

Holistic Healing & Reiki By Sharon



Reflexology

What is reflexology.

The History of Reflexology.

The benefits of Reflexology

Contra indications of Reflexology

Conditions & Disorders

Effects of Reflexology on the body.

What Exactly is Reflexology

Reflexology is a method for activating the healing powers of the body, It is both old and new. From ancient texts, illustrations, and artifacts. We know that the early Chinese, Japanese, Indians, Russians and Egyptians worked on the foot to promote good health. Today many of these same techniques have been developed into a modern scientific method called reflexology. What joins the ancients with the moderns is the long-established principle that there are energy zones that run throughout the body and reflex areas in the feet that correspond to all the major organs, glands and body parts.

Reflexology is a holistic healing technique that works on precise reflex points on the feet that correspond with all body parts.

The term 'holistic' is derived from the Greek word holos, which means 'whole' and as such aims to treat the individual as an entity incorporating. Body mind and spirit.

It would be an exaggeration of course to claim that reflexology automatically guarantees a healthy body and mind. This can best be achieved by living in harmony with ourselves and the world around us. Nevertheless there are always trying periods in our life when we have to grapple with problems or weather storms. Our organs suffer the consequences and sometimes the strain is so great that one of them falls ill. This is just the sort of case where reflexology can act as a balm. Massaging the reflex zones and taking care of the sick organ provide it with a better “operating environment” as well as improving the circulation of the blood. The organ is thus able to regenerate itself and resume its duties in the body.

Reflexology has been found to reduce stress and tension, relieve pain, improve bodily functions and restore the body to a better state of balance in general, improving physical, emotional, mental and spiritual well being.

**Reflexology is reported to
Induce a state of deep relaxation**

Reduce stress and tension

Improve blood circulation

promote the flow of nerve impulses

Reduce inflammation

Encourage and aid the body's release of toxins

Enable the body to regain its natural equilibrium to be in a position to heal itself

Stimulate creativity

Promote restful sleep.

There are many theories as to how Reflexology works, one is that simply by inducing a state of deep mental and physical relaxation may, in itself, provide the environment in which healing can take place. Additionally the psychological benefits of being involved in a one-to-one treatment involving physical contact could also be a contributory factor. While the recipient is able to have time and space to themselves in this therapeutic environment, they potentially may deal with any current problems. Or illness in the early stages to resolve.

Reflexology is a very safe treatment, and can be used on young and old, even babies. , However there are a few contra-indications that we will cover later.



In Egypt a wall painting in the tomb of Ankhmahor, dating back to 2330 BC, shows a reflexology treatment being performed.

The History of Reflexology.

The roots of reflexology are embedded way back in ancient history when pressure therapies were recognized as preventative and therapeutic medicine.

There is evidence of a type of Reflexology being practiced in Chinese and Egyptian cultures. It is believed by some that a form of reflexology was used by many different races including the American Indians and the Indians.

Reflex Zone therapy was practiced by the working classes and those involved in healing amongst royalty and upper classes in middle Europe.

In the 1890's Sir Henry Head, a research scientist and medical doctor, demonstrated the neurological relationship that exists between the skin and the internal organs. He later was knighted for his contributions. Sir Charles Sherrington became a Noble prize winner for proving that the whole nervous system and body adjusts to a stimulus when it is applied to any part of the body. These contributions, coupled with the presence of the ancient foot charts, greatly encouraged later explorations such as work done by Dr William Fitzgerald and led to the greater understanding and acceptance of reflexology.



Sir Henry Head

Dr William Fitzgerald (1872-1942)



Dr. Fitzgerald was an American physician and ear, nose and throat surgeon, and is credited with the rediscovery of 'zone therapy' which was a treatment used in India and China about 5,000 years ago. Zone therapy hinges on the belief that the body is divided into 10 longitudinal zones of energy that extend from the feet and hands to the brain. Five Zones originate on each foot, with the big toe representing zone 1 and the little toe representing zone 5. The zones originating in the left foot run up the left side of the body. And the zones in the right foot run up the right side of the body. These zones also originate on the hands, with the thumb as zone 1 and the little finger as zone 5. Zone 1 is considered to be the most powerful. Zone 1 includes the spine, brain, pituitary gland, nose, mouth, thymus, beginning of the liver, lungs and solar plexus, and the bladder, uterus and prostate. It is usually the most sensitive. Dr Fitzgerald also worked in Europe, in 1917, in association with Dr. Edwin Bowers, he wrote 'zone therapy or Relieving Pain at Home' two years later they published 'zone therapy or Curing Pain and Disease'. Fitzgerald's work caught the attention of American physician Dr Joe Shelby Riley, who wrote 4 books devoting much attention to zone therapy. His first book was published in 1919 and was entitled 'zone therapy simplified' As well as extensively using zone therapy, Dr Shelby Riley made the first detailed drawings of the reflexes on the foot. He also added 8 horizontal lines to the 5 longitudinal lines originating from zone therapy.



Dr Shelby Riley



Author and Lecturer
EUNICE D. INGHAM STOFFEL
Feb. 26, 1889 - Dec. 18, 1974
Eunice Ingham

In the early 1930's Dr Riley had a physiotherapist in his office called Eunice Ingham (1889-1974). Eunice Ingham became engrossed in zone therapy, with the aid of visiting Chinese doctors, who gave her documentation illustrating how the Chinese perceive the feet to mirror the body, she started equating areas on the feet with the anatomy of the body and drew up detailed foot charts. Eunice Ingham's work became more and more reflex based, but confusingly, she continued to use the term zone therapy. She also found that not only did zone therapy relieve pain, but it also promoted healing. In 1938 she published a book entitled "stories the feet can tell" and then "stories the feet have told". Over the course of her work she changed the term from zone therapy to compression massage, and finally settled with "Reflexology".

Hanne Marquardt trained with Eunice Ingham. Hanne then became the first practitioner in Germany to work using pressure on the feet only. She was also credited with introducing the concept of transverse lines across the feet. These lines are now commonly used as the main guidelines. Hanne went on the train a large number of medically qualified professionals to be Reflexologist's.



Hanne Marquardt

Doreen Bayly, a student of Eunice Ingham, brought reflexology to the UK in the 1960's and established the Bayly School of Reflexology. From then on many other schools were established, many of these by her graduates. On her death the school passed to her senior tutor Nicola Hall.



Doreen Bayly

Eunice Ingham's nephew, Dwight Byers, assisted Eunice with her work and carried it on after her death in 1974. The national Institute of Reflexology and the International Institute of Reflexology were formed, dedicated to the teaching of the original Ingham Method.

In the 1970's Ann Gillanders began to study reflexology with Dwight Byers and she qualified in 1976. Ann worked with Byers for 16 years, teaching and setting the future of reflexology in motion. Ultimately she was a director of the International Institute of Reflexology. During her time with this institute, she established schools in Hong Kong, France, Switzerland and Israel. Ann founded the British School of Reflexology in 1987, She also has a school in Japan. Ann travels and lectures throughout the world promoting reflexology and other aspects of natural healing.



Ann Gillanders

The Benefits of Reflexology

Reflexology has many benefits, these include:

it maintains balance within the ten body's systems

It reduces the feelings of stress

It gives a feeling of well-being

It is relaxing for the mind and body

It encourages the elimination of toxins

It improves the circulation in the blood and lymph

It assists the body to maintain a state of balance

It re-balances the body

It promotes relaxation

It helps to promote the energy flow within the body

It releases endorphins and serotonin to help lift the mood and release

Pain killing hormones

It improves muscle tone

It encourages the body to heal itself

It increases energy levels

It can help to treat ailments and assist in restoring health

It acts as a preventative to health and can help to protect the body from future illnesses.

