

**DEFINITION OF ANATOMY**

- Anatomy is the study of the structure of the body. For example, where is the heart situated and what is its shape and weight?

**DEFINITION OF PHYSIOLOGY**

- Physiology is the study of the functions of that structure. For example what is the purpose of the heart?

In our studies for the examination, we refer to eight systems of the body, although there are in fact many other systems that need not concern us. These systems are so divided to make it easier to study the working of the body as a whole.

Our Eight systems are as follows:

**THE FOUR MAJOR SYSTEMS.**

(so called because they are the systems which can be most easily affected by the practice of the Physical Therapist.)

1. **Skeletal System.**
2. **Muscular System.**
3. **Neurological or Nervous System.**
4. **Vascular or Circulatory System. (Inc. the Lymphatic System).**

**THE FOUR MINOR SYSTEMS.**

1. **The Digestive System.**
2. **The Respiratory System.**
3. **The Genito-Urinary System (Inc. the Reproductive and Kidney Systems).**
4. **The Endocrine System or (Ductless Glands).**

**MESSAGE MOVEMENTS AND THEIR EFFECTS:**

Learn thoroughly. These are an *abbreviated* form of the selection on the Theory of Massage see pages F1 – F5.

1. **EFFLEURAGE:** Stroking movements towards the heart to improve circulation and relax client. Causes blood to move faster. Precedes and succeeds all other movements.
2. **PÉTRISSAGE:** Muscles gripped between the fingers and thumb, lifted from the bone and squeezed, to release toxins and waste products.
3. **STROKING:** For its reflex action upon the nervous system, to soothe the client.
4. **KNEADING:** Alternate compression and relaxation of the soft tissue to improve nutrition of the treated part - perhaps with a rolling action or a waving motion.
5. **FRICTIONS:** Small circular movements performed with the tips of the fingers or similar. Its purpose is to break up the products of inflammation in order to further their absorption.
6. **TAPOTEMENT:** Including hacking, cupping, beating and pounding. Quick light blows with the hands, as instructed, to excite capillary circulation, stimulate cutaneous nerves and cause muscle contractions.
7. **VIBRATIONS:** May be soothing or stimulating. Rapid contraction and relaxation of the muscles of the forearm, either through the flat of the hand or finger tips maybe static or moving. Shaking is a form of course vibration.

**CONTRA INDICATIONS LEARN THOROUGHLY.--**

When not to employ massage therapy for medical reasons. Always refer to a medical practitioner if in any doubt.

- ◆ Any Cardiovascular Condition, Inc. thrombosis, phlebitis, angina pectoris, hypertension, hypotension, varicose veins. (If you are unsure refer to your teacher for definitions of these terms).
- ◆ Over Contagious or Infectious skin diseases, varicose veins.
- ◆ Over the abdomen during pregnancy (except with medical advice).
- ◆ Over the abdomen during first two or three days of menstruation.
- ◆ Any other areas of unexplained inflammation, unrecognised lumps or bumps.
- ◆ Any condition being treated by a medical practitioner -- unless they first agree.
- ◆ Refer to your teacher for precautions to be taken regarding AIDS.
- ◆ In cases of Diabetes it is best to refer to your patients doctor.

**ANATOMY & PHYSIOLOGY --- ELEMENTARY.**

Students are required to learn the positions of the following muscles.

**BACK & SHOULDER.**

Trapezius	External Oblique
Latissimus Dorsi	Spinatus Erectus
Deltoid	The Gluteals

**CHEST.**

The Pectorals

**ABDOMEN.**

Abdominus Transversalis  
Abdominus Rectus

**NECK**

Sterno-Cleido-Mastoid

**UPPER ARM**

Biceps, Triceps  
Brachialis Anticus

**LOWER ARM**

Pronator Radii Teres  
Supinator Longus  
Flexor Carpi Radialis  
Flexor Sublimis Digitorum

**UPPER LEG**

Vastus Externus	Gracilis
Vastus Internus	Sartorius
Adductor Magnus	Biceps Femoris
Semi-Tendinosus	Semi-Membranosus ( <i>Hamstrings</i> )

**LOWER LEG.**

Gastrocnemius	Tibialis Anticus
Soleus	Tendon of Achilles

**DEFINITION OF A MUSCLE**

A muscle consists of a number of elastic fibres in bundles, which are bound together by a thick band contained in a sheath. The sheath is extended at the ends to form tendons that fasten the muscles to the bones. There are two main types of muscle, voluntary and involuntary. Voluntary are the walking, running muscles etc., and are under conscious control. Involuntary muscles are involved in movements of the heart, digestive system, breathing etc and are under control of the subconscious mind.

- ◆ An **EXTENSOR MUSCLE** extends a limb.
- ◆ A **FLEXOR** flexes a limb.
- ◆ An **ABDUCTOR** takes the muscle away from the **Median line**. (Imaginary line running through the centre of the body and making it easier to refer to anatomical parts accurately.)
- ◆ An **ADDUCTOR** bends a limb towards the **Median line**.
- ◆ A **SUPINATOR** turns a limb to face outwards.
- ◆ A **PRONATOR** turns a limb to face downwards.
- ◆ A **SPHINCTER** closes an orifice.
- ◆ A **ROTATOR** rotates a limb.

