make sure that you understand what your child is expressing by saying something like, "Oh, that means you have a little hurt" if she picks only the first chip. If she then says, "No, hurts a *lot*," then re-explain the concept one more time. (Don't try a third time if it still doesn't work. Use one of the other measures.)
- Use the faces scale to determine pain. Particularly after about age 5, some children describe their pain accurately using the faces scales, such as the one shown in Chapter 17. If you use this scale, try using these descriptions for the five faces:
  - **First face:** Doesn't hurt at all.
  - **Second face:** Hurts a little.
  - **Third face:** Hurts more.
  - **Fourth face:** Hurts a lot.
  - **Fifth face:** Hurts the most.

Reading physiologic measures of pain

An increased heart rate, sweating, an elevated pulse or blood pressure, or rapid breathing can all indicate that a child is in pain and feeling stress. However, these signs must be used along with the self-reporting and behavioral measures because these physical responses can be caused by other factors, such as anxiety or hunger. And, just as in adults, infants in pain sometimes don't show any abnormalities in heart rate or blood pressure.

Reading behavior to detect pain

Children show pain by crying and pulling away from the cause, such as a needle or catheter that hurts. They also may hold their breath; clench their fists; show pain, anxiety, or fear on their faces; and hold or stroke the area where it hurts. Children in pain may also be less active and sleep more or less than normally. They may refuse to eat.

The most reliable way to tell pain in an infant is by facial expression. The following expressions show an infant is in pain: quivering chin, eyes squeezed shut, mouth wide open, and grimacing. An inability to be comforted and crying with a tone that is higher and louder than usual also may indicate pain. Cries from pain also tend to be sharp, not melodious.

Detecting Chronic Illness in Your Child

A myriad of medical conditions can cause chronic pain conditions in children. If you think that your child is in pain and notice any of the following signs, report them to your pediatrician or family doctor, because they may be symptoms of a chronic or serious illness.

- Breathing problems such as coughing or wheezing
- Marked changes in weight, behavior, sleep patterns, eating, or drinking
- Vomiting or diarrhea that doesn't improve
- Crankiness and crying
- Rashes that don't improve

Assessing Pain Medications for Children

Most drugs used to treat pain haven't been studied in children, and the FDA doesn't give guidelines for giving painkillers to children. So, doctors must extrapolate from studies performed with adults.

In part, because of the lack of guidelines, many health professionals are afraid of overdosing a child, so, they sometimes don't give them *enough* medicine to handle the pain.

Acetaminophen, ibuprofen, and opioids are used most often for pain control in children. However, ibuprofen and other nonsteroidal anti-inflammatory drugs (NSAIDs), such as Motrin, are not recommended for infants younger than 6 months old. (Their livers can't metabolize it.) Pain medicines for children are available as lollipops, syrups, or nasal drops, which can make administration easier.

Don't give your child Motrin and Tylenol at the same time or within the time on the dosage schedule given to you in this chapter, by the drug's manufacturer, or by your pediatrician. In other words, if the bottle for your child's Motrin says, "give every six hours," don't give him either drug during that six-hour period. Giving your child Tylenol and Motrin close to each other in time can cause her to have kidney failure.

Acetaminophen and ibuprofen are the most frequently used OTC pain relievers in children. They're effective for both acute and chronic pain. The two OTC drugs are similar in their ability to relieve moderate to severe pain, but ibuprofen is better at reducing fever. The dosage to give your child is based on weight.

Acetaminophen

Administering the correct dosage of acetaminophen is extremely important to avoid accidentally overdosing your child. For example, giving your child too many OTC drugs that include acetaminophen (Tylenol and Datril) can damage his liver. Not only is the drug sold under the brand name of Tylenol (and other names), but it's also available in many cough and cold products. Be sure to read the labels on all OTC drugs your child will be taking *before* administering them and also total the amount of acetaminophen in them. Don't exceed the recommended dosage even though the acetaminophen comes from different sources. Also, don't give your child acetaminophen for more than the days recommended by your pediatrician.

If your child is prescribed a drug that includes acetaminophen, ask the pharmacist how much acetaminophen is included in the drug and whether it's okay to also give the child OTC painkillers.

An overdose of acetaminophen can cause liver damage. The signs of liver damage include abnormally yellow skin and eyes (jaundice), dark urine, light-colored stools, nausea, vomiting, and loss of appetite. The signs are similar to the symptoms of the flu, so they easily can go unnoticed.

Table 23-1 shows the recommended dosages for acetaminophen according to the age of the child.

Table 23-1 Acetaminophen Dosage Chart

Age	*Weight*	*Drops (0.8 ml)*	*Syrup (5 ml)*	*Chewable Tablets (80 mg)*
0–3 mos.	6–11 lbs.	0.4 ml	n/a	n/a
4–11 mos.	12–17 lbs.	0.8 ml	1/2 tsp	1 tab
1–2 years	18–23 lbs.	1.2 ml	3/4 tsp	1 1/2 tabs
2–3 years	24–35 lbs.	1.6 ml	1 tsp	2 tabs
4–5 years	36–47 lbs.	2.4 ml	1 1/2 tsp	3 tabs

Dosages may be repeated every four hours, but they should not be given more than 5 times in 24 hours. (*Note:* Milliliter is abbreviated as ml; 5 ml equals 1 teaspoon [tsp].)

Don't use household teaspoons, which can vary in size. Instead use the medicine spoon or syringe provided by the pharmacy (usually for free).

Ibuprofen

Ibuprofen works better than acetaminophen in treating high fevers (103° F or higher). However, ibuprofen should be given only to children older than 6 months (see Table 23-2). Never give ibuprofen to a child who is dehydrated or vomiting because it can cause renal failure. Dosages may be repeated every 6 to 8 hours, but should not be given more than 4 times in 24 hours.

If your child has kidney disease, asthma, an ulcer, or another chronic illness, ask your pediatrician whether ibuprofen is safe. Don't give your child ibuprofen or acetaminophen if he's taking any other pain reliever or fever reducer, unless your pediatrician says it's okay to do so.

Table 23-2 Ibuprofen Dosage Chart

Age	*Weight*	*Drops (1.5 ml)*	*Syrup (5 ml)*	*Chewable Tablets (50 mg)*
6–11 mos.	12–17 lbs.	1.5 ml	n/a	n/a
1–2 years	18–23 lbs.	2.25 ml	n/a	n/a

Age	*Weight*	*Drops (1.5 ml)*	*Syrup (5 ml)*	*Chewable Tablets (50 mg)*
2–3 years	24–35 lbs.	3 ml	1 tsp	n/a
4–5 years	36–47 lbs.	n/a	1 1/2 tsp	3 tabs

Other pain-reducing options

The two opioids used most often in children are morphine (MS Contin) and Fentanyl (Duragesic). However, many doctors are reluctant to prescribe these drugs because of the lack of research on side effects in children. Opioids are available in pills for swallowing, tablets to put under the tongue, rectal suppositories, nasal sprays, intravenous shots, and subcutaneous injections.

In addition, children who are 4- to 6-years-old in extremely severe pain can, with supervision from an adult, use patient-controlled analgesia (PCA). This implanted device can be triggered when pain occurs and doesn't allow more than a specific level of medication to be released. Older children can often use PCAs without supervision. (See Chapter 14 for information on PCAs.)

Prescription drugs

Unfortunately, no research shows the effectiveness of giving children prescription drugs, such as antidepressants and anti-epileptics, which are often used to treat chronic pain in adults. (See Chapter 14 for information for adults regarding taking these types of drugs for chronic pain.) However, many doctors do prescribe the following drugs for pain control in children:

- Anti-anxiety medications, such as lorazepam (Ativan) and diazepam (Valium), to enhance the effects of opioids
- Tricyclic antidepressants, such as amitriptyline (Elavil), to treat chronic pain and headaches
- Corticosteroids to eliminate inflammation and bone pain
- Anticonvulsants, such as phenytoin (Dilantin) and gabapentin (Neurontin), to treat neuropathies. (See Chapter 11 for information on neuropathies.)
- Neuroleptics, which are antipsychotic drugs with sedative and pain-killing effects, to help relieve cancer pain and other severe pain
- Anesthetics, such as the topical painkiller EMLA cream, which is available for children over 1 month old and is given ahead of time, to reduce pain caused by medical procedures

Chapter 24

Pain and Aging

In This Chapter

- Admitting to chronic pain
- Realizing how medicines act in the bodies of older people
- Understanding the medical risks of ignoring pain in seniors
- Detecting pain in people with cognitive problems

Have you heard of *ageism?* It's prejudice against older people, and it's partially reflected in society's worship of youth, as well as its anxiety and horror over wrinkles and graying hair. Strangely, most people wish for a long life, and yet they don't seem to want to think about becoming old. (How you achieve long life without actually aging is a mystery.)