Always remember that you must NEVER claim that reflexology can heal a condition.

It may help with the symptoms, but there is never any guarantee.

Reflexology is NOT a diagnostic treatment.

Everyone can benefit from a reflexology, be they men, Women, Pregnant Women, The elderly, Children and babies.

Each individual will respond in different ways to this treatment and everyone's results will differ.

The benefits are effective on physical, emotional and spiritual levels.

Contra – indications of Reflexology

A contra-indication is a condition which prevents or restricts the treatment being carried out on your client.

Total Contra-indication

Resulting in prevention of carrying out the treatment.

Infection, disease or fever

A person under the influence of recreational drugs or alcohol

Diarrhea or vomiting

Pregnancy – during the first trimester it is advisable for the client not to have reflexology, Also medical consent is required if the pregnancy is high risk

Undiagnosed lumps or swelling

Referral Contra- Indications

Resulting in medical consent/permission to carry out the treatment.

Pregnancy – if there is a possibility of high risk pregnancy

Cardiovascular conditions – Thrombosis, Phlebitis, Hypertension, Hypotension, Heart conditions

Haemophilia

Any condition already being treated by GP or another complimentary therapist

Medical Oedema

Osteoporosis

Arthritis

Nervous/ Psychotic Conditions

Epilepsy

Recent Operations

Diabetes – Their healing rate is lower

Asthma

Any Dysfunction of the nervous system – M.S., Parkinson's disease

Trapped/Pinched or inflamed Nerves – Sciatica

Cancer

Spastic conditions

Kidney infections

Whiplash

Slipped Disc.

While taking prescribed medication

Acute rheumatism.

Localized Contra – Indications

Localized swelling

Inflammation

Varicose veins

Cuts, bruises or abrasions

Scar Tissue (2 Years for major operations or 6 months for a small scar)

Sunburn / Windburn

Haematoma

Recent fractures or sprains

Cervical spondylitis

After a heavy Meal.

If you are unsure of what any of the above conditions are, it is advisable to look them up so you have an understanding of what you are checking for when carrying out your consultation with your client.

If you are ever in doubt as to weather to carry out the treatment on a client due to a condition, it is best to get them to get the all clear from their GP first.

It will put yours and your clients mind at rest.

Remember, you are not qualified to diagnose a condition, You must refer them to their GP explaining that you are unsure what their condition is .

Never put doubt or worry into your clients mind.



Conditions & disorders of the Hands, Feet and nails

Contagious conditions

To avoid cross- contamination, your first line of defense is to recognize a condition and to avoid contact with it.

Fungal

Fungal conditions consist of yeasts and molds which feed off the waste products of the skin they invade.

Tinea Ungium Fungal infection of the nail
Tinea Pedis Athletes Foot.

Viral

Tiny germs which can only survive in living cells.

Verrucas
Warts

Arthritis

Arthritis is a painful condition of the joints

Gout

osteoarthritis When the cartilage between the bones gradually wastes away and causes the bone to rub together.

Rheumatoid Arthritis Pain & swelling in the joints.



Nail Disorders

Pitting lines (horizontally or vertically)

Ridges

Leuconychia – white spots on the nail plate

Yellow/Brown or White nails- nail dis-colouration, can be caused by many factors.

Kollonychia – Flat or spoon shaped nails

Onychryptosis – ingrown nail

Onycholysis – separation of the nail plate from the nail bed

Paronychia – Inflammation of the soft tissue surrounding the nail

**Blue Lines – Horizontal ridges across the nail plate
Curved or concave**

Vertical Ridges

Blue Nails – Nails with a blue tinge, usually due to poor circulation.



Common Nail conditions

Skin Disorders

Callouses – An area of hard skin usually caused by pressure or rubbing of that area.



Chilblains – Small, itchy, painful lumps that develop on the skin from an abnormal response to cold.



The Effects of Reflexology

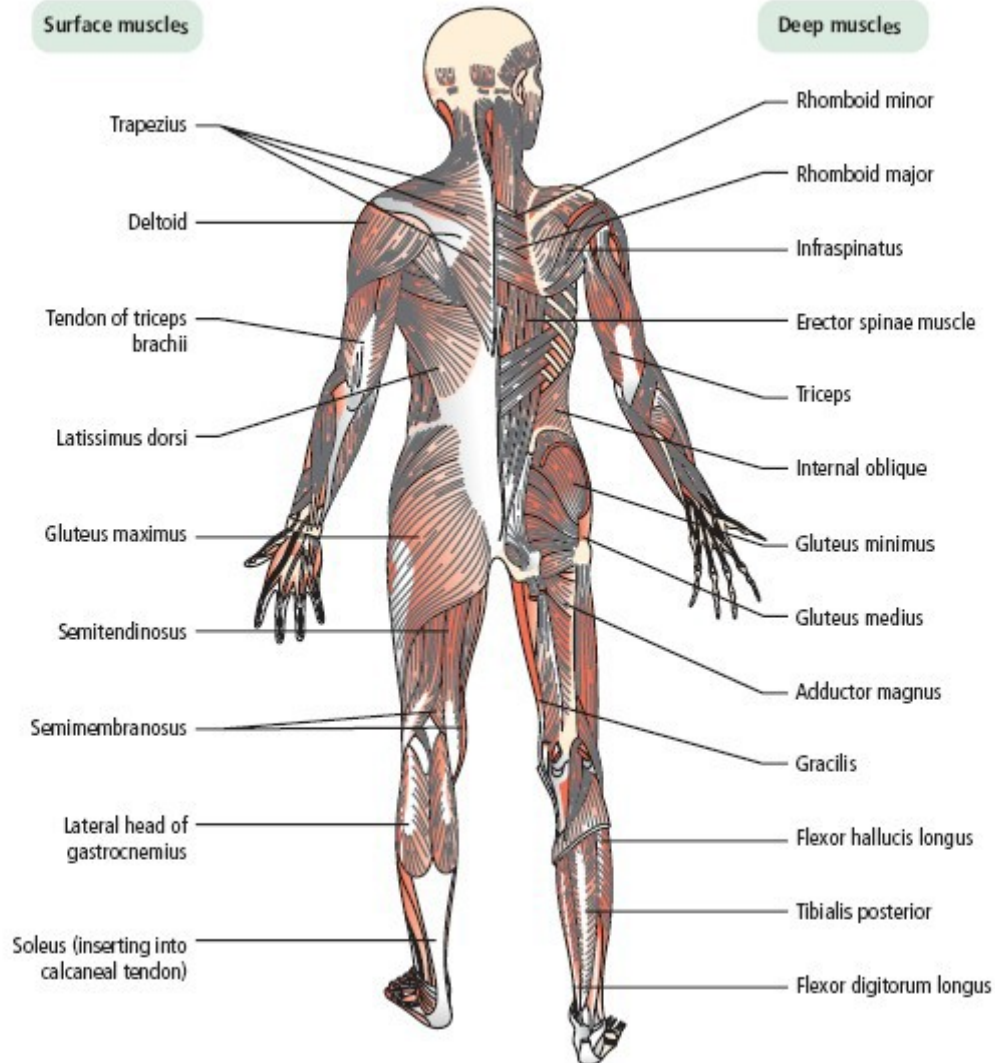
On the muscular system.