**NOTES ON SKELETAL SYSTEM.**

There are approximately 206 bones in the adult Skeletal System. The longest and strongest is the Femur and its weakest point is the neck of the Femur. The Clavicle is particularly vulnerable to injury because of its position.

<b><u>Articulation</u></b> (or joints)	Ball & Socket	femur/pelvis
	Full Hinge	femur/tibia/fibula
	Partial Hinge	humorous/radius/ulna
	Sliding	radius/ulna

<b><u>Deformations of the spine</u></b>	<b><u>Kyphosis</u></b>	Exaggerated outward curvature of the spine in the <b><u>Thoracic</u></b> region.
	<b><u>Lordosis</u></b>	Exaggerated inward curvature of the spine in the <b><u>Lumbar</u></b> region.
	<b><u>Scoliosis</u></b>	<b><u>Lateral</u></b> curvature of the spine.

**NAMES OF THE BONES (to be learned thoroughly)**

<b><u>TRUNK</u></b>	<b><u>Ribs:</u></b>	12 pairs (7 pairs are true, 5 pairs are false, of which 2 pairs are floating.)
	<b><u>Clavicle:</u></b>	Collar bone
	<b><u>Scapula:</u></b>	Shoulder blade
	<b><u>Sternum:</u></b>	Breast Bone
	<b><u>Spinal column</u></b> (total 33)	<b>7 cervical vertebrae</b> <b>12 thoracic vertebrae</b> <b>5 lumbar</b> <b>5 sacral fixed vertebrae</b> <b>4 coccygeal fixed vertebrae</b>
	<b><u>Pelvis</u></b>	Ilium, Ishium, and Pubis.

**Basic Massage Course  
Elementary Tutorial Notes**

**ARMS**

<b><u>Humerus</u></b>	Upper arm
<b><u>Radius</u></b>	Forearm
<b><u>Ulna</u></b>	Forearm
<b><u>8 carpal bones</u></b>	Wrist
<b><u>5 metacarpal bones</u></b>	Hand
<b><u>14 phalanges</u></b>	Fingers

**LEGS**

<b><u>Femur</u></b>	Thigh
<b><u>Patella</u></b>	Kneecap
<b><u>Tibia</u></b>	Shin bone
<b><u>Fibula</u></b>	Brooch bone
<b><u>7 Tarsal bones</u></b>	Ankle
<b><u>5 Metatarsal bones</u></b>	Foot
<b><u>14 Phalanges</u></b>	Toes

**THE LYMPHATIC SYSTEM.**

This system is part of the circulatory or vascular system. It is intertwined with blood circulation. The basic material of the system is Lymph, which is the term given to plasma after it has been exuded from the capillaries.

Lymph fluid brings nourishment to the cells and drains away the waste products. The fluid is drained off by tiny lymphatic vessels, which join up with the larger lymph vessels, the latter being supplied with valves in much the same manner as veins. Situated along the route back to the heart there are more concentrated areas known as Lymph Nodes, these filter the lymph as it passes through them and so prevents infection reaching the bloodstream.

All Lymph passes into the two principal lymph vessels **The Thoracic Duct** and **The Right Lymphatic Duct.**

**THE IMPORTANCE OF MASSAGE MOVEMENTS ON THE LYMPHATIC SYSTEM.**

By the use of manipulations, such as effleurage and kneading, lymphatic circulation is accelerated. Kneading squeezes lymph from the lymph spaces and deep effleurage passes it along to the nearest lymph glands, following which fresh lymph exudes through the capillary walls bringing nourishment and removing waste products.

In a person of normal health lymphatic circulation is maintained by the pressure of contracting muscles. (There is no pumping action, as is the case with those vessels powered by the heart - arteries and veins.) This process is dependent upon the person taking a reasonable amount of exercise. Though all movements will initiate it to some extent, the process is more efficient when the person carries out a normal amount of walking and stretching. This explanation will help you to understand why even a young person, who is temporarily bed bound, looks grey and ill after a short while, despite the fact that, but for their specific injury or illness, they may otherwise be perfectly healthy.

In the case of anyone suffering from illness and injury, or unable to move his/her limbs normally, the exuded lymph may remain in the tissues and so cause oedema (swelling) or lymphatosis (stagnation of the lymph fluids). In these cases the masseur can help considerably by removing these fluids mechanically, either by 'hands-on' technique, or with the aid of electro-medical apparatus, such as gyrotator, vacuusager or a faradic machine.

**THE HEART: THE VASCULAR SYSTEM.**

Refer to diagram of heart in the appendices. (Diagram 3).

### **COMPOSITION OF THE BLOOD.**

Blood has four principle constituents: Plasma, Erythrocytes, Leucocytes and Platelets.

1. **Plasma:** Provides the liquid basis.
2. **Erythrocytes:** (Red corpuscles) carry food and oxygen to all parts of the body and absorb waste products on their way back.
3. **Leucocytes:** (Also known as phagocytes) are the protectors of the body against infection. When the body is infected the leucocytes increase rapidly.
4. **Platelets:** (Also known as Thrombocytes). These are needed for coagulation or clotting.