Most people (including some doctors!) have preconceptions of older age. One of them is that getting old means you're *supposed* to live with aches and pains. Well, it's true you're more likely to have arthritis and other pain-inducing disorders as you age. However, chronic pain isn't inevitable, and it's caused by an actual disease or disorder, not by whatever age you are. If you're older, you don't have to let your aches and pains bench you altogether, nor should your doctor assume that you should accept all pain as normal. Fight back! You *can* take action against chronic pain. This chapter offers suggestions for older people in pain, as well as for the people who love them.

What is meant by older Americans, senior patients, or seniors? These are all terms that generally apply to people age 65 and older, a common definition of the elderly in the United States.

Older People Have Real Pain

Many doctors say that a lot of senior patients deny that they have pain. Even people who are bent over, stiff, and in obvious discomfort may deny that they're in pain. When asked if they hurt, they say, "I'm fine" or "At my age, who can complain?" But if doctors probe a little further, many older patients say that they "always" feel stiff and sore.

Sometimes older people have adapted society's ageist beliefs and *expect* aching and discomfort to appear or accelerate as their birthdays stack up. So they don't report it to their doctors. Their thinking is, "Of course, I'm in pain. I'm old!" Other older individuals think that admitting they're in pain is a sign of weakness. And others fear the side effects of drugs, particularly narcotics, used to treat pain.

The consequences of these attitudes are all bad. Neglecting pain means a life of discomfort, when this pain could be greatly reduced with the help of a physician, other health-care professionals, and pain-relieving treatments and techniques. If you're an older person or someone who loves an older person, don't accept that older people are in pain solely because they're old. There may be other reasons for their pain.

According to the American Geriatrics Society, arthritis is the most common cause of pain in people over age 65. Circulatory problems, shingles, and other types of nerve damage, bowel diseases, and cancer are also other common causes of chronic pain in older people. In addition, muscle pain is also quite common. Conditions that contribute to muscle pain in older people are fibromyalgia and myofascial pain.

Admittedly, while it's not a given, pain is common during the later years. Two in three seniors in the United States say that pain prevents them from carrying out routine activities, such as cooking, housework, hobbies, and gardening. If you're age 65 or older, you may be wondering, "Why us? We finally have some time off from the daily grind of work, but now we have trouble getting around the grocery store and running the vacuum cleaner."

It may not seem fair, but many seniors have multiple medical conditions — arthritis, back problems, gastrointestinal problems, and other conditions that cause chronic pain.

Here's the good news: While chronic pain is far too common in older age, it is not inevitable.

Many studies have shown that older people are often undertreated for pain, which means they're either given no pain medicine or are administered extremely low dosages that are ineffective. Some physicians are afraid to give narcotics to older people with severe pain from cancer, back pain, and other ailments because the doctors believe patients may get addicted.

In contrast, we agree with many experts who believe that severe pain should be treated with appropriate pain medications and that the risk of addiction is low unless the patient had a previous addiction problem.

Not only does the failure to treat chronic pain lead to discomfort, but it's also true that when neglected, chronic pain can cause other problems.

Possible ageist comments from docs and examples of responses

Here are some examples of ageist comments some doctors make and suggestions on how you might respond to them.

Ageist comment: You have to expect pain at your age! There isn't much we can do.

Possible response: My pain is severe. Please help.

Ageist comment: Older people have to take a lot of medicine.

Possible response: I understand that I need a lot of medicine. But I'm wondering if we could review all the drugs I take. Maybe I don't really need them all.

Ageist comment: I only prescribe narcotics for short-term pain. Do you want to become a drug addict?

Possible response: Of course I don't want to become a drug addict! But the other medications we've tried don't help! I'd like to try a low dose of a strong pain medicine for awhile so that I might get some relief.

Ageist comment: When you get older, you have less energy. You're not 20 any more!

Possible response: I was old two months ago and had a lot more energy then. Could there be some other reason for my sluggishness now? (Give the doctor an example, such as you could take daily walks two months ago, but can't now.)

Managing Pain with Medications

Taking medications for long periods of time to treat chronic pain is always a complex issue, regardless of how old you are. Aging adds other complications to the mix. Older bodies process drugs differently than younger bodies, and it often takes smaller dosages to reach an effective pain-killing effect in older people.

A number of ways to control pain are available in addition to or along with medicines. You can read about these techniques in many chapters of this book, but for specific tips, be sure to see the appropriate chapter for your condition. In addition, Chapter 15 discusses alternative and complementary approaches to pain control.

Even if certain pain drugs work well for you when you were younger, you need to be careful about taking the same drug as you age. This caution is also important for people who care for (or care about) an elderly person. For example, if you're in your 40s and you've had great success in managing your own arthritic pain with NSAIDs, you may be tempted to give them to your 80-year-old mother for her arthritis pain. Resist this impulse. Ask your

mom to talk to her doctor first, particularly if she has any stomach problems. Depending on the level of pain that your mother has, the doctor may recommend trying another medicine first. (See Chapter 14 for a description of NSAIDs).

Never give away your opiate pain medication to another person. It's illegal under federal law and may be very dangerous to the person receiving the drug.

The American Geriatrics Society has developed guidelines for fighting off chronic pain (which they call *persistent pain*) in older people. The society convened a panel of experts to make the recommendations. They built their guidelines around two important types of drugs:

- **Acetaminophen (Tylenol):** This drug is the first choice for mild to moderate musculoskeletal pain.
- **Opiods:** Older people with persistent, severe pain require strong drugs, including opiates such as morphine or oxycodone.

When doctors decide on dosages for acetaminophen, opioids, or other drugs for older people, they usually "start low and go slow." In other words, they use the lowest dose possible and then build slowly until the patient's pain is relieved.

The good and bad about opioids

Opioids, also known as *narcotics* or *opiates,* generally have a greater pain-killing effect in older people than in younger patients. As a result, if you're an older person, you probably need a lower dose than someone who's younger, although the dose should be sufficient to provide pain relief. (See Chapter 14 for information on opioids.) However, *geriatricians* (doctors who specialize in aging) say that these drugs are prescribed too infrequently rather than too often. Undertreatment leads to breakthrough pain, which means that the drug isn't keeping the pain under control. If your doctor says that you or your older loved one should consider taking an opioid, he will work with you on the type of drug and dosage.

Some opioids, such as propoxyphene (Darvon, Darvocet), should never be taken by seniors. And some opiods, such as morphine, can cause confusion and even hallucinations in some older people, so the drug itself should be selected with care.

Narcotics have side effects. While opioids are recommended for severe pain in seniors, almost every older person who takes them has problems with constipation, and sometimes with urination as well. Therefore, older people who take these drugs regularly should get plenty of exercise, drink lots of fluids, and take laxatives if needed (under the watchful eye of a physician who can monitor their heart and sedation levels).

Identifying potential problems

Some health conditions that commonly strike older people can greatly affect their ability to take their pain medications safely and effectively. The result can be loss of pain control, as well as dangerous reactions from taking drugs incorrectly.

The loved ones in your life may not want to talk about these conditions, such as vision or hearing loss, because they're afraid of losing their independence. However, if they (or you) have any of the problems listed in this section, valuable techniques are available to help you adapt and keep your independence. In addition, if you're concerned about a loved one with these problems, assure him that talking them over with you and your health-care professionals can help him find techniques and treatments to adjust to the problems so that he can remain independent.

The following conditions can affect the ability to take pain medications:

- **Problems with vision:** By the age of 65, about one in three people has a vision-reducing eye disease. An older person may have difficulty reading, or she may not be able to read prescription labels and consumer materials about medications. She also may be unable to see the differences between pills. A resource for adapting to vision problems is The Vision Learning Center (`www.preventblindness.org`).

  Having a daily pill container filled by another person for the week may help a person with poor vision. Then the individual can simply take Monday's pills on Monday. (However, some pills need to be taken with food or have other restrictions, so this aid doesn't work in such cases.)

- **Hearing problems:** As you grow older, it often becomes more difficult to hear soft sounds and conversational speech. In fact, one-third of adults between the ages of 65 and 74 and about half the people age 85 and older have a hearing loss. As a result, listening to advice from doctors and others about prescriptions and treatments for pain control is difficult or impossible. Many people think that they can read lips accurately, but they still miss a great deal of what is said. A resource for adapting to hearing loss is the American Speech Language Hearing Association (`www.asha.org`).

- **Cognitive impairment:** Some older people have some form of dementia, and the older the individual, the more likely dementia is present. In fact, dementia is tragically common among people of advanced age, such as those over age 85. The Alzheimer's Association reports that in 2007, 5 million seniors in the United States had Alzheimer's disease. (Alzheimer's is just one form of dementia.)

  Studies have shown a correlation between memory problems and not taking medications according to directions or not taking them at all. The Alzheimer's Association (`www.alz.org`) has local chapters and offers assistance to people in these situations and their families.