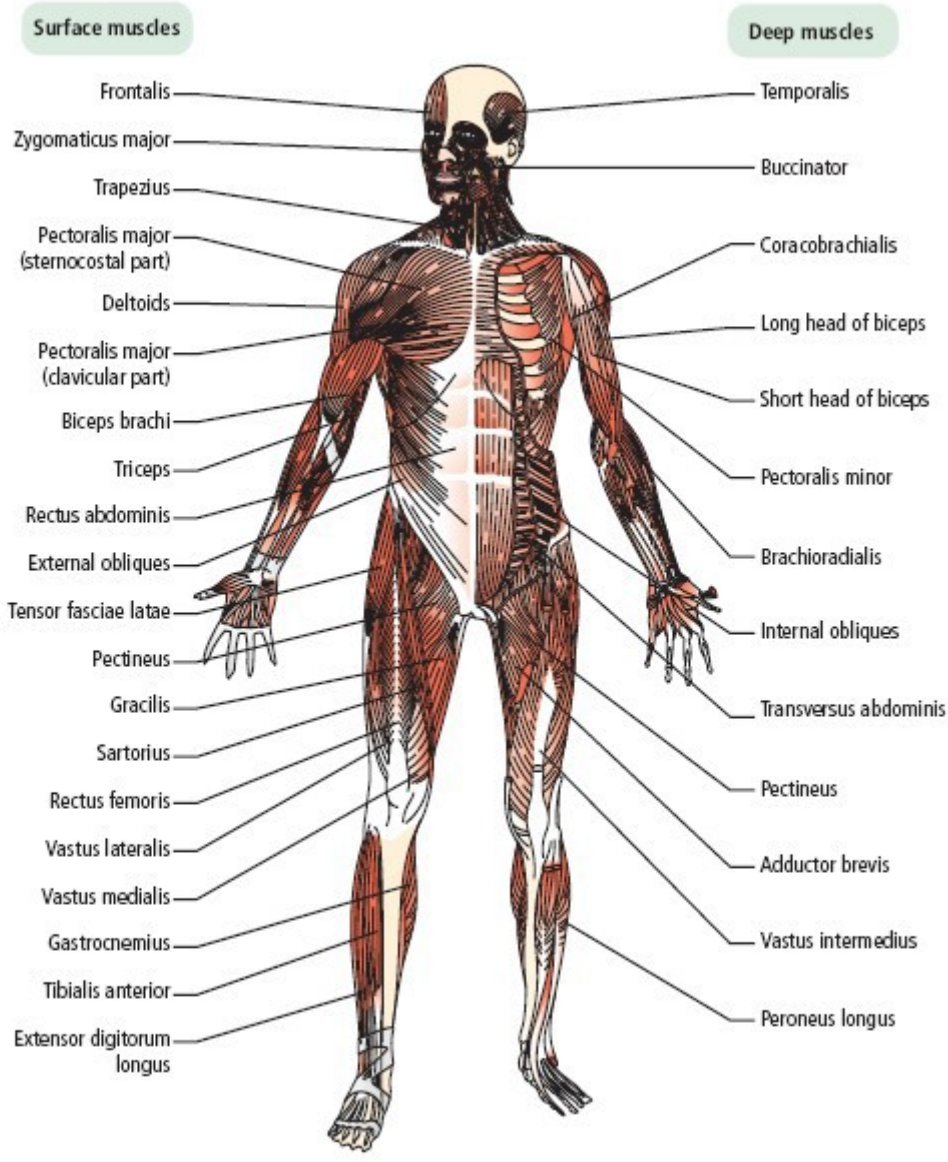
Increases blood supply and oxygen to the muscles.

Helps to relieve pain, stiffness and muscle fatigue.

Breaks down Knots due to muscular tension, injuries and poor posture.

Relaxes tense muscles.





Surface muscles

Deep muscles

- Frontalis
- Zygomaticus major
- Trapezius
- Pectoralis major (sternocostal part)
- Deltoids
- Pectoralis major (clavicular part)
- Biceps brachii
- Triceps
- Rectus abdominis
- External obliques
- Tensor fasciae latae
- Pectineus
- Gracilis
- Sartorius
- Rectus femoris
- Vastus lateralis
- Vastus medialis
- Gastrocnemius
- Tibialis anterior
- Extensor digitorum longus
- Temporalis
- Buccinator
- Coracobrachialis
- Long head of biceps
- Short head of biceps
- Pectoralis minor
- Brachioradialis
- Internal obliques
- Transversus abdominis
- Pectineus
- Adductor brevis
- Vastus intermedius
- Peroneus longus

The muscular system

The muscular system is comprised mainly of skeletal or voluntary muscle tissue that is primarily attached to bones.

The other types of muscle tissue are cardiac muscle tissue, found in the wall of the heart, and smooth muscle tissue located in the wall of the stomach and small intestines.

Through contraction, muscle performs three important functions: movement, maintaining posture and heat production.

Voluntary or skeletal muscle tissue consists of muscle fibres held together by fibrous connective tissue and penetrated by numerous tiny blood vessels and nerves.

Voluntary muscle tissue is made up of bands of elastic or contractile tissue bound together in bundles and enclosed by a connective tissue sheath.

Each muscle fibre is enclosed in an individual wrapping of connective tissue called the endomysium.

The muscle fibres are wrapped together in bundles, known as fasciculi, and are covered by the perimysium (fibrous sheath), which are then gathered to form the muscle belly (main part of the muscle) with its own sheath – the fascia epimysium.

Each skeletal muscle fibre is made up of thin fibres called myofibrils, made up of two different types of protein strands called actin and myosin. This gives skeletal muscle its striated or striped appearance. Muscle fibre contraction results from a sliding movement within the myofibrils in which actin and myosin filaments merge.

Skeletal muscle is moved as a result of nervous stimulus which they receive from the brain via a motor nerve. Each nerve fibre ends in a motor point, the end portion of the nerve, and is the part through which the stimulus is given to contract.

The muscle cells in smooth or involuntary muscle are spindle-shaped and tapered at both ends, with each muscle cell containing one centrally located oval-shaped nucleus.

Smooth muscle contracts or relaxes in response to nerve impulses, stretching or hormones.

Cardiac muscle, found only in the heart, resembles skeletal muscle in that it is striated. However, it is branched in structure and has intercalated discs between each muscle cell.

The contraction of cardiac muscle is regulated by nerves and hormones. During muscular contraction a sliding movement occurs within the contractile fibres (myofibrils).

The actin filaments move in towards the myosin and cause the muscle fibres to shorten and thicken.

During relaxation the muscle fibres elongate and return to their original shape.

The energy needed for muscle contraction comes from glycogen (stored in the liver and the muscles) and oxygen.

If insufficient oxygen is available to a working muscle a waste product called lactic acid forms which can cause a muscle to ache.

The term muscle fatigue is defined as the loss of ability of a muscle to contract efficiently due to insufficient oxygen, exhaustion of glucose and the accumulation of lactic acid.

During exercise the circulatory and respiratory systems adjust to cope with the increased oxygen demands of the body; more blood is distributed to the working muscles and the rate and depth of breathing is increased.

When muscle tissue is warm, muscle contraction will occur faster due to the increase in circulation and acceleration of chemical reactions. Conversely, when muscle tissue is cooled, the chemical reactions and circulation slow down.