### **SOME DISEASES OF THE VASCULAR SYSTEM.**

- ANAEMIA (also Pernicious Anaemia)
- LEUKAEMIA
- HAEMOPHILIA
- ARTERIOSCLEROSIS
- ATHEROSCLEROSIS
- VARICOSITY (pooling of in varicose veins)

### **THE NEUROLOGICAL SYSTEM.**

#### **The Three main Parts of the Brain:**

1. **Cerebrum:** - records the sensations of smell, taste etc. Called the grey matter. The **function** of the cerebrum is to control voluntary movement, to receive and interpret conscious sensations. It is the seat of higher functions, such as the senses, memory, reasoning, intelligence and moral sense.
2. **Cerebellum:** - the **function** of the cerebellum is to control muscular co-ordination and balance.
3. **Medulla Oblongata:** - the **function** of the Medulla Oblongata is to act as the link between the brain and the central nervous system of the body. It is also the centre of those parts of the automatic nervous system, which control the heart, lungs and digestion etc.

### **SOME DISEASES OF THE NERVOUS SYSTEM.**

- **NEURITIS** A blanket term for a group of nervous problems.
- **SCIATICA** Inflammation of the great sciatic nerve.
- **NEURALGIA:** A painful condition in a nerve caused by irritation exposure or inflammation.
- **NEUROMA** Cancer of the nerve sheaf.

### **THE THEORY OF MASSAGE.**

The following terms are used in massage:

- Effleurage

- **Stroking**
- **Pétrissage, including Kneading**
- **Friction**
- **Tapotement**
- **Vibration**

### **EFFLEURAGE**

Effleurage consists of a rhythmic succession of strokes, carried out in the direction of the venous and lymphatic flow. The hand is completely relaxed and the palmar surface should mould itself to the part that is being treated. The masseur should stand or sit in a comfortable position in order to ensure ease and regularity of movement. In treating the limbs, the stroke should start at the tips of the extremities and should end in the groin or axilla, as the case may be. In treating fractures or other injuries, it is often possible to secure a more even comfortable pressure, by starting the stroke from the side of the limb, instead of from the extremities, and allowing the ulna border of the hand to lead and the radial to finish the movement. Even pressure must be maintained throughout the stroke, the depth of the pressure depending upon the nature of the case.

### **Effects of Effleurage.**

1. Circulation in the veins is improved, owing to the thin walls of these vessels, effleurage hastens the flow of blood towards the heart and produces a suction action on the column of blood behind.
2. Arterial circulation is aided by the removal of congestion in the veins.
3. Lymphatic circulation is improved and the absorption of waste products is hastened.
4. Effleurage should always be used as a preliminary movement, as it accustoms the client to touch. It has a soothing effect upon the nervous system, overcoming spasm and cramp, producing relaxation of the muscles and relieving pain.

### **Uses of Effleurage**

1. In all circulatory disturbances.
2. In all cases of nervous irritability and spasm.
3. In all cases of injury and inflammation.

### **Contra-Indications of Effleurage.**

1. Over very hairy skin.
2. Over scar tissue.
3. In all cases of neuritis, when the movement causes irritation.
4. In cases of spasm, where stroking is found to give more relief.

### **STROKING.**

Stroking is used purely for its effect upon the nervous system, and not for any direct effect upon the circulation.

### **Stroking is performed in one direction only:**

1. Down the course of the nerves in the limbs.
2. In a circular direction over the abdomen.
3. Along the course of the inter-costal nerves.
4. Down the spine.

The whole hand may be in contact with the part, or only the fingertips. When stroking down the spine, the whole hand should be in contact. The essential point is that the stroking should be rhythmical, gentle and slow.

### **Effects of Stroking.**

1. The cutaneous nerves are soothed and relaxation of the muscle is induced.
2. It helps to induce sleep and to relieve pain.
3. It has a reflex action upon the internal organs - e.g. the stomach.
4. If carried briskly down the spine it has a stimulating effect.

### **Uses of Stroking.**

1. In recent injuries accompanied by pain and spasm of muscle.
2. In some cases of neuritis if it gives relief.
3. In upper motor neurone lesions, to overcome the spastic condition of the limbs.
4. In cases of dilation of the stomach.
5. In inter-costal and other neuralgia's.
6. In insomnia.

### **PÉTRISSAGE.**

In this movement the muscles are grasped between the fingers and thumb, lifted from the bone and squeezed. The grasp is then relaxed and by a movement of the wrist, without losing contact with the limb, a fresh grasp is taken immediately below the first and the movement repeated. Pressure should always be made in an upward direction and in line with the bone. Beginners are apt to introduce a slight twist into this movement, as they lift the muscle from the bone, and this twist combined with too light a grip, causes a painful nipping of the tissues. The whole muscle or muscle group should be thoroughly treated from origin to insertion.

The movement is a deep one, but does not necessitate the use of force. The delicacy of the tissue worked on must be born in mind, also the fact that these tissues are bathed in lymph and surrounded by vessels prepared to carry away all the waste products from the tissues. intermittent compression without undue force is all that is required to increase the activities of these vessels. Pétrissage is a valuable movement for aiding nutrition and is especially useful for treating individual muscles and muscle groups. It may be performed with one or both hands and in the latter case is known as double pétrissage.

### **KNEADING:**

This movement may be performed in different ways. In kneading large surfaces, as with the back, the hand is pressed down and moved in a circular direction, causing compression of the soft parts on the harder structures. But the pressure is applied in a wave like manner, so as to secure alternate compression and relaxation. Contact with the skin must not be lost. In kneading the limbs and abdomen, the muscle is grasped with the whole hand, mainly by means of the thenar and hypothenar eminences, lifted and alternately squeezed and relaxed while being moved in a circular direction, pressure being exerted upwards.