- **Dexterity:** It's one of the most frustrating things about the aging process: As you grow older, your physical dexterity declines. This loss of dexterity can make opening child-proof or even standard packages or containers difficult or impossible. To help with dexterity issues, ask your druggist for easy-to-open packaging, pre-filled syringes, and pre-measured liquid dosages.

Antiaging drugs or techniques are completely experimental at this time and may have severe negative side effects.

Affecting older bodies differently

As we discuss in Chapter 14, many drugs are available to manage pain. However, older people are more likely than younger people to experience side effects from pain-killing drugs because aging increases sensitivity to most drugs. This is especially true for medications affecting the central nervous system. (See Chapter 2 to review how pain works in the central nervous system.)

A sad truth of science today is that very few drugs are tested on older people. Instead, they're studied in young people — often college students. A general understanding of how drugs work in the bodies of older people is very limited. However, some facts are known.

When you take a medication, your body circulates the drug in its fat and water. But this process has different results when you're older. For example, aging causes a decrease in blood flow in the liver, which is the organ in our bodies that metabolizes most drugs. This reduced vitality of the liver can have a substantial effect on the effectiveness and side effects of medications. In addition, while most drugs are metabolized by the liver, they're eliminated by the kidneys. But for people over age 75, kidney function is half what it was at a younger age. The result is that drugs eliminated by the kidneys hang around longer in older people.

Sometimes kidney or liver function may change very suddenly without the older person even being aware of it. If you or a loved one are over age 65 and you notice side effects, such as confusion or extreme fatigue, contact a doctor or pharmacist right away.

Guidelines for taking pain medicines

As you and your loved ones age, your bodies change in the way they process drugs. As a result, you and your doctor understand that effectively managing your pain medications is one of the most important things you can do for your health.

Use the medication log in Chapter 17 to keep track of all the drugs you take. Keep a copy in your purse or wallet, give a copy to your doctor, and make sure that your loved ones and caregivers have copies. Here are a few guidelines if you or a loved one is older and taking medications:

- If possible, use only one pharmacy to fill all your prescription medications so that your druggist will have an updated chart of all the drugs you take. She can also check for possible incompatibilities between the drugs you take.
- If you take two or more drugs, ask your doctor and pharmacist to run your medication list through a drug interactions database. (Four eyes are better than two!) You can also check for drug interactions yourself at `www.drugs.com`. (Click Interactions Checker.)

Deciphering Pain in Seniors with Memory Problems

Dementia is a tragic condition of declining mental abilities. If a loved one has a diagnosis of dementia, it means she may have difficulty reasoning and remembering. In fact, your loved one may not even fully understand physical problems, such as pain.

Older people with dementia may have many medical problems that can make diagnosis difficult. If you have a loved one with dementia, try to determine whether he's experiencing pain.

If you see any clues that pain is present in a senior with dementia, talk to a doctor or other health-care professional right away. Using the list of nonverbal cues that we include in Chapter 17, try to fill in the blanks, giving as much detail as possible. Here are some observations important for the older person's doctor or other health-care provider to know:

- Offer your best guess as to how you think the pain is experienced by the senior (for example, burning, aching, stabbing). Also, explain what you've observed that led you to these guesses.
- Describe *when* you observe the pain occurring, such as when the senior is getting up from a chair or lying in bed.
- Provide a history of all prescription and over-the-counter medicines your loved one takes. (Use the log in Chapter 17.)
- Give examples of displays of pain you've noticed, such as grunting or clutching a hip.
- Report on what — if anything — appears to relieve the pain.

Chapter 25

Pain at the End of Life

In This Chapter

- Discovering the total pain concept
- Understanding palliative care
- Coping with terminal pain
- Knowing your rights as a patient

This chapter is hard-hitting, and it's one that many people would prefer *not* to read. But if you or someone you love has chronic pain and a terminal illness, this chapter is important because it covers the difficult situation of having chronic pain that is amplified by end-of-life pain.

Pain associated with the dying process may or may not be related to the pain of an individual's chronic condition. For example, Nora struggled for a decade with fibromyalgia, and she now has a rare condition called primary pulmonary hypertension. It affects the blood vessels in her lungs and makes breathing difficult. Nora is faced with managing both her fibromyalgia pain and the pain from the primary pulmonary hypertension.

In order to manage her condition and the resulting pain, Nora has taken advantage of a concept called *palliative care,* which uses a team of doctors and other types of professionals (such as palliative-care social workers and chaplains) who meet regularly to plan and coordinate their patient's interdisciplinary care.

This chapter covers the palliative care approach and offers information about total pain, an idea particularly relevant for people with chronic pain who also have a terminal illness.

Managing Total Pain with the Palliative Approach

The concept of *total pain* dates back to Cicely Saunders, the founder of the first hospice in the United States. She opened St. Christopher's Hospice in 1967, with the wise perception that chronic pain in the face of death presents challenges to the patient, doctor, and other members of the health-care team. Saunders saw such pain as endless and meaningless, bringing a sense of isolation and despair to the patient. She described the concept of total pain as the suffering that encompasses a person's physical, psychological, social, spiritual, and practical struggles.

Saunders and her colleagues saw that people with constant pain experienced a worsening of chronic pain when they were diagnosed with a terminal illness, largely because of the many stressors associated with a fatal disease. Here are some examples of the types of distress that contribute to total pain:

- **Psychological pain:** Difficulty coping with a diagnosis and adapting to physical changes, such as the loss of hair or a limb.
- **Social pain:** Sorrow over the idea of leaving family and friends and the loss of a career and/or parenting.
- **Spiritual pain:** Questioning whether an afterlife really exists; anger at God.
- **Practical:** Organizing necessary care and finances as the illness progresses.

The palliative approach to managing total pain includes a team of experts who help you cope with sources of distress. For example, a grief counselor can help both you and your family cope with the distress of possible separation. A chaplain or other spiritual advisor can help you work through spiritual issues. And an estate attorney and/or financial advisor can help you put your financial affairs in order.

Palliative care focuses on the relief of the pain and the symptoms and stress of a serious illness. The goal of this type of care is to give comfort and support to the person receiving care. It's not an alternative to conventional medical care, but complements it. It is also not the same thing as "comfort measures only." It's a coordinated effort to give the best possible comprehensive care under the circumstances. Palliative and hospice care were recognized as a medical subspecialty in 2006 by the American Board of Medical Specialties.

Palliative care is not a one-size-fits-all treatment. The palliative care team devises and carries out treatment to meet the particular needs of each patient.

You or your loved one can receive palliative care in your own home, in a nursing facility, hospital, or other setting of your choice.

Palliative care is often confused with hospice care, but they differ. Specifically, hospice care involves helping ill individuals and their families during the last days or months of life and is often an important part of palliative care, which can involve caring for the individual over a longer period of time and is compatible with treatment that aims to cure the terminal illness.

One of the many advantages of palliative care is that it's patient-centered. If you're the patient receiving palliative care, you'll be the central force of your team. The team is all about you!

You also have a responsibility to be as informed as possible about your condition, your needs, and the desires you have for the future. For example, is it important that you never, ever go to a nursing home, even if a very good one is nearby? Is it important to you to never have invasive medical procedures? If so, it's up to you to make these wishes known to your family members, doctors, other members of your team, and particularly anyone who you choose as a *health-care agent* (a person you predesignate to make medical decisions for you if you can't make them).

Facing the Hard, Physical Truth about Dying

In addition to severe pain, people who are dying can suffer additional unpleasant and uncomfortable symptoms that impede quality of life. Yet many people at the end of life want to spend their precious remaining time with loved ones. Or, they may have some unfinished business to work out with family and friends. They may also want to set their financial affairs in order. When physical problems get in the way of such meaningful and significant activities, patients feel even more frustrated on top of the already- difficult circumstances.

Common physical problems that occur during the dying process are nausea, lack of appetite, difficulty breathing, weakness, fatigue, and problems with elimination. In addition, the fear of intolerable pain can cause great anxiety and irritability, and some studies have shown that the fear of future pain is a major source of stress. You can treat most of these problems, and your team can work to put these treatments in motion for you. For example, for fatigue, your team can focus on finding and treating possible causes, such as anemia and depression. For loss of appetite, your doctor can prescribe a variety of measures, such as the drug *megestrol,* a synthetic version of the hormone progesterone. It increases weight gain by increasing appetite for women with certain types of cancer.

Managing the pain of a terminal illness

As death draws near, the standard of treatment for pain control is the use of opioids, sometimes along with other analgesics. (See Chapter 14 for information on these drugs.) In addition to managing pain, opioids can help with anxiety and breathlessness, common problems at the end of life. If the individual can't take medication by mouth, drugs can be delivered in the cheek or under the tongue *(sublingually).* In addition, skin patches or rectal suppositories are sometimes easier for patients to use at home. Other options, such as intravenous medication, can cause more discomfort for the individual and usually can't be done at home.