The term muscle tone is the state of partial contraction of a muscle to help maintain body posture.

Good muscle tone can be recognised by the muscles appearing firm and rounded. Poor muscle tone may be recognised by the muscles appearing loose and flattened.

Tendons are tough bands of white fibrous tissue that link muscle to bone. Unlike muscle they are inelastic and therefore do not stretch. Ligaments are strong, fibrous, elastic tissues that link bones together and therefore stabilise joints.

Fascia consists of fibrous connective tissue that envelops a muscle and provides a pathway for nerves, blood vessels and lymphatic vessels. Fascia plays a key role in maintaining the 'health' of a muscle. Muscle attachments are known by the terms origin and insertion. The origin is the end of the muscle closest to the centre of the body and the insertion is the furthest attachment. The insertion is generally the most movable point and the point at which the muscle work is done.

In the coordination of movement, muscles work in pairs of groups. Muscles are classified by functions as agonists (prime movers), antagonists, synergists and fixators (stabilisers).

- **Antagonists** are two muscles or sets of muscles which pull in opposite directions to each other, with one relaxing to allow the other to contract.
- **Agonist/prime mover** is known as the main activating muscle.

- **Synergist** refers to muscles that are on the same side of a joint that work together to perform the same movements.
Muscular contractions can be isometric or isotonic.

- **Isometric contraction** is when the muscle works without actual movements (postural muscles).

- **Isotonic contraction** is when the muscle's force is considered to be constant but the muscle length changes.

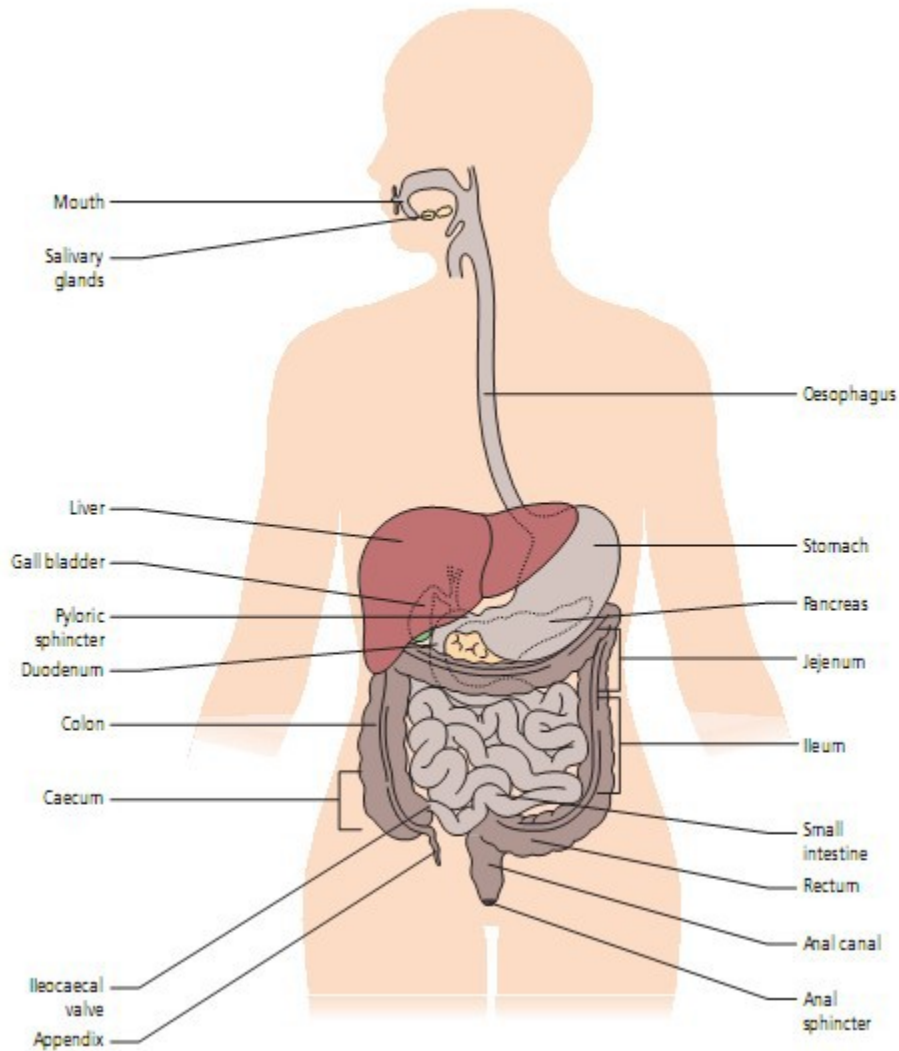
- There are two types of isotonic contraction: concentric contractions (towards the centre) and eccentric contractions (away from the centre).

The effects of Reflexology on the digestive system

Helps to promote the movement of waste matter in the colon

Helps to relieve flatulence and constipation

Helps to relieve the effects of irritable bowel syndrome and intestinal spasms



The Digestive System

The digestive system consists of the mouth, Pharynx, Oesophagus, Stomach, the Small Intestine, Pancreas, Large Intestine, Rectum & Liver.

Its function is to change the food that we eat into small, simple molecules that can be absorbed into the bloodstream and is then used by the body to produce energy or for repairing or growing. The digestive tract is more than 10 metres long and food takes an average of 24 hours to pass through the digestive tract.

Effects of Reflexology on the circulatory system

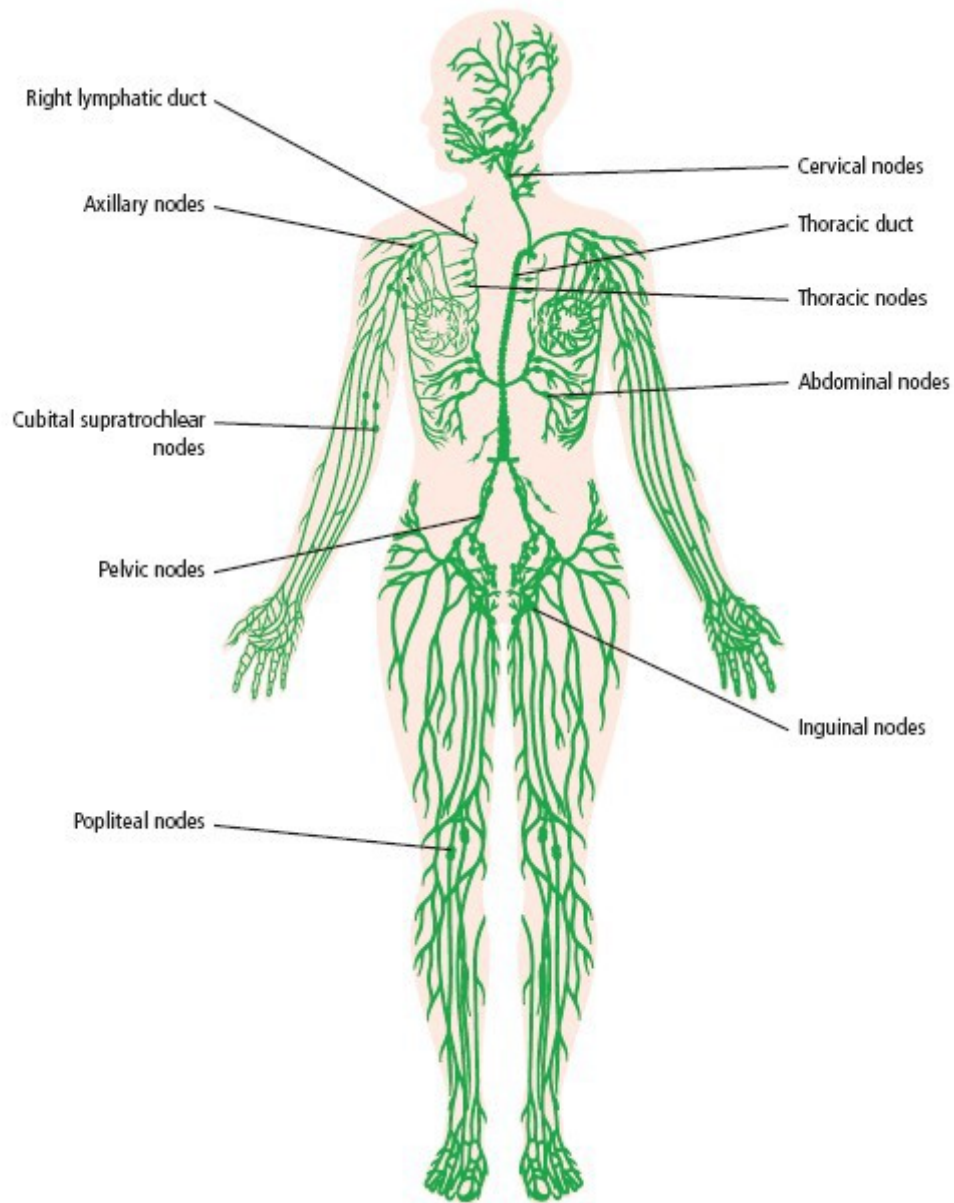
Increases fresh oxygenated blood and nutrients to the area and assisting the elimination of toxins.