### **Effects of Pétrissage and Kneading.**

1. The nutrition of the part is improved as the compression and relaxation of the muscle causes the veins to be alternately emptied and filled. The venous blood being driven on towards the heart and fresh blood flowing in to take its place.
2. The lymphatic circulation is aided by alternate compression and relaxation. The lymph is squeezed out of the lymph spaces and is carried away by the lymphatic vessels.
3. The condition of the skin is improved, superficial and deep tissues are stimulated to further activity.
4. Hard, contracted muscles may be softened and stretched.
5. Fatigue is removed, owing to increased absorption of waste products.
6. Congestion in internal organs is relieved, as the blood is drawn to the parts worked on.

### **Uses of Pétrissage and Kneading.**

1. In all cases of wasting of muscle due to disease, malnutrition, lower motor neurone paralysis, joint disease or injury.
2. In cases of defective circulation.
3. In cases of neurasthenia and debility.
4. Abdominal kneading in cases of constipation and weak abdominal wall.

### **Contra-indications to Pétrissage and Kneading.**

1. Chorea, if causing irritation and spasm.
2. Varicose veins.
3. Recent fractures
4. Inflamed areas.
5. Spastic conditions.

### **FRICTIONS.**

Small circular movements performed with the tips of the fingers or thumb, the heel of the hand, or the dorsal surface the two terminal phalanges. The latter method is only used on the gluteal region. Pressure should always be made **before** moving the hand in a circular direction and always toward a bony support. Friction should be performed from the shoulder with the elbow and wrist extended. There must be no slipping of the fingers upon the underlying structures. Spinal friction's may be given slowly and rhythmically, in order to soothe or quickly, in order to stimulate the nervous system.

### **Effects of Frictions.**

1. To break up the products of inflammation in order to further their absorption.
2. To remove inflammatory oedema from the neighbourhood of the joints.
3. To remove inflammatory products from the sheaths of nerves.
4. To stimulate the circulation and bring blood to the part worked on.
5. To loosen adherent scars and stretch contracted tissues.
6. Colon friction's act mechanically by breaking up hard faecal masses by stimulating peristaltic action.

### **Uses of Friction's:**

1. In treating adherent and contracted scars.
2. In cases of joint stiffness with peri-articular thickenings and adhesions, whether caused by injury or inflammation.
3. Lumbago and Fibrositis in any situation.



4. Sciatica in the chronic stage, or any other form of interstitial neuritis.
5. Light stimulating friction's are useful in facial paralysis.
6. Colon friction's in constipation.

**Contra-Indications of Friction's:**

1. Inflamed areas.
2. Recent Fractures.

**TAPOTEMENT:**

**Under this heading are included hacking, cupping, beating and pounding.**

Hacking, consists of light quick blows, the hands striking alternately, performed by:

1. The dorsal aspect of the three inner fingers.
2. The ulna border of the little fingers, or
3. The palmar aspect of the tips of the three middle fingers, the latter method being used only on the neck and head.

The movement is performed from the wrists, by means of radial and ulna flexation, without pronation and supination.

**Cupping** is performed with the palmar surface of the hands, which must be loosely relaxed and held so as to form a slight concavity, adapting themselves to the shape or part under treatment. It is a pure wrist movement.

**Beating** is a slow movement. The relaxed arm is lifted from the shoulder and then allowed to fall by its own weight. The hand is loosely closed with the dorsal aspect of the fingers coming first in contact with the part. It is used over the liver and also over the gluteal region.

**Pounding** is a quick movement done with the ulna border of the loosely closed hand by means of flexation and extension of the elbow. It is used over the liver, the buttocks and fleshy parts of the thigh and on the shoulders in obesity.

**Effects of TAPOTEMENT:**

1. Tapotement excites capillary circulation, stimulates the cutaneous nerves and causes muscle contractions.
2. If performed lightly it causes contraction of the vessels if more deeply, it produces dilation.
3. Chest cupping improves the interchange of gases and loosens mucus.
4. Beating and pounding increases the functional activity of the liver cells.

**Uses of TAPOTEMENT:**

1. In liver treatment to relieve portal congestion.
2. In cases of weak muscles where stimulation is needed.
3. To stimulate the nervous system.
4. To break down adhesions around joints.
5. In bronchitis and other lung conditions to loosen mucus.

F4

**Contra-indications of Tapotement:**

1. In all lesions of the upper motor neuron with spasticity and exaggerated reflexes.
2. In recent fractures.

3. In treatment of nervous, excitable patients, when it would be likely to increase the tendency to muscular tension.
4. Over any muscle which is abnormally contracted
5. Over any painful area.
6. Very thin patients.

### **VIBRATIONS.**

Vibrations may be either soothing or stimulating.

**Soothing. Flat handed vibrations** are conveyed to the part through the palmar surface of the relaxed hand, which rests lightly on the client. The movement is performed by very rapid contractions and relaxation's of the muscles of the forearm.

### **Stimulating Vibrations may be:**

1. Static nerve vibrations, in which the vibrations are conveyed to a nerve by the finger tips, the finger remaining stationary.
2. Running nerve vibrations, which are performed by drawing the vibrating fingers down the course of the nerve.
3. General nerve vibrations, which are conveyed by the separated finger tips surrounding the limb.