There is good news, however. Some newer delivery systems for drugs are now available, which can provide pain relief at the end of life with little or no drowsiness or hallucinations. (These procedures are mouthfuls and are called tunneled epidural catheters with continuous external infusion pumps and implanted internal intrathecal infusion pumps.) In addition, in some cases painful nerves can now be removed.

A major tradeoff with taking opioids is that, at the levels necessary to control severe pain, they can cause drowsiness, hallucinations, and other unpleasant symptoms.

End of life is a time when your wishes (or the wishes of your loved one) are extremely important, and you have hopefully conveyed them to the person who'll act in your behalf if you can't speak for yourself. The question to answer and convey to your health-care agent is whether you would rather have the pain than the side effects of the drug.

Lamenting loss of control

If your loved one has chronic pain and is approaching the end of life, loss of control is likely to be one of his most frustrating concerns. As a terminal illness advances and pain takes over, the individual loses more and more control. For most, this loss of control is a dreaded aspect of the end of life. In fact, many people fear the loss of independence more than death itself.

For example, you may need help with all your private needs, such as toileting, or you may need to be fed by hand. Many people become depressed and grouchy at this point. It's important for the patient to retain any kind of control still possible. If you're caring for someone in this situation, try to find things that he can still control. For example, let him decide what food to eat and what time of day to eat it, or give him a choice of TV shows to watch. Or arrange for him to administer his own dosages of painkiller when he wants it through PCA. (See Chapter 14 for information on PCAs.) These decisions may seem like little things to you, but they can help raise the spirits of the person who is dying.

Comparing hospice and palliative care

Many people confuse hospice and palliative care. Here is a comparison chart:

Issue	Palliative	Hospice
Several months or less to live	No	Yes
Pain control is very important	Yes	Yes
Compatible with treatment to cure, such as chemotherapy	Yes	No

Looking at Hospice Care

Most people want to stay home until they die, and, most of all, they don't want to be in a hospital or nursing home. However, sometimes there's no choice because the individual needs care — such as being hooked up to a heart monitor or infusion equipment — that can't be provided at home.

Understanding what hospice care is

Many people with terminal illnesses choose hospice care. In fact, the National Hospice and Palliative Care Organization estimates that approximately 36 percent of all deaths in the United States are under the care of a hospice program. Patients make this choice at the point when a cure is no longer possible for their condition. Hospice care provides palliative care along with other services to make the dying process as comfortable as possible. This type of care stresses peace, comfort, and dignity for the patient.

Hospice care recognizes death as the final stage of life, and the typical hospice patient has a life expectancy of only a couple of months. The care may be provided at home or at a facility specifically planned and organized to care for people at the end of life.

Most hospice programs require a doctor to verify that a patient's probability of survival is less than six months, a requirement for eligibility to receive Medicare or other insurance coverage.

You have two options when it comes to hospice care:

Types of care often needed at the end of life

The types of care needed to control total pain often include the following services. In addition, in most geographic areas, hospice-care programs provide or coordinate many of these services:

- Physician services, including pain management and other comfort care
- Nursing care
- Physical therapists
- Home medical equipment, such as hospital beds and oxygen
- Grief and related counseling for yourself and your loved ones
- Spiritual support
- Social services and support
- Personal care, such as assistance with bathing and toileting
- Assistance with errands, meals, housecleaning, and other domestic tasks
- Respite care, which fills in for caregivers so that they can take breaks

- **Home hospice care:** Most dying patients want to remain at home as long as they possibly can. Home hospice typically provides items to make this possible, such as medications, ventilators, walkers, and other durable medical equipment. In addition, nursing visits, home health-care visits, volunteer support, chaplain services, social workers, and so on allow the patient to receive care at home. A lot of the time, the family provides most of the care to the individual.
- **Hospice care in a hospital, nursing home, or other facility:** Some people with terminal illnesses require more care than can be provided at home. When this is the case, inpatient hospices in acute-care hospitals, chronic care hospitals, or nursing homes are an option. These programs try to provide a home-like setting.

Locating a reputable hospice service

Hospice care providers can vary a great deal. Some are based in home-like buildings, some are part of hospitals, and others provide only home-health care. They may be run by religious organizations, for-profit companies, or not-for-profits. Or, they may serve only people with acquired immune deficiency syndrome (AIDS), cancer care, or another area. So how do you find the best program in your geographic area? Here are some tips to help guide you:

- Visit the Hospice and Palliative Care searchable database at `http://caringinfo.org`. Click Caring for Someone and then Find a Local Hospice to locate hospice providers nationwide.
- Ask for opinions from people who've had personal experience with specific hospices. Ask your friends, your doctor, the discharge planner at your local hospital (she'll know all the services in your area), and social workers from local agencies.
- Find out whether the hospice is certified. Medicare requires certification for payment eligibility, and in some states, so does Medicaid. State health departments certify hospices.
- Find out whether it's licensed. Licensing is also usually handled by your state health department.
- Find out whether its employees are bonded. If so, you have some protection against any potential legal problems.

Understanding Your Rights

By bioethical standards, as patients, you or a loved one have the right to choose your treatment as long as you're competent. But what if you're *not competent* — in other words, you're not capable of making a decision in your own best interests, and this fact has been established legally in court by a relative, guardian, or other interested party. In this case, a health-care agent substitutes for you to say what you would say if you could make the decision yourself. So, it is important to pick someone for this position whom you trust to respect your wishes. See the contact information for the National Hospice and Pallative Care Organization in the next section for information about picking a health care agent.

Understand that the health-care agent is not making the decision for you. She will tell others what you would value if you could make the decision. So, it is key that you let anyone who you arrange to stand in for you know exactly what your wishes are.

Following are examples of the types of questions you should discuss with your health-care agent:

- Would you want to be kept alive at all costs, even if it meant that you would have pain even more severe than the pain you have now?
- Do you want to receive ventilation if needed?
- Is it okay to perform surgery if necessary?

Resources

Many organizations provide important services to people at the end of life, as well as their loved ones. Here are three of the top national programs:

Hospice Foundation of America (HFA), 1621 Connecticut Ave. NW, Suite 300, Washington, DC 20009; phone 800-854-3402; Web site `www.hospicefoundation.org`. HFA programs assist individuals who are coping with issues of caregiving, terminal illness, and grief. Use HFA's interactive Locate a Hospice page to find hospice programs in your area.

National Hospice & Palliative Care Organization (NHPCO), 1700 Diagonal Road, Suite 625, Alexandria, VA 22314; phone 703-837-1500; Web site `http://caringinfo.org`. NHPCO represents hospice and palliative care programs and professionals in the United States. Go to the NHPCO-sponsored Web site to find information on designating health-care agents through advance directives and other legal matters relating to the end of life.

The Center to Advance Palliative Care, 1255 Fifth Ave., Suite C-2, New York, NY 10029; phone 212-201-2670; Web site `www.getpalliativecare.org/providers`. CAPC is a national organization dedicated to increasing the availability of quality palliative care services for people facing serious illness. The center sponsors the Palliative Care Directory of Hospitals to help consumers locate a hospital in their area that provides a palliative care program.

Part VI
The Part of Tens

"Maybe you need to withdraw from the clinical trial."

In this part . . .

No *For Dummies* book is complete without this irreverent part. In this part, we give you ten ways to detect bogus cures. We also cover ten things to remember about chronic pain and sexuality and ten important sources of help for pain. Finally, we remind you of ten things you should avoid doing when you have chronic pain.

Chapter 26

Ten Ways to Detect Bogus "Cures"

In This Chapter

- Staying away from bogus arthritis and cancer remedies
- Shunning false anti-aging promises

Have you seen ads that offer intriguing promises like "Natural Secret Cures They Want to Hide from You" or "The One Cure for All Diseases"? If so, hopefully you tuned them out. Or perhaps you bought one of these products, thinking, "Maybe it'll work," and you were disappointed. Bogus remedies for chronic pain often make major money for sellers because so many people are eager for relief. But these products often have serious consequences for the purchaser. They waste precious dollars that could have been spent on legitimate medical treatments. They may prevent people from getting the medical treatment they really need. And these so-called remedies may even be harmful to your health.

So why do so many people fall for these sales pitches? For one thing, distributors are not just selling a product. Instead, they're primarily selling *hope* to people with serious diseases and chronic pain. Who wouldn't want to take the XYZ potion and obliterate all their pain and the disease itself, forever? Sounds great! But hold on! You're being scammed.

Quack cures for chronic pain and the diseases that cause them come in the form of drugs (pills, lotions, or other forms) and nutritional supplements (including some that you can buy at health-food stores). Miracle cures may be touted on "infotainment programs" on radio and television. Sometimes they're promoted by direct mail. However, the fastest growing sales medium for these products is the Internet. Information on fake cures is also published in books available for purchase on Amazon.com and other Internet sites.

Because ads for bogus cures are everywhere, you can't steer entirely clear of them. And sometimes it's tough to figure out when a remedy may be legitimate. In this chapter, we provide you ten important points to help you identify and avoid bogus cures. Hopefully, they'll prevent *you* from being victimized.