May help to reduce high blood pressure and raise low blood pressure as reflexology helps to re-balance the body.

Effects of Reflexology on the Lymphatic System

Helps to speed up the lymph flow which helps to detoxify the body and improve its immunity

Can help to reduce fluid retention and improve lymph flow



The Lymphatic System

The lymphatic system is closely associated with the cardiovascular system. It assists the blood by draining the tissues of excess fluid and returning the fluid from the tissues back to heart; this helps to maintain blood volume and blood pressure and to prevent oedema (waterlogging of the tissues).

The lymphatic system also plays an important role in the body's immune system, as the lymph nodes fight infection and generate antibodies. The lymphatic system also absorbs the products of fat digestion through the intestinal lymph vessels called the lacteals. Lymph is a clear, colourless, water fluid derived from tissue fluid and contained within lymph vessels. It is similar in composition to blood, except that it has a lower concentration of plasma proteins.

The circulatory pathway of lymph begins with lymphatic capillaries which lie in the tissue spaces between the cells. Tissue (interstitial) fluid drains into lymphatic capillaries and the excess fluid becomes lymph.

Lymphatic capillaries merge to form larger vessels called lymphatic vessels which convey lymph in and out of structures called lymph nodes. The main groups of lymph nodes relating to the head and neck include: deep cervical, superficial cervical, submandibular, occipital, mastoid and parotid nodes.

The main group of lymph nodes relating to the body include: superficial cervical, deep cervical, axillary, supratrochlear, thoracic, abdominal, pelvic, inguinal and popliteal nodes.

Lymph passes through at least one node where it is filtered of cell debris, microorganisms and harmful substances.

Once filtered, the lymph is collected into two main ducts: thoracic duct (the largest duct) which collects lymph from the left side of the head and neck, the left arm, lower limbs and abdomen, and the right lymphatic duct, which collects lymph from the right side of the head and neck and the right arm. The collected lymph is then drained into the venous system via the right and left subclavian veins. Other lymphatic organs include the spleen, tonsils and the thymus gland. Immunity is the ability of the body to resist infection and disease by the activation of specific defence mechanisms.

There are two types of immunity: specific and non-specific.

■ **Non-specific immunity is programmed genetically from birth and includes mechanical barriers (skin and mucous membrane), chemicals, inflammation, phagocytosis and fever.**

■ **Specific immunity involves interaction between an antigen and an antibody. An antigen is any substance that the body regards as foreign or potentially dangerous, and against which it produces an antibody.**

■ **An antibody is a specific protein produced to destroy or suppress antigens.**

There are two types of immune response produced by different types of lymphocytes: – Humoral immunity – involving B lymphocytes which produce free antibodies that circulate in the bloodstream. – Cell-mediated immunity – effected by helper T-cells, suppressor T cells and natural killer (NK) cells that recognise and respond to certain antigens to protect the body against their effects. Immunisation is when the body is artificially stimulated into producing antibodies.

An allergic reaction may occur when a foreign substance, or antigen, enters the body. An allergic reaction can only occur if the person has already been exposed to the antigen at least once before and has developed an antibody to it.

Antibodies are located on the cells in the skin or mucous membranes of the respiratory and gastrointestinal tracts. Typical antigens include pollen, dust, feathers, wool, fur, certain foods and drugs.

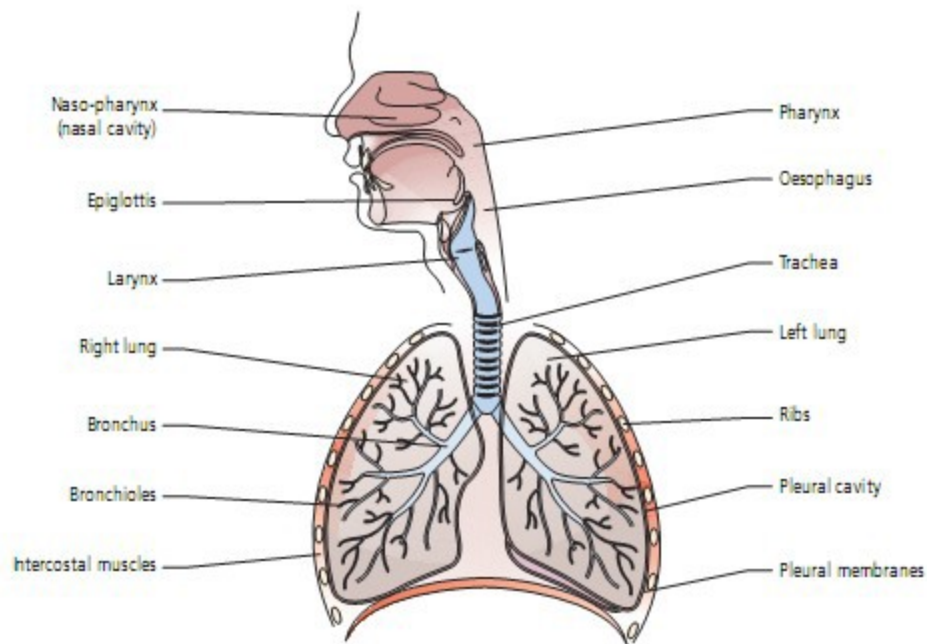
Effects of Reflexology on the Respiratory system

Helps to relax chest muscles and improve breathing.

Increases the blood circulation to improve the condition of the lungs.

Working on the diaphragm has a deep relaxing effect on the body as a whole.

Helps to unblock sinuses.



The respiratory organs include the nose, nasopharynx, pharynx, larynx, trachea, bronchi, bronchioles and lungs.

They act with the cardiovascular system to supply oxygen and remove carbon dioxide from the blood.