**Shaking** is a type of course vibration, and is used in abdominal treatment. The relaxed hand is laid on the abdomen and shakes the part with fairly firm pressure.

### **Effects of Vibrations.**

1. Flat handed vibrations relieve pain and tension.
2. Fine vibrations reduce oedema, relieve flatulence, loosen scars and stretch adhesions.
3. Deep vibrations loosen stiff joints, loosen mucus (in bronchitis) and assist expectoration.
4. The static, running and general nerve pressures stimulate the nerves.

### **Uses of Vibrations.**

1. In chronic bronchitis to loosen mucus.
2. In some cases of sciatica to relieve pain.
3. In dilated stomach to disperse flatulence.
4. To stimulate the nerves as in facial paralysis.

### **Contra-Indications of Stimulating Vibrations.**

1. If disliked by the client.
2. In recent fractures
3. In spastic conditions.
4. In nervous conditions such as chorea. (Lack of normal muscle control)

F5

## **GENERAL MESSAGE.**

General massage should not be given within **one and a half - two hours after a meal**. The bladder should be empty. The client should be warm and comfortable, with the whole body relaxed.

## **Basic Massage Course Elementary Tutorial Notes**

The masseur should understand the taking of pulse and temperature, as in some cases of illness, it may be necessary to take both and note and then report any rise in either, after the treatment. The normal pulse rate is about seventy-two beats per minute in an adult, but more in a child. The normal temperature is 98.4°F. The treatment should last not more than half an hour at first, gradually work up to an hour if the client's condition allows it. General massage varies according to the type of case. The length of treatment and the depth of the massage will depend entirely upon the condition of the patient.

The treatment is always begun by a breathing exercise such as chest lifting, repeated a few times. The downward pressure of the diaphragm gives a little internal massage to the abdominal contents and the deep breaths also induce relaxation.

The following order is usually followed: massage of the legs, arms, abdomen, chest, and back and the gluteal region. The breathing exercise should be repeated before beginning the abdominal massage.

**Do not massage** over the abdomen until the muscles are completely relaxed. Repeat breathing exercises several times if necessary and adjust the knees to the most comfortable position, with a warm pillow beneath them.

Give some gentle preliminary kneading of the abdomen and if relaxation has been achieved, the abdomen will be soft and the hand able to sink deeply in. The manipulations are generally performed in the following order:

**Stomach Stroking.** Rhythmic strokes with the relaxed hand carried along the greater curvature to the pylorus, to cause reflex contraction and consequent emptying of the stomach.

**Kneading of the Stomach.** Again following the greater curvature of the pylorus. Flat handed vibrations and shaking may also be given. It is impossible to tell the position of the abdominal organs unless the patient is X-rayed, but it is well to remember that the stomach commonly reaches below the umbilicus.

**Liver Kneading.** Should be given to the uncovered area below the costiform cartilage between the costal margins. It is the custom to turn the patient on the left side and to knead, pound, hack, and beat the liver with the idea of stimulating the portal circulation and increasing cellular activity. It is difficult to believe that these objects are achieved by the rather superficial work that is now usually seen.

**The Small Intestines;** are kneaded to stimulate peristalsis and improve the circulation.

**Colon Kneading;** must follow the source of the ascending, transverse and descending colon.

**Frictions;** to mechanically break up faecal masses and promote peristalsis and finally

**Colon Stroking;** both follow the same course.

### **Precautions**

1. Stop abdominal massage at once if the client shows any signs of restlessness or discomfort.
2. Never massage the abdomen for longer than four to five minutes in anaemic patients, as it may induce depletion of blood in the head and cause faintness.

## **Basic Massage Course Elementary Tutorial Notes**

3. In cases of heart disease and cerebral haemorrhage never give abdominal massage unless expressly ordered by a doctor (MD)
4. Any localised spot of pain or tenderness in the abdomen that is persistently complained of should be reported.
5. Never drag on the umbilicus, it can induce bleeding in some people.

In massaging the back, the masseur should be very careful to keep the patient warmly covered, only exposing the part actually under treatment. Knead, Pétrissage, Hack, Clap the gluteal region before finishing the back, so that the treatment may finish with frictions' and stroking down the whole length of the spine. Always knead glutei, pressing towards the mid-line and never separate the gluteal fold.

### **Movements:**

In all but very weak patients, active movements of all joints of the limbs should be given. If the patient is too weak for active movements, passive movements may be given. In some cases it may be necessary to omit them altogether.

Students should familiarise themselves fully, with the following medical terms.

- ◆ **Supine**                Lying on ones back.
- ◆ **Prone**                Lying on ones front.
- ◆ **Anterior**            Front aspect of the body.
- ◆ **Posterior**            Rear aspect of the body.

*(These terms are synonymous with ventral and dorsal. They are applied to man in the 'anatomical position' - that is in the erect position with the arms by the sides and the palms of the hands facing forwards).*

- ◆ **Medial line or plane** is an imaginary line running through the centre of the body.
- ◆ **Lateral**. - to either side of the medial line; the three positions being medial, intermediate or lateral form the medial line.
- ◆ **Peripheral**. - to the extreme of, on the circumference or outer edge of a part.
- ◆ **Torticollis**. - stiff or wry neck.
- ◆ **Fibrositis**. - inflammation of the soft tissue, or rheumatic affection of the muscles, a condition in which there is a build up of urea and lactic acid inside the muscle to the extent of causing stiffness and pain.
- ◆ **The names of the eight systems of the body (4 major and the 4 minor.)**
- ◆ The definition of anatomy and physiology. Anatomy is the study of the structure of the body and physiology is the study of the functions of that structure.