Many bogus cures use the *placebo effect,* in which drugs with no active ingredients seem to be effective, to make victims (you, your family, your friends) feel that they're getting better, when the truth is that many people feel better just because they're taking a pill or potion —regardless of what is in it. The fact is that this type of relief does not last.

Avoid Products Promising to Halt Aging

Remedies that claim to stop aging play on fears of growing old as well as the worry that current pain problems may worsen with aging You may think, "I hurt now, but what about in five years? How will I be able to stand it? Maybe taking an anti-aging miracle cure now is just the ticket." Sorry, but no, it's not!

"Anti-aging" medicine is a multibillion dollar industry in the United States today, so a lot of people are buying into staving off aging. However, *no* treatments have proven to slow the aging process. Consequently, no treatments can stop chronic pain by slowing down aging.

Here's a checklist from the World Health Organization of anti-aging potions to avoid:

- **Injections of human growth hormone (HGH):** Some dietary supplements are known as *HGH-releasers,* which purportedly stimulate the body's production of the hormone. HGH-releasers, which can cost $15,000 a year, are marketed as a cheaper alternative to shots. But no valid evidence supports that any type of HGH supplementation offers life-extension benefits.
- **DHEA:** DHEA breaks down into estrogen and testosterone in the body. Found in anti-aging dietary supplements that supposedly improve libido, strength, energy, muscles, and immunity to disease, DHEA also supposedly decreases fat. What a wonder drug! Feeling strong, energetic, muscular, sexy, healthy, younger, *and* thinner sounds pretty great. Too bad it isn't for real. No evidence supports DHEA as an anti-aging hormone.
- **Melatonin:** Often included in anti-aging supplements, melatonin may help you get to sleep if you have insomnia, but it won't slow down the aging process.

Stay Away from Products Promising to Cure Arthritis Overnight

Unproven arthritis remedies are easy to fall for because many symptoms come and go. Maybe today was a good day, and you attribute it to the anti-arthritis supplement that you took yesterday (or the copper bracelet you wore), when the truth is that it was really just a good arthritis day. Maybe the weather was nice, and your arthritis calmed down. Or something else helped you feel better. But your good arthritis day had nothing to do with the pill or the bracelet.

At present, no cures exist for any of the 100-plus forms of arthritis. We really, really wish there were. The authors of this book are a rheumatologist who treats many people in severe pain (Dr. Kassan), a pain researcher and avid golfer with arthritis in his wrists (Dr. Vierck), and a medical writer with arthritis throughout her body (Elizabeth Vierck). We'd love for those phony ads to be true! But they're just not.

Shun Amazing Cancer Cures

Quacks prey on people's fear of cancer. Their ads say things like "This Cancer Cure Really Works." They claim all you have to do is take their pills or potions or follow a special (and often very complicated) diet, and you'll be free of cancer and the pain that goes with it. Or they push special facilities, making such statements as "Visit our clinic in Mexico, and in two weeks you'll be cancer free."

When these cure-alls fail for desperate consumers, the hucksters then claim it was because of damage done by previous "conventional" therapy. Or it's that the consumer didn't follow their regimen to the letter. In other words, you did it wrong, and it's your fault that it didn't work. Don't believe any of this rubbish!

Laetrile is a famous example of a bogus cancer cure. Not only has it been found to *not* cure cancer, but it's also poisonous in high dosages. The sad truth is that by using unproven methods such as laetrile, people with cancer may lose valuable time when they could be receiving effective treatment and often ridding themselves of cancer.

Suspect Common Sales Tactics

Health quacks often use similar techniques proven to sell their bogus products. Stay away from products with the following claims:

- **Our product cures everything.** The distributor may claim that the product cures arthritis, cancer, stomach ulcers, and depression. About a hundred years ago, people bought potions that purported to cure everything, like Mrs. Winslow's Soothing Syrup (containing morphine), because there were few reliable drugs available at the time and almost no government oversight. Those cure-all potions were dangerous. They didn't cure disease then, and the current crop of "amazing" drugs still doesn't work now. Stick with mainstream medicine.
- **The product cures diseases not yet understood by medical science, such as fibromyalgia and other forms of arthritis.** The reality is that these medical problems have no known cures. Yet medically documented treatments really help. These treatments, discussed throughout this book, are the ones you should be using.
- **Promoters say they're valiant souls persecuted by evil people who want to prevent them from telling you the truth.** They may claim that universities or pharmaceutical companies seek to suppress their treatment out of professional jealousy or fear of losing profits. These promoters don't have credible scientists and medical professionals to back them up, so they invent conspiracy theories instead. Don't believe them. There *are* some bad guys out there, and they're the promoters of fake remedies.
- **Sales people give testimonials and no scientific proof.** When no studies support the use of a product, scam artists often revert to the use of testimonials that can't be verified for accuracy or effect. Usually, these testimonials are nothing more than an infomercial and don't give any useful scientific information. Typically, the claims range from vague descriptions of feeling better to miraculous transformations.

Be Aware of Safety Concerns of Supplements

Dietary supplements are regulated very little by the government compared to the scrutiny given to over-the-counter or prescribed medications, yet taking supplements can be akin to taking drugs — or worse.

Once in your system, many supplements interact with other medications and supplements and may cause serious harm. For example, the popular supplement St. John's Wort can be dangerous when taken with a number of commonly prescribed drugs. According to the National Center on Complementary and Alternative Medicine, part of the National Institutes of Health, some drugs that St. John's Wort may interact with include

- **Birth control pills:** St. John's Wort may cause breakthrough bleeding.
- **Antidepressants:** When combined with some antidepressants, St. John's wort may increase nausea, anxiety, headache, and confusion.
- **Warfarin and related anti-clotting drugs (anticoagulants):** When combined with St. John's Wort, warfarin is less effective.

To ensure the safe use of any health-care product, read labels and package inserts, follow product directions, and check with your physician about substances you're considering taking. In addition, make sure that no warnings have been issued about the product. The following Web sites list supplements that are questionable or have been found to have adverse effects. Check these sites out before you buy!

- Federal Trade Commission: `www.ftc.gov/bcp/menus/consumer/health/drugs.shtm`
- Food and Drug Administration: `www.cfsan.fda.gov/~dms/supplmnt.html`
- Arthritis Foundation: `www.arthritis.org/conditions/supplementguide`

Check Out Health Claims Before Sampling

To check a product out, follow these tips:

- If it's an unproven or little-known treatment, always ask a doctor, pharmacist, or other medical specialist if the product is safe.
- Talk to others. Be wary of treatments offered by people telling you to avoid talking to others because "It's a secret treatment or cure."
- Check with the Better Business Bureau or local attorneys generals' offices to see whether other consumers have lodged complaints about the product or the product's marketer.

- Contact appropriate health professional groups, such as the American Cancer Society and the Arthritis Foundation. Many groups have local chapters that provide various resource materials about your disease.
- Check with the FDA. It's part of the FDA's job to see that medicines and medical devices are safe and effective. For more information, call toll-free, 1-888-INFO-FDA (1-888-463-6332), or visit `www.fda.gov`.

Avoid Impulse Buying!

Never decide "on the spot" to try an untested product or treatment. Ask for more information and then consult a knowledgeable doctor, pharmacist, or other health-care professional. Promoters of legitimate health-care products don't object to your seeking additional information.

To learn whether the FDA or the FTC has taken action against the promoter of a product, visit `www.fda.gov/oc/enforcement.html` or `www.ftc.gov`. You can also check out `www.cfsan.fda.gov/~dms/ds-warn.html` for a list of dietary supplement ingredients for which the FDA has issued warnings.

Be Wary of "Cures" Sold on the Web

It's easy to run into ads for unproven remedies when surfing on the Web. We recently did an Internet search using the keyword "chronic pain," which turned up a front-page ad for a supplement that claimed to take away pain, elevate your mood, and cut your food cravings. Hey, sounds great! But such claims are unsubstantiated.

When searching on the Web, try using directory sites of respected organizations, rather than doing blind searches with a search engine. Also ask yourself the following questions:

- **Who sponsors the site?** Is the site run by the government, a university, or a reputable medical or health-related association? Is the information written or reviewed by experts in the field, academia, the government, or the medical community? If not, then claims provided on this site are suspect.
- **What is the purpose of the site?** Is the purpose of the site to educate the public objectively or just to sell a product? The intent may be hard to determine sometimes, but see how many places the Web page has where you can click to buy the product. The more places and the easier it is to purchase something, the less likely the site is objective.