The nose is lined with cilia and mucous membrane and is adapted for warming, moistening and filtering air, and senses smell.

Smell is perceived by specialised olfactory cells which connect directly with the olfactory bulb in the brain.

The pharynx or throat connects the nasal cavity to the larynx.

As well as providing an air passage between the nasal cavity and larynx, the pharynx also serves as a food passage for the digestive system.

The larynx is a short passage that connects the pharynx with the trachea and contains the vocal cords.

The trachea, or windpipe, is made up mainly of cartilage and passes down into the thorax to connect the larynx with the bronchi, which pass into the lungs.

The lungs are situated in the thoracic cavity on either side of the heart. Internally the lungs consist of tiny air sacs called alveoli which provide a very large surface area for the exchange of the gases oxygen and carbon dioxide. The interchange of gases occurs as a result of simple diffusion.

During inhalation, oxygen is taken in through the nose and mouth, along the trachea and bronchi to the lungs, where it diffuses through a thin film of moisture lining the alveoli. Oxygen then diffuses across the permeable membrane surrounding the alveoli to be taken up by the red blood cells, and oxygen-rich blood is carried to the heart and pumped to the cells of the body.

Carbon dioxide collected from respiring cells diffuses from the capillary walls into the alveoli, passes through the bronchi and trachea and is exhaled through the nose and mouth.

Air is moved in and out of the lungs by the combined action of the diaphragm and the intercostal muscles.

During inspiration the combined contraction of the diaphragm and the external intercostals increase the volume of the thoracic cavity, which decreases the pressure inside the thorax so that air enters the lungs.

The process of expiration is passive and is brought about by the relaxation of the diaphragm and the external intercostals and the elastic recoil of the lungs.

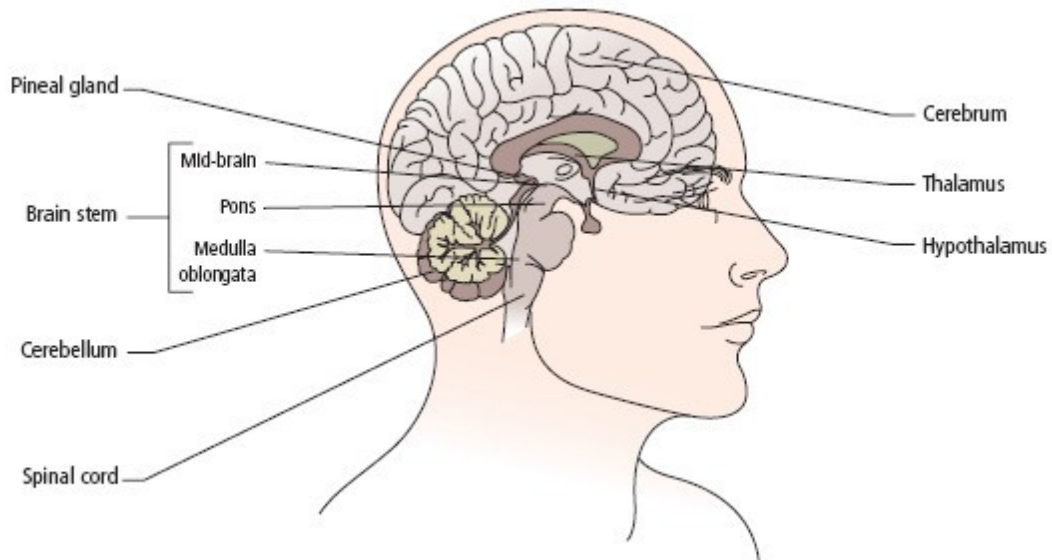
Effects of Reflexology on the nervous system

Helps to release Endorphins to sooth pain

Working the brain area will affect the whole of the nervous system.

Working the solar plexus can help to improve the functions of many of the organs.

It helps to enhance the nervous system.



The Nervous System

The nervous system helps regulate homeostasis and integrates all body activities by sensing changes, interpreting them and reacting to them.

- The central nervous system (CNS) consists of the brain and the spinal cord.
- The peripheral nervous system (PNS) consists of the somatic nervous system, which is made up of the cranial and spinal nerves, and the autonomic (involuntary) nervous system.

There are two types of nervous tissue:

- Neurone: functional unit of the nervous system which is designed to receive stimuli and conduct impulses.
- Neuroglia: specialised type of connective tissue that supports, nourishes and protects neurones.

Neurones have two major properties: excitability and conductivity. Most nerve cells, or neurones, consist of a cell body, many dendrites and usually a single axon.

There are three main types of neurones: sensory, motor and mixed.

- Sensory neurones conduct impulses from receptors to the CNS.
- Motor neurones conduct impulses to effectors (muscles).
- Mixed neurones conduct impulses to other neurones.

The junction where nerve impulses are transmitted from one neurone to another is called a synapse. Impulses are relayed from one neurone to another by a chemical transmitter substance which is released by the neurone to carry

impulses across the synapse to stimulate the next neurone.

The central nervous system (brain and spinal cord) is covered by a special protective type of connective tissue in three layers called the meninges.

The parts of the brain include the cerebrum, thalamus, hypothalamus, pituitary gland, pineal gland, cerebellum and the brain stem. The cerebrum is the largest part of the brain and is concerned with all forms of conscious activity. It has sensory areas which control

vision, touch, hearing, taste and smell, motor areas which control voluntary movements and association areas which control reasoning, memory and emotions.

- The thalamus is a relay and interpretation centre for all sensory impulses, except olfaction.
- The hypothalamus controls hunger, thirst, temperature regulation, anger, aggression, hormones, sexual behaviour, sleep patterns and consciousness.
- The pineal gland is involved in the regulation of circadian rhythms and is thought to influence mood.
- The cerebellum is concerned with the coordination of skeletal muscles, muscle tone and balance.
- The brain stem contains the midbrain, the pons and the medulla oblongata.

The midbrain contains certain visual and auditory reflexes that coordinate head and eye movements with things seen and heard. The pons relays messages from the cerebral cortex to the spinal cord, and helps regulate breathing.

The medulla oblongata contains control centres for the heart, lungs and intestines.

The spinal cord is an extension of the brain stem and its function is to relay impulses to and from the brain.

A reflex action is a rapid and automatic response to a stimulus, without any conscious action of the brain.

The peripheral nervous system contains all the nerves outside of the central nervous system and can be subdivided into the somatic nervous system and the autonomic nervous system.

- The somatic nervous system contains 31 pairs of spinal nerves (nerves originating from the spinal cord) and 12 pairs of cranial nerves (nerves originating from the brain). The 31 pairs of spinal nerves are: 8 cervical, 12 thoracic, 5 lumbar, 5 sacral and 1 coccygeal. Each spinal nerve is divided into several branches, forming a network of nerves or plexuses which supply different parts of the body.

The 12 pairs of cranial nerves connect directly to the brain. They are olfactory, optic, oculomotor, trochlear, trigeminal, abducens, facial, vestibulocochlear, glossopharyngeal, vagus, accessory and hypoglossal.

The autonomic nervous system is the part of the nervous system that controls the automatic body activities of smooth and cardiac muscle and the activities of glands. It is divided into the sympathetic and parasympathetic divisions.