### **USES OF OILS AND POWDERS.**

Powder should not be used as an agent in massage therapy in the case of very dry skin, very hairy skin or traumatic conditions, when the skin has swollen and the powder is too gritty for comfort. Also it should not be used if the patient is allergic to its smell, which will occasionally happen.

Oil should not be used for slimming massage, because it puts in through the skin more calories than the massage treatment helps to remove. Too much oil should not be used in any

## **Basic Massage Course Elementary Tutorial Notes**

treatment. Always be aware of peanut oil intolerance, check with the client if they are allergic to any nut oil products, which you may be using.

### **MECHANICAL MASSAGES.**

Two principal types

Percussors  
Gyrators

**Percussors** operate in the vertical plane and are approximately equivalent to Tapotement or Hacking in physical effect. Includes vibratory cushions, chairs, couches and belts.

**Gyrators** operate in the horizontal plane and may be used to simulate effleurage, pétrissage and kneading.

Contra-indications are similar to hand massage, but must be used with greater care, because of their power (usually 130 wattage motor). Never to be used on the abdomen.

### **LAWS RELATING TO LICENCES.**

- **NO LICENCE** required for visiting practice.

Conditions for Application:-

- Town and Country Planning - whether premises may be used.
- Public Health and Fire Authorities regarding safety.
- Apply to the Public Control dep't for licence to practice in area's where this is applicable. When these are required they are usually based on G.L.C. regulations. 'Establishments for Massage and Special Treatments'. Now the London Government Act 1953.
- Applications will be granted only for therapies in which the applicant is qualified:-
- Massage, Faradism, Steam Baths, Manicure, Infra red/Ultra Violet treatments, other medical treatments.
- Applicants must have qualified with a recognised school or college. Licences renewable every year.
- Licences are personal to the applicant and premises specified.

An inspector has the right of entry. Operating premises without a licence or violating terms and conditions, can lead to a fine of up to £50 and a daily penalty of £20 if offence continues. Imprisonment of up to three months can be imposed for a second or subsequent offences. Licensees are required to notify the local authority of their prices and of any change, records must be kept of all therapeutic treatments.

**ETHICS:** **Do not** undertake to cure medical conditions. **Do not** diagnose. **Do not** treat patients for a condition already being treated by a doctor. **Do not** make derogatory remarks about doctors or other therapists. Treat all clients equally. Wash hands thoroughly before and after treatment. **Do NOT** discuss other patients..

**ALWAYS PAY PARTICULAR ATTENTION TO HYGIENE.**

G

### **A.I.D.S : SOME GUIDELINES FOR THE PRACTISING THERAPIST.**

As teachers of the physical therapies, we feel that students past and present should be brought up to date with the current guidelines on handling patients with A.I.D.S. (Acquired Immune Deficiency Syndrome). Much nonsense is being written by the media generally, and by certain sections of it in particular. This scare mongering is not only irresponsible and, shameful, some therapists, both of whom may fail to take the basic precautions that are necessary to ensure safety for both parties.

These precautions are elementary, yet 100% effective when carried out properly. All hospital medical staff use them as a matter of course, in their dealings with *any* infectious and/or contagious disease. There is nothing new about them, yet they are just as effective against the A.I.D.S. virus (more so in certain cases), as they are against all the one thousand and one killer diseases. If our military leaders are constantly thinking up new ways of 'taking out' sections of enemy forces, by all manner of high tech means, or avoiding them by means of 'tactical withdrawals', have you ever considered what would happen to the enemy if we to immerse them all in household bleach? Exactly, they would all die very quickly. My point is that the household bleach is not at all 'high tech' by modern standards, but just as effective as it was in the fight against infection. And yes, it does kill the A.I.D.S. virus, within 30 min at a concentration of 2%, as does alcohol (70% ethyl alcohol) in one hour, or Glutaraldehyde, in one hour (sterilising solutions containing this are widely available commercially. Boiling instruments for 30 mins will also inactivate the virus, as will autoclaving (steaming), in 15 mins, or dry, hot air sterilisation, in 2 hours, at 160C.

So all the old fashioned methods are active against the A.I.D.S. virus. This is something which the media sees fit *not* to inform us about. Nor, generally, do they make the point that compared with the other more virulent viruses A.I.D.S. is very hard to catch. When compared with syphilis or gonorrhoea, or the common cold, or influenza, it is a non-starter in the 'catching' stakes. There are many cases of wives with infected husbands who themselves are still antibody negative after two years.

The HTLV111 virus is contained in and spread by contact with certain bodily fluids - blood, semen and mothers milk. The virus has been isolated in tears, urine and saliva, but this is not always the case when checking the body fluids of infected persons and thus far there are no provable cases of infection via saliva, tears, urine or, for that matter, contact with toilet seats, cracked cups, hand shaking, dry kissing, breathing the same air, using the same swimming pool, or coming into contact with infected persons at the same place of work.