- **What is the source of the information, and does it have any references?** Have any studies supporting the "cure" been reviewed by recognized scientific experts and published in reputable peer-reviewed scientific journals, such as *The New England Journal of Medicine?* Can you find the study in the National Library of Medicine's database of literature citations at `www.ncbi.nlm.nih.gov/PubMed`? If you can't find any legitimate studies, stay away from this so-called cure.
- **How reliable are Internet or e-mail solicitations?** While the Internet can be a rich source of reliable health information, it's also an easy vehicle for spreading myths, hoaxes, and rumors about alleged news, studies, products, or findings. To avoid falling for such hoaxes, be skeptical and watch out for overly emphatic language with ALL UPPERCASE LETTERS and lots of exclamation points!!!! Also, beware of such phrases, such as "This is not a hoax" or "Send this to everyone you know." Don't do it! Instead, move on.

Watch Out for Celebrity Promotions

Tommy Terrific, the famous hockey star, and Sandy Glamorous of television fame are promoting a brand new product that they swear will eradicate your pain. They emphatically repeat on TV that this product is an absolute must for you! It'll ease your chronic pain, and you won't have to take dangerous drugs like narcotics. Instead, call right now and order their amazing just-discovered cure from the jungles of Peru. You reach for the phone because you're confident that Tommy or Sandy wouldn't lie to you. They're so sincere! Well, maybe they aren't lying — sometimes celebrities actually believe in the product. That *still* doesn't make it okay for you. Ask your doctor first.

Always Report If Anything Goes Wrong!

If you have a negative reaction to any unproven remedy, be sure to report it to the federal government. Your action could prevent other people from having the same bad reaction. So be a good guy and help others. Call the Food and Drug Administration at 1-800-FDA-1088. You can also fax the FDA at 1-800-FDA-0178 or report online at `www.fda.gov/medwatch/how.htm`.

Chapter 27

Ten Things to Remember about Pain and Sexuality

In This Chapter

- Addressing your fears
- Checking your medications
- Talking to your partner

Maybe you're starting to feel some of that special spark once again, and your partner is hinting about some action, too. But darn it, you're just in too much pain for sex right now. Or maybe *you* are the one desiring intimacy, but you're worried that your partner is in too much pain, and you're afraid to initiate anything sexual. So you hold off.

Chronic pain, and some of the medications that treat it, can curb sexual enjoyment for both you and your partner. But sexual intimacy is an important part of a healthy relationship and quality of life for the individuals involved. So don't give up on sex! Read this chapter for helpful hints on re-igniting your relationship despite your pain problem.

In this chapter, you find ten things to keep in mind in order to ignite a healthy and pleasing sex life.

Address Your Fears

If you have chronic pain, you may have some fears about sexual relations. You're not alone. Many people with chronic pain develop these issues. Here are three top concerns and what you can do about them:

- **Fear of rejection:** It's common to worry that chronic pain makes you less sexy. For example, maybe you're less active now during sex than before your pain condition struck. You may think that your partner will be "bored" with the lower level of activity that you need in order to avoid pain. If so, talk about this fear together. Focus on new and creative ways that don't hurt so that you can enjoy sex together.
- **Fear of pain:** You don't want to hurt, and your partner doesn't want to hurt you either. (Yelling "ouch" during a heated moment can be a major letdown for both of you.) Make sure that you've taken your pain medication before launching any sexual activity. Regular exercise and relaxation exercises may also help reduce your anxiety about pain. In addition, many people find that it also helps to try different ways to satisfy their partner. Try experimenting with sexual positions that can cause less pain. Also, don't forget lubricants!
- **Fear of failure:** If you're having trouble becoming aroused or achieving an orgasm, consult your doctor. Several medications that may help are available for men and women that your physician can prescribe.

Figure Out What to Do about Specific Problems

Chronic pain can cause problems that ultimately affect your sexuality, such as a lack of sleep, stiffness, and difficulty moving around.

Make a list of problems that may affect your desire and ability for sex and then strategize on what to do about them. Strategize with your partner, if you have one. (More about that in the upcoming "Talk to Your Partner" section.)

A great resource for identifying problems that may be hampering your desire for sex is the Sexual Health page on MedlinePlus at `http://medlineplus.gov`.

Check Your Medications

Make sure that none of the drugs you're taking are causing sexual problems. For example, narcotics frequently lower the hormone testosterone's levels to the point that the following side effects exist: lack of interest in sex, inability to achieve erection or orgasm, clinical depression, and a general lack of energy. (These side effects are often alarming to the male chronic pain

patient, and if you or your partner feel this way, it's important to mention them to your doctor. A simple blood test may demonstrate low testosterone levels that can be treated effectively with a testosterone patch, skin gel, or injections.)

Other medicines can also cause arousal problems, including the following:

- Some pain medications
- Blood pressure medicines
- Antihistamines
- Antidepressants
- Tranquilizers
- Appetite suppressants
- Diabetes drugs
- Some ulcer drugs, such as ranitidine

Some of these drugs may lead to impotence or make it hard for men to ejaculate, while others can reduce a woman's sexual desire.

If you're taking any of these categories of drugs and experiencing sexual problems, consider asking your doctor to prescribe a different drug without this side effect or to lower your dosage.

Pay Attention to Your Emotions

How you feel may affect what you're able to do sexually. Are you depressed because of chronic pain? Are you angry? Frustrated? Do you have a "Why me?" attitude toward your pain? All these emotions and attitudes can affect your sexuality.

Living with chronic pain often requires making adjustments to daily life. Many people find it useful to talk these issues out with a good therapist.

Don't blame yourself for sexual difficulties you and your partner are having. It takes two to have fun with sex, and it also takes two to fix it when it isn't fun anymore.

Rest can greatly help your emotional state. Take a nap before having sex so that you won't wear out when you least want to.

Talk to Your Partner

Sex can be difficult to talk about, even with someone you've been intimate with for a long time. Counselors suggest that you talk about sex when you're fully clothed and in a neutral setting. Of course, you should probably avoid having this discussion in a crowded public place. People nearby may find your discussion far too fascinating not to eavesdrop!

This discussion is the time for both of you to talk about your fears and desires. During your conversation about sex, begin sentences with "I," not "you." For example, saying "I feel loved and cared about when you hold me close" is much better than "You never touch me anymore!"

You may think that your partner has stopped touching you because of a lack of interest, or that you're no longer desirable. Instead, your partner's main concern may be fear of causing you more physical pain. Only when you talk it out can you find out what's going on with each other.

Let Go of Stereotypes about Sex

Many people have stereotypical ideas about sex, and these ideas can impede their sexual happiness. Here's the thing: The only rules about sex that everyone should follow are

- No one should get hurt, physically or emotionally.
- Sexual activity should be between consenting adults.

Another common and mistaken assumption is that sex should always be spontaneous. But spontaneity can be difficult when you have chronic pain. It's okay (really!) to plan your sexual activities together, whether it's best for you on Friday night after dinner when your pain is often at its lowest level or during an "afternoon delight" when you're both home.

Lots of people also think that certain things must happen during sex. For example, they think that it isn't real sex if no orgasm occurs. But that isn't true either. You can have intimate times together in many ways that are not mind-blowingly sexual, but that still feel great and make you and your partner happy.

Try new ideas and new positions that may be more amenable to a body in pain. For example, maybe the missionary position hurts you, so try having sex side-to-side or in another position. Be creative.

Get Help from the Experts

Sexuality experts can assist with sexual problems that result from chronic pain and also help you come up with ideas for sexual enjoyment. Obviously, you'll want a therapist sensitive to you and your partner's needs, so check out the resources listed in the "Educate Yourself about Sex" section, later in this chapter.

In addition, Widener University in Chester, Pennsylvania (`www.widener.edu`), and Hofstra University in Hempstead, New York (`www.hofstra.edu`), both have graduate programs in sex therapy. You may want to check with them to locate therapists who graduated from their programs.

Make Dates If You Sleep Separately

Chronic pain may mean that you and your partner sleep in separate beds or even in different rooms. The lack of proximity can create distance in your lovemaking activities, particularly if you're both on different schedules. But separate sleeping spaces don't mean that you can't get together often.

Make dates to meet in a comfortable place in the house when you know you'll be well-rested. Visit each other often in each other's bed, even if you're just relaxing and not doing anything sexual. These rendezvous will benefit your sex life if you make a habit of being close to each other often, even if you sleep separately.

Become Physically Fit and Work at Being Attractive

Keep a positive attitude about yourself. Being a positive person is attractive to others, while being too negative is a turnoff.

Also, looking attractive can help create a sexual spark — for you, because you feel good about yourself, and for your partner, because you look great. Sometimes people with chronic pain don't have the energy and strength to keep up their appearance. But making a special effort can pay off. It's easy to gain weight and get out of shape due to inactivity (especially when you feel that it hurts too much to exercise). But maintaining a healthy weight can greatly improve your appearance and desirability. Check out Chapters 18 and 19 to find out more about nutrition and exercise for people with chronic pain.

Educate Yourself about Sex

This tip is actually number 11, so you get a bonus! You should really check out the following terrific resources for information on sexuality.