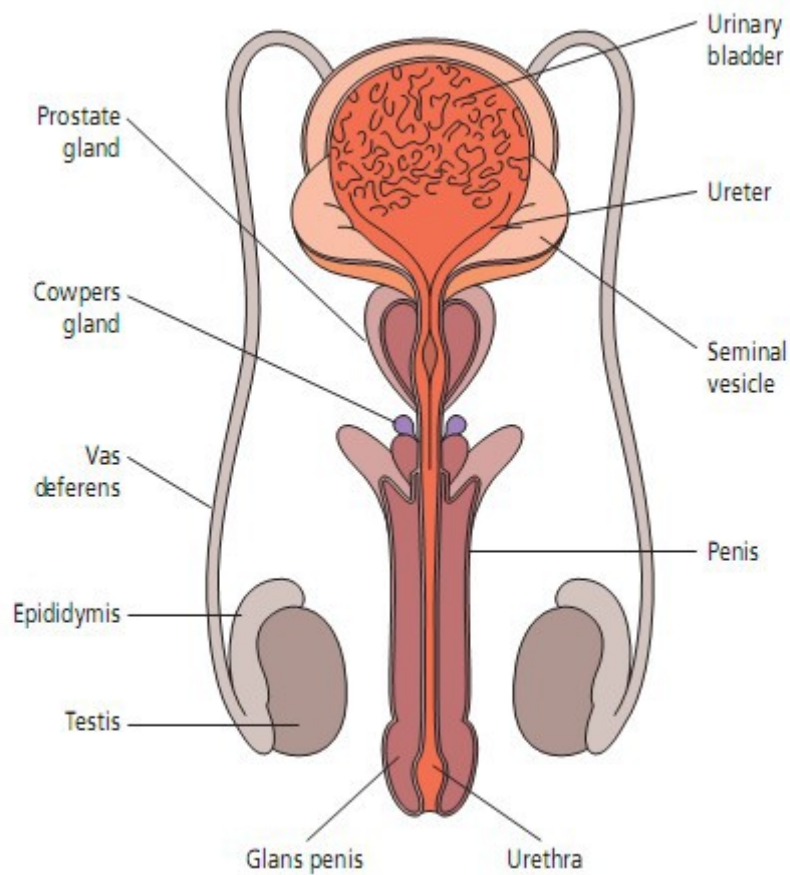
- **The activity of the sympathetic system is to prepare the body for expending energy and dealing with emergency situations.**

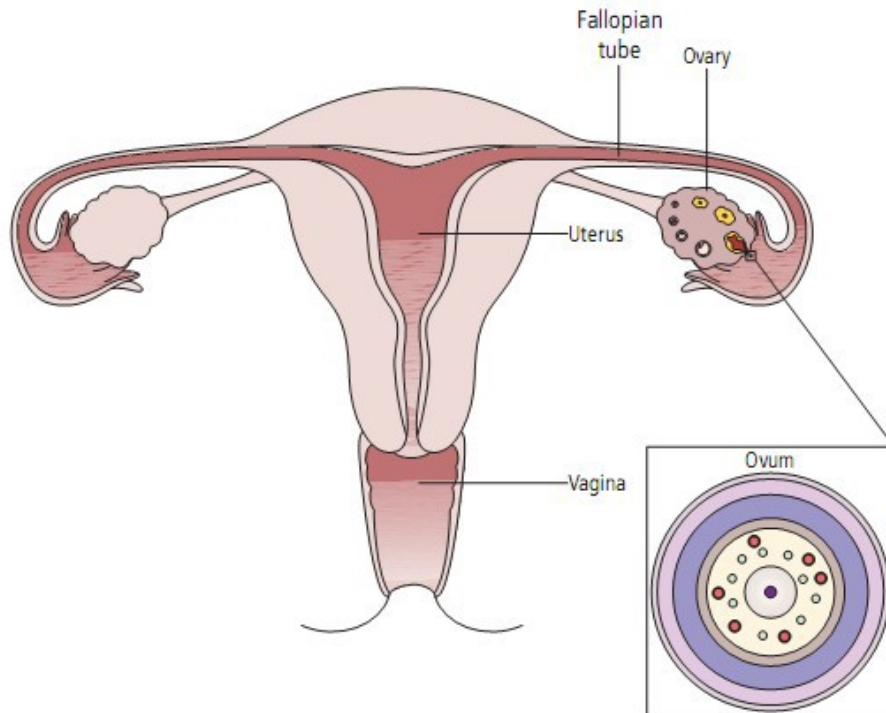
- **The parasympathetic system balances the action of the sympathetic division by working to conserve energy and create the conditions needed for rest and sleep. It slows down the body processes except digestion and the functions of the genito-urinary system.**

The sense organs include the nose (olfaction), the tongue (taste), the eyes (sight), the ears (hearing) and the skin (touch).

Effects of Reflexology on The reproductive system

Helps to improve the health of the reproductive organs by helping to bring oxygen and nutrients and removing waste products.
Helps to improve lymphatic drainage and helps to reduce fluid retention.





The Reproductive System

These systems within the male and the female enable new human life to be created.

Male reproductive system

This consists of two testes, and vas deferens which connects the testes to the urethra. It also consists of the prostate which lies under the bladder.

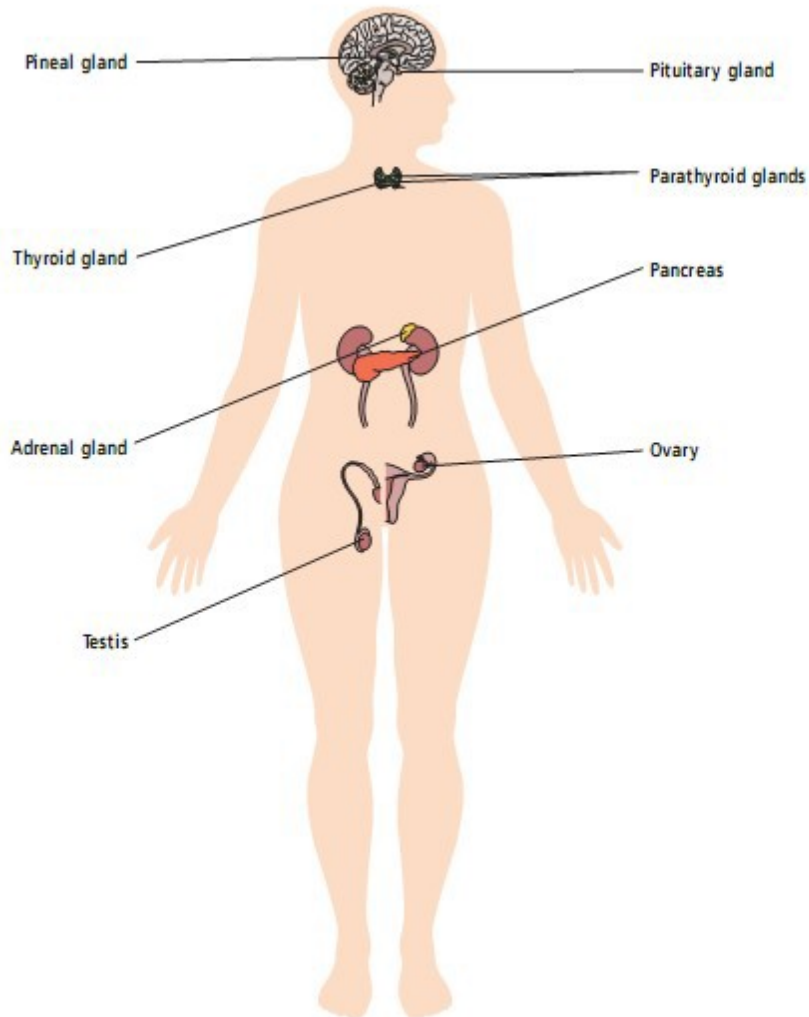
Female reproductive system

This consists of two ovaries that release the hormones oestrogen and progesterone. The fallopian tubes connects the ovaries to the womb.