Let us try to put what we know about this virus into perspective. While we read every day of how many people are expected to become infected by the end of the year or whatever, are you aware of how this compares with, for instance, the statistics on syphilis? No one talks about syphilis anymore, why should they, syphilis is eradicated is it not? Far from it. Syphilis still kills very many more people every year, even if is only because they have been infected for years, though undiagnosed. There are currently 50 million new cases of syphilis reported world wide every year. Remember that these are only reported cases. The A.I.D.S. virus has some way to go before it matches these totals.

Looking at the situation with some objectivity you are far more likely to treat a syphilis sufferer than an A.I.D.S. sufferer on a world-wide basis.

H1

I have written about syphilis, but what about Hepatitis A, B or C?, Or Influenza, Legionnaires disease, Meningitis, or even the newly found E'coli bacteria.? The answer is that you should take all the usual precautions in order to protect your clients and yourself from all of these diseases and lots of other infections too, including the A.I.D.S. virus.

Elementary minimum precautions include the following measures:

**Basic Massage Course  
Elementary Tutorial Notes**

Wear a freshly laundered overall at all times when dealing with clients. This garment should be of cotton, so that it can be boil washed and bleached. It should be large enough to cover your normal clothing at all points where you are likely to come into contact with the client. If there is any spillage of the client's bodily fluids onto the overall (particularly any blood) the garment should of course be changed before you deal with the next client and the soiled areas should not be handled by anyone, including yourself. The garment should then be soaked in water which contains at least 1% ordinary household bleach (Sod Hypochlorite) or a solution containing at least 10% Hydrogen peroxide. In either case the garment should be soaked for at least one hour.

**WASH YOUR HANDS!** You should be doing this anyway, as part of your normal simple routine. When we speak of washing hands in the clinical context we **do** mean thoroughly, using a nail-brush for some minutes (think of the surgeon 'scrubbing' up). A small amount of hydrogen peroxide may be added to the water. This bleach is relatively kind to the skin, unlike Sodium Hypochorite.

All working areas should be thoroughly scrubbed and wiped down on a daily basis. The scrubbing is important as blood and other material that contains protein will coagulate. This coagulation may then act in a protective capacity for the virus when it is exposed to chemical disinfectants. A useful way to prevent this coagulum forming is to use only cold water when rinsing clothes or instruments and work surfaces etc.

Only when all dirt and crusts have been removed is it wise to use hot or boiling water. If using Sod Hypochlorite as a disinfecting agent with cold water only, increase the strength of the solution to at least 2%, as the bleach is less effective when used cold (hot or boiling water increases its action by as much as 50%).

Observe your contra indications! You cannot 'catch' the A.I.D.S. virus from open and weeping areas of broken skin if you do not touch these areas. Such areas as these, when they are tiny areas can be covered and avoided. An example of the sort of area I am writing of is that of an active boil, pimple, open scratch or herpes sore. You have already been taught **not** to treat these areas as a matter of course, in your basic training routine. I am therefor asking you to take note of what you were taught at this time. If you don't know what all the fuss was about then, you certainly should by now. The same rules apply in reverse of course. You should not touch your client with any part of yourself that bears an open wound, however small. An example of this type of wound could be a simple hangnail, or a tiny scratch. All the virus requires is an open passage from blood to blood. Your hangnail and your client's weeping pimple will do very nicely.

H2

I have been asked about clients' sweat. There is an obvious answer. If the virus were transmittable by contact with perspiration, then most of the medical staff who deal with A.I.D.S. on a regular basis would by now be infected. I have seen no mention of sweat at any time in the medical literature on the disease. Indeed, there is no proof that even saliva or tears can spread the disease, this despite the fact that the virus has been isolated in both secretions. A therapist who should have had more common sense stood up at a recent seminar (at the Royal Society of Medicine) and stated that her GP had told her that she would have to ingest at least 1.5 pints of saliva, before she could get A.I.D.S. from it!

This shows some very muddled thinking. I think that the point she was making was that there was in fact only the minute quantity of the virus present in saliva. I agree with her. It is already proven that the virus is only found in saliva in very small quantities. This is also true of a speck of dust in a pint of milk. However, it certainly is not true that one needs to drink the whole glass of milk in order to swallow the speck of dust. One could be unlucky and swallow it in the very first mouthful.

Another lady therapist, while allowing that the virus 'hopped' from host to host via the blood presumed that small wounds did not matter, such as a scratch or a hang nail.

She failed to note that, if one can get an infected finger from such a wound and this is from an invasion of bacteria, which is far larger than a virus, then the virus would certainly find an access hole', far in excess of its needs. A virus is a micro-organism, the smallest infective germ so far discovered by man. It is impossible to imagine a break in the skin (to us) and yet so large (to the virus).

There is no point in allowing our selves to be panicked, by the media, or by our own illogical fears. We, as therapists, have always been at risk, as is anyone who deals with others on a personal basis. Dentists, Opticians, Osteopaths - even Hairdressers and Beauty Therapists, are all equally at risk, of catching A.I.D.S, but many other potentially fatal diseases. I will repeat myself: **A.I.D.S. is very hard to catch.**

While being fully aware of the dangers, we should also be aware that this virus, like many others which is susceptible to some common disinfectants, the cheapest of which is ordinary household bleach. Regular scrubbing down of all work areas and surfaces, sterilisation of any instruments used in treatments, personal cleanliness and clean linen, all of these measures will help to ensure safe working conditions for the physical therapist.