Web sites:

- **Women's Health.gov:** This government agency provides lots of information on women's health topics, including sexuality.

  `http://4women.gov`

- **Drs. Laura and Jennifer Berman:** These well-known, sister sex therapists offer candid advice on improving your sex life, sexual health, and your relationship.

  `www.DrLauraBerman.com`

  `www.bermansexualhealth.com`

Books:

- ***Sex For Dummies*** **(Wiley), by Dr. Ruth K. Westheimer and Pierre A. Lehu:** This friendly, authoritative guide is by renowned sex therapist Dr. Ruth. Among other things, she debunks sex myths and covers new therapies to manage low libido, overcome sexual dysfunction, and enhance pleasure. Read it with your partner!
- ***The Power of Two: Secrets of a Strong & Loving Marriage*** **(New Harbinger Publications), by Susan, Ph.D. Heitler (Author), Paula Singer (Photographer):** This excellent book on marital relationships can help you have a positive conversation about sex with your partner.

Organizations:

- **American Association of Sexuality Educators Counselors & Therapists** (AASECT), P.O. Box 1960, Ashland, VA 23005-1960; phone 804-752-0026; Web site `www.aasect.org`. In addition to sexuality educators, sex counselors, and sex therapists, AASECT members include physicians, nurses, social workers, psychologists, allied health professionals, clergy members, lawyers, sociologists, marriage and family counselors, and therapists. The association has resources, including books, articles, and fact sheets, available for consumers.
- **American Association for Marriage and Family Therapy (AAMFT),** 112 S. Alfred St., Alexandria, VA 22314; phone 703-838-9808; Web site: `www.aamft.org`. The American Association for Marriage and Family Therapy is the association of marriage and family therapists in the United States and abroad. AAMFT members are mental-health professionals who treat and diagnose mental and emotional disorders and other arrays of problems, including sexuality issues.

Chapter 28

Ten or So Web Sources for People with Chronic Pain

In This Chapter

- Finding support groups
- Locating pain doctors and medical pain centers

Many free resources are available on the Web for people with chronic pain. This chapter describes organizational Web sites that can help you find out more about chronic pain. This information is organized into categories so that you can easily locate the help you need.

Keep in mind two important warnings on health information that's available on the Web:

- Although many reliable resources are on the Internet, including those we list in this chapter, sadly, far too many sites offer only incorrect and/or outdated information, and many are downright hoaxes designed to sell empty promises. Make sure that you gather information only from reliable resources. Two good sites for checking out possible hoaxes are `www.quackwatch.org` and `http://hoaxbusters.ciac.org`.
- Don't forget that the information you obtain from any Web site is no substitute for a checkup and advice from an appropriate medical professional. If you have chronic pain and haven't told your doctor about it or found a doctor who can help you, please do it now.

Finding Information

Several helpful organizations offer you general information on chronic pain and the health conditions that cause it:

The American Pain Foundation (APF); phone 1-888-615-PAIN (7246); Web site www.painfoundation.org. The foundation's comprehensive Pain Information Library includes information on a broad array of topics of interest to people with ongoing pain, such as what kind of work you can continue to do if you qualify for Social Security disability payments, as well as background information on many diseases that cause chronic pain. The Web site also provides information on pain relief studies and therapies.

Danemiller Foundation; Web site www.pain.com. This Web site hosts not only substantial information for patients but also has a forum in which experts in pain medicine are available to answer questions posed to them.

The Mayo Clinic; Web site www.mayoclinic.com. The Mayo Clinic is a reliable and comprehensive source of a wide range of health information. You can look up diseases and conditions alphabetically and find background information and updates on research.

MedlinePlus; Web site http://medlineplus.gov. MedlinePlus brings together authoritative information from the National Library of Medicine, NIH, and other government agencies and health-related organizations. The Web site includes preformulated searches, which provide you with easy access to abstracts (summaries) of many medical journal articles. MedlinePlus also has extensive information about drugs, an illustrated medical encyclopedia, interactive patient tutorials, and the latest health news. This site is a great resource! Use it.

Finding Support Groups

Many people find valuable information, as well as understanding, by joining support groups whose members share their condition. Often, such groups are available locally, and their meeting times are listed in your local newspaper. If you can't find the information you need, call the reference librarian at your local library.

American Chronic Pain Association (ACPA); phone 1-800-533-3231; Web site www.theacpa.org. In 1980, after years of living with chronic pain, Penney Cowan placed a notice in her church bulletin, and she quickly found others living with chronic pain. As a result of Cowan's work, the first ACPA support group was born. Several hundred ACPA support groups now meet across the United States and Canada, as well as other countries. ACPA's Web site has a searchable database that enables you to find support groups in your area. You can then call its toll-free number for contact information or e-mail the organization at ACPA@pacbell.net.

Finding Doctors Who Specialize in Pain Management

When you have chronic pain, you need a caring and knowledgeable doctor. Maybe you already have one, and if so, she's a keeper! But if you need to locate a new doctor, consider online resources as one means for locating and/or screening the best physician for you.

American Academy of Pain Medicine (AAPM); Web site `www.aapainmanage.org`. AAPM provides credentialing to physicians, accreditation of pain centers, and other resources for medical professionals who treat people in pain. The academy has more than 6,000 members. Its Web site has a searchable database where you can find pain professionals and/or pain centers located near you.

American Board of Pain Medicine (ABPM); Web site `http://www.abpm.org`. The ABPM tests and certifies physicians in the field of pain medicine. Its Web site offers a searchable database of its qualified members (called *diplomates*). You can search for diplomates in your area and by specialty, such as anesthesiology or rheumatology.

International Spine Intervention Society; Web site `www.spinalinjection.com`. A physician organization in pain medicine dedicated to implementing guidelines for physicians practicing interventional pain.

Locating Medical Centers Specializing in Pain Management

Some medical centers concentrate on treating chronic pain only, and their services may be just what you need to get on the path to feeling better.

The American Pain Society; Web site `www.ampainsoc.org`. The society has a searchable database of pain treatment centers, which you can identify by location, services, classification, and setting (such as home or hospital-based).

Resources Outside the United States

Maybe the information you need isn't readily available in the United States, but you can access it online at a site in another country, such as Canada or England.

The Canadian Pain Society; Web site www.canadianpainsociety.ca. The Canadian Pain Society provides a bilingual Web site (English and French) offering free journal articles and a newsletter pertaining to pain and pain control, as well as links to Canadian resources.

The International Association for the Study of Pain (IASP); Web site www.iasp-pain.org. IASP's members include scientists, physicians, psychologists, dentists, nurses, and physical therapists dedicated to furthering research on, and improving the care of, patients with pain. The association's Web site provides free medical newsletters and clinical updates and resource listings by country.

Advocacy

You may be looking for an organization whose leadership and members understand the tough fight you and others must face to obtain relief from your chronic pain and who have some ability to get things done within local, state, and federal governments. If so, advocacy may be the answer for you. Consider the following Web sites.

Partners Against Pain; Web site www.partnersagainstpain.com. This alliance of patients, caregivers, and health-care providers works to advance standards of pain care through education and advocacy.

The American Pain Society; Web site www.ampainsoc.org. This go-to organization covers what's happening in the area of advocacy about chronic pain issues. The society has a three-part agenda guiding its national advocacy efforts. It focuses on enhancing funding from the National Institutes of Health for pain research, removing barriers to effective clinical pain management, and providing evidence and analysis to further the understanding of controversies surrounding opioid use and abuse.

Chapter 29

Ten Things to Avoid When You Have Chronic Pain

In This Chapter

- Knowing what not to do when you have chronic pain
- Discovering your rights as a health-care consumer

Most of this book tells you what you should do to better deal with your chronic pain. This chapter takes an entirely different approach, advising you about what not to do when you have chronic pain.

Don't Stop Caring for the Condition Causing Your Pain

Whether you have diabetes, arthritis, or one of the many other causes of relentless pain, it's important to work on controlling that medical condition as best you can. Sure, it can be an endless drag, with doctors' appointments, medications, physical therapy, exercise, proper nutrition, and so on filling your entire day. Enough already! Maybe you'd rather just collapse in a comfy chair in front of the tube and watch your favorite soap to find out whether Lois Loveless' eighth husband really was cheating on her while she had amnesia.

Forget about Lois and put yourself first instead. Once you get the hang of making these activities a regular part of your routine, you'll feel much better. And, *if* you still have pain, it will be much more manageable for you.

Don't Be a Couch Potato

A common cause of chronic pain is *deconditioning,* or getting badly out of shape, which can lead to more pain than whatever condition started this whole mess you're in to begin with. You need to know that deconditioning is often caused by couch potato-ism.

When you lie about watching TV or bemoaning your chronic pain (or both), your muscles lose their strength and endurance, your joints stiffen, your posture collapses, and you also lose cardiovascular strength — not good! (See Chapters 3 and 19 for lots of tips on avoiding deconditioning.) Take a walk, ride your bike, and do whatever you can (with your doctor's approval) to get moving again.

If You're Overweight, Lose Those Pounds

Are you a chocoholic? Is your secret passion gummy bears? Indulging every once and awhile is usually okay, but eating healthy food (see Chapter 18) and exercising (see Chapter 19) are both true essentials to maintaining a healthy weight, avoiding deconditioning (see preceding section), and controlling pain. As a general rule, do your best to maintain a healthy weight.

A great resource for discovering a healthy weight for you (and getting there) is *Dieting For Dummies* (Wiley) by Jane Kirby, RD, and the American Dietetic Association.

Avoid Pain Triggers

Hopefully, you've used a pain diary to figure out what triggers your pain. (See Chapter 17 for information on keeping pain diaries.) It's easy to think, "Oh, I feel so much better now, so I'm sure it's okay if I eat that extra piece of cake, play on the Internet for hours on end without a break, or stay up really late tonight." Then, wham! Irritable bowel syndrome kicks in, or the arthritis in your neck starts hurting from leaning over the keyboard, or maybe a massive migraine strikes. So, in advance, say no to pain triggers!

Don't Let Stress Pile on to Your Pain

Stress is the result of how you react to your world, and heightened stress equals heightened pain. Life is often stressful, but you can learn to relax. For example, adopt healthy breathing techniques. (When people are under stress, they tend to breathe shallowly.)

Or memorize a funny poem and recite it in your mind whenever you feel stress coming on (or you feel like honking madly at the slow driver in front of you, causing you to have a stress attack because you're late to your daughter's piano recital.) Singing or humming a rhyme is even better than reciting it. Try something along these lines:

Little Miss Muffet sat on a tuffet
Eating a Big Mac and fries
Along came a spider and sat down beside her
"Yuck," it said, "I prefer flies"

Many other good techniques are available to reduce stress, such as distraction and expressive writing. You can read about these techniques in Chapter 22.

Don't Neglect Your Sleep

Chronic pain is exhausting. If you don't usually get adequate sleep, you're not alone. The majority of people who wake up too early because of chronic pain are unable to fall back to sleep. In this case, don't go with the majority! You need to get enough Zzzzzs.

The first rule for getting adequate sleep is to maintain a regular time to go to bed and to wake up at the same time every morning, including on weekends. For other techniques, see Chapter 20.

Don't Let Depression Persist

Chronic pain can be depressing. The first step toward beating depression is to accept that you or your loved one needs help and then go find that help. (See Chapter 3 for a list of the signs and symptoms of depression.) The good news is that depression is highly treatable, and Chapter 22 helps you manage your pain with lifestyle changes.

In addition, here's another great resource:

National Mental Health Information Center; phone 1-800-789-2647; Web site `http://mentalhealth.samhsa.gov`. The center provides information about mental health via a toll-free telephone number, a Web site, and more than 600 publications that you can request online.

Don't Ignore New Pain Problems

You may be so used to your chronic pain condition that if a new type of pain pops up, you automatically think, "Oh, it's just another symptom of the same old thing." But just because you often get migraines doesn't mean you're immune from getting a brain aneurysm, which is a true emergency. Or, just because you have central pain syndrome doesn't mean that you can't develop peripheral neuropathy. Again, this situation is when your pain diary can come in handy. (See Chapter 17 for information on pain diaries.) If you're suddenly tracking new types of pain — particularly if the pain is severe — be sure to see your doctor.

Don't Forget Your Rights as a Health Consumer

You're the only one who knows how you feel, and you have to live with the results of your medical treatment. However, you may not know about your rights as a medical consumer. The President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry adopted a list of consumer rights and responsibilities in 1998. Many health plans (hopefully yours) have adopted these principles, which are good to keep in mind.

Here are six key consumer rights that are important to the medical management of your pain:

- **Information disclosure:** The right to receive accurate, easily understood information to make an informed health-care decision.
- **Choice of providers and plans:** The right to a choice of health-care providers that's sufficient to ensure your access to appropriate high-quality healthcare.

- **Access to emergency services:** The right to access emergency health-care services if the need arises.
- **Participation in treatment decisions:** The right to fully participate in all decisions related to your healthcare. If you're unable to fully participate in treatment decisions, you have the right to be represented by a spouse, parents, guardians, adult children, or someone else.
- **Respect and nondiscrimination:** The right to considerate, respectful care from all members of the health-care system at all times and under all circumstances.
- **Confidentiality of health information:** The right to communicate with health-care providers in confidence and have the confidentiality of your individually identifiable health-care information protected. You also have the right to review and copy your medical records and request any needed amendments.

Don't Complain Too Much

Yes, maybe you're in your third year of constant pain, and that's a drag. And okay, maybe your spouse, kids, and colleagues were sympathetic for the first few months. But now you think, "No one pays attention to me any more!" Well, maybe you talk a little too much (or a lot) about your chronic pain.

The hard truth is, people get tired of hearing the same old complaints, even if they're very real. Here's a good general rule: When talking to other people, unless you're in the middle of a medical emergency, keep the conversation off your pain and the condition causing it. Concentrate instead on the other person or talk about something positive in your life. (Come on, you can think of something!) Keep it up for a month or so, and this behavior will become a new good habit.

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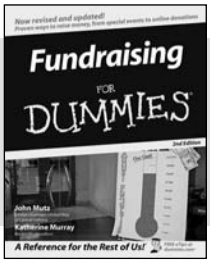

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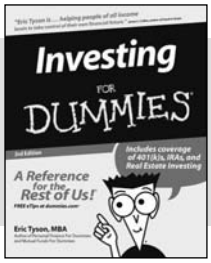

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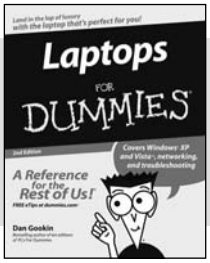

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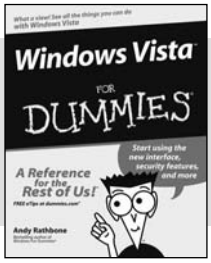

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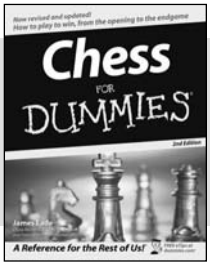

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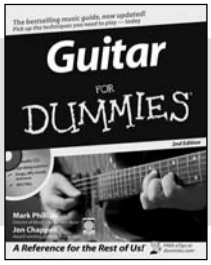

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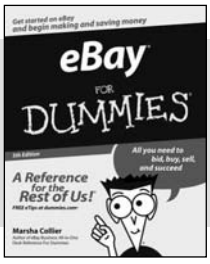

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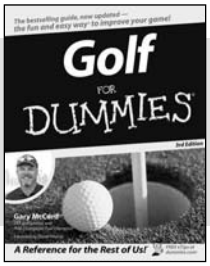

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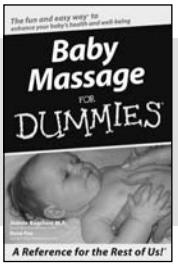

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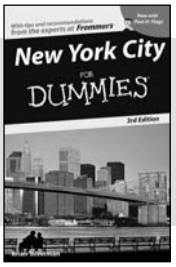

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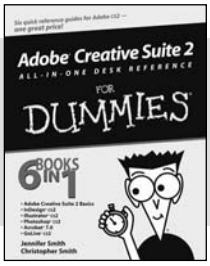

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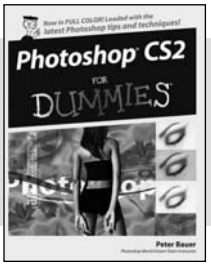

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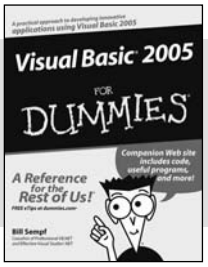

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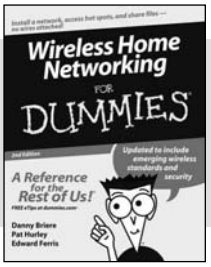

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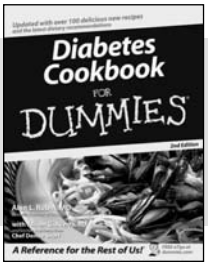

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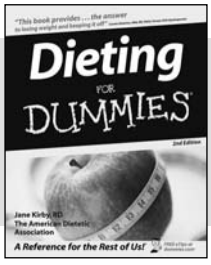

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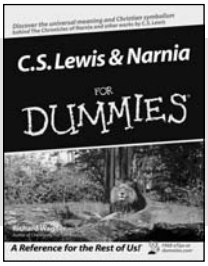

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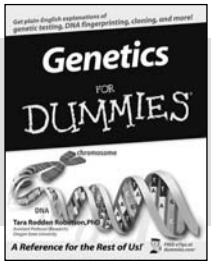

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