By following the guidelines which you have already learnt regarding contra-indications and initiating the measures which I have described here, you have no more to worry about now, than you ever did, at least as far as your work is concerned. The risks which you may choose to take concerning your personal life is another matter and the authorities are taking the necessary steps to keep you informed about that.

Finally, it only remains for me to say that therapists will be kept updated, as more information becomes available. I hope that I have reassured you about your own risks of contracting this dreadful disease. If only I could be confident of your not catching influenza, which, in the 1920's, killed more than 20 million people in **ONE** year.

H3

### **A GUIDE TO EXAM PRESENTATION.**

Rather than just worry unnecessarily over what the examination may - or may not - entail. I suggest that you give the matter some careful thought, both about the type of question most likely to be asked and how best to present your answers.

Most successful 'exam takers' have ensured their success by studying not only the subject of the examination, but also what the examiner will require of them. Whatever the subject in question, it is possible to virtually put yourself in the examiner position. Lets look at some of the instances.

1. What is the most important part of the subject? There has to be some part of your tuition that is more important than the rest.



2. What you welcome --or -- despise, if you were the examiner?
3. What questions would you ask if you were the examiner.

**1. The most important part.**

If you were a driving examiner you would hope that your examinee could handle the car adequately wouldn't you? That is to say, know how to start the engine and be able to start and stop the vehicle, which gear to go forwards/backwards, which was right/left, so on and so on. Note that we haven't mentioned road sense, traffic signs or such things as three point turns. These things are in fact secondary to the business of handling the car safely, particularly when you consider that the poor examiner spends his whole day with potentially dangerous inadequate drivers!

**And so to your examination.** Why did you take your course? Surely in order to learn massage, wasn't it? And only secondarily to learn about anatomy and physiology (many students are amazed when they realise that they have to learn about these subjects and licensing laws, mechanical massage, etc.). So now it is possible for us to actually guess what you are likely *always* to be asked and what you will certainly fail on, should you get it wrong, as opposed to these questions that you might 'slip' through on, even with a - wrong - or a potentially wrong answer. We will look into that shortly.

**2. Pleasing the examiner.**

If you were the examiner would you prefer to read through masses of words or simple lists with clear, underlined headings? Look at the two sample answers on contra indications and muscles and bones. Is it easier to read the list of contra indications or the text? The muscles of the arms or of the leg/back? The bones of the head or the arms/legs? What might you think if you had been marking papers all day?

Inaccurate spelling may not be all that disastrous - if the examiner can determine what you are trying to indicate. But what of the spelling is so bad that he cannot make out the word/s that you mean, or the writing makes it impossible to even guess it? Look how I have organised this page. I have used paragraphs, headings, which are underlined and spaces to separate the subjects.

**3. What questions????.**

Well, you will have to be asked about the techniques of massage, the physiological effects of same and the Contra indications (you must be safe to let loose on people). You will always be asked about muscles, bones and systems. (You can never guess which ones but cardiovascular, lymph and nervous systems are all important in your future works.

Then there are the anatomical terms. (Supine, prone, etc.), licensing requirements, mechanical massage and so on.

- I have written these things in order of importance for you. There are only ten questions. You can now actually guess most of them - they **must** be asked.

**THE EXAMINATION QUESTIONS LIKELY TO BE ASKED.**

**Section 1: Massage.**

1. Name the major techniques of Swedish massage. (See theory of massage).
2. Describe the main physiological effects of massage. (See theory of massage).
3. Should a massage practitioner be capable of diagnosis? (**Discuss with tutor**).

4. When should the massage be carried out with talcum - and when with oil?
5. Explain the difference between a gyrator and processor.
6. Should a massage therapist offer to cure any condition? (**Discuss with tutor**).
7. Is it true that fat people should not be massaged? (**Discuss with tutor**).
8. What are the common Contra Indications to massage therapy?
9. In your opinion are there certain patients on which massage should **not** be carried out? (**Discuss with tutor**).

### **Section 2: Anatomy & Physiology.**

1. Name the principal bones of the body.
2. Name the principal muscles of the body.
3. Classify and number the vertebral bones.
4. State what you mean by the following terms: Kyphosis, Lordosis, Scoliosis. Fibrositis, arthritis, sprain, atony, spasticity, lumbago, sciatica, syndrome, dermatitis, eczema, psoriasis. (**Discuss with tutor**).
5. Define the terms 'Anatomy' and 'Physiology'.
6. Give a brief description of the Lymphatic system.
7. Define the difference between Atherosclerosis and Arteriosclerosis. (**See tutor**)
8. Name the four major and four minor systems.
9. What is a system?
10. What is meant by the term Varicosity. (**See tutor**).
11. Describe briefly the function of the Cerebrum, Cerebellum and the Medulla Oblongata.
12. Describe the blood and name some diseases.
13. Name some diseases of the nervous system: give a brief description.
14. Describe a muscle and explain the difference between voluntary and involuntary muscles.

### **Section 3: General.**

1. Define the following terms, supine prone, anterior, distal, medial, proximal, torticollis, peripheral.
2. What type of licence is required for a visiting practice?
3. If you were treating a client who, in your opinion had been wrongly treated by another therapist, what would your comment be to the client.
4. Do you wash your hands before or after treating?

**Note:** All questions may be answered in any order, but they must be clearly numbered, as must be the page headings. At the end of each question a line must be drawn to indicate a separation from the next question. The student should put his/her name at the top of each page and sign the last page upon completion of the paper.