Effects of Reflexology on the endocrine system

Helps to reduce the amount of stress hormones released
Can help to regulate menstruation as it re-balances and distresses the body.

Helps to balance the control of hormones released.



The Endocrine System

The endocrine system is responsible for controlling the body's functions and works in conjunction with the nervous system. It consists of endocrine or ductless glands, which are also referred to as organs of internal secretion as they secrete chemical substances called hormones directly into the bloodstream.

The endocrine glands are composed of millions of cells, each of which makes hormones or chemical messages, which are then transported by the blood to target cells in the body.

The glands of the endocrine system are:

Name: Pineal Gland

Location: In front of the cerebellum

Hormone: Melatonin

Function: Informs the brain when it is day or night.

Inhibits growth and maturation of the sex glands (Gonads) until puberty.

Name: Pituitary Gland (Master Gland)

Location: middle of the brain

Hormone: It releases several hormones that controls most of the endocrine glands.

Function: It secretes hormones that affect growth, kidney function, delivery of babies and milk production.

Name: Hypothalamus

Location: Next to the Pituitary gland.

Function: It is the link between the nervous system and the endocrine system.

Name: Thyroid Gland

Location: It has two lobes situated on either side of the trachea and by a narrow strip of tissue.

Hormone: Thyroxine

Function: Regulates the body's metabolic rate and influences the growth of the body.

Name: Parathyroid Gland

Location: There are two pairs of parathyroid glands situated on either side of the posterior surface of the thyroid gland.

Function: Together with the thyroid gland it regulates the levels of calcium in the blood. The thyroid lowers the amount of calcium and

the parathyroid controls calcium metabolism.

Name: Thymus Gland

Location: Behind the sternum and in front of the heart.

Function: A lymph gland. Thought to be important in helping the process of cellular immunity by processing T and B cells. Which are lymphocytes that help with cellular immunity.

Name: Adrenal Glands

Location: Immediately above the kidneys.

Hormone: Adrenal Cortex – Steroids

Adrenal Medulla – Adrenaline & Noradrenaline

Function: Adrenal Cortex – balancing water, blood sugar levels and electrolyte in the body; as well as sexual development.

Adrenal Medulla – Known as the ‘fight or flight’ hormone to prepare the body to cope with danger and stress.

Name: Pancreas

Location: The abdomen, attached to the duodenum (within the colon.)

Function: Secretes Insulin and pancreatic juices to control sugar levels and to aid digestion.

Name: Ovaries & Testes (Gonads)

Function: Testes – Secretes androgens (testosterone & Oestrogen in small amounts) for the development of the sexual characteristics of the male.

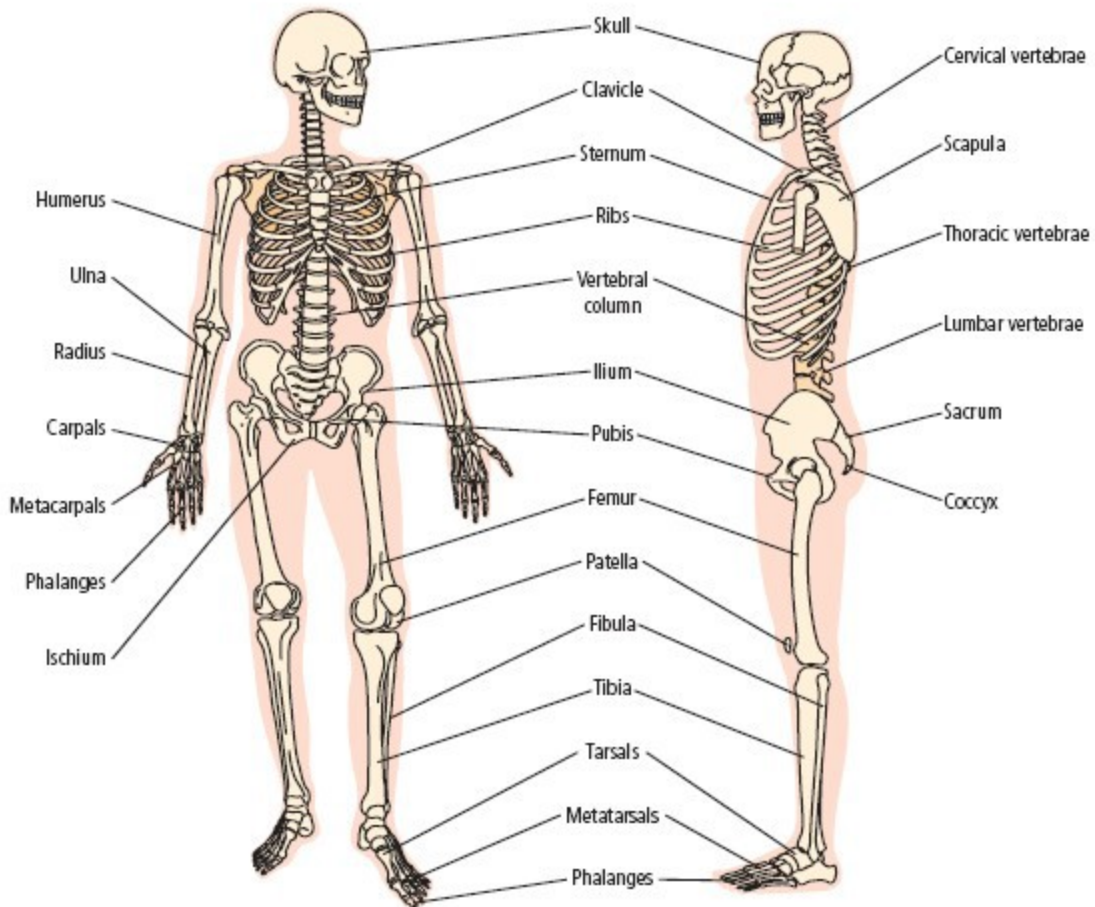
Ovaries – Secretes oestrogen and progesterone and small amounts of androgens. They regulate menstruation and the development of the sexual characteristics of the female.

The effects of Reflexology on the skeletal system

It helps to ease stiff joints

It can help to loosen scar tissue surrounding the joints

By increasing the blood circulation it increases the nutrient supply to the bones.



The functions of the skeleton are:

**Support / shape
Attachment for muscle and tendons
Development of blood cells
Protection
All movements of the body
Mineral storage.**

**Bone is the hardest type of connective tissue in the body.
There are two types of bone tissue: compact (hard) and cancellous (spongy).
The process of bone development is called ossification and is not complete until about the 25th year of life.**

Cartilage is a strong and rigid type of connective tissue that cushions and supports bone.

A ligament binds bones to other bones.

**A tendon attaches a muscle to bone.
Bones are classified according to shape: long, short, flat, irregular or sesamoid.
The axial skeleton forms the main core of the body and consists of the skull, vertebral column, sternum and ribs.**

**There are eight bones of the skull, including one frontal, two parietal, two temporal, one sphenoid, one ethmoid and one occipital.
There are 14 bones of the face, including the 2 maxillae, 1 mandible, 2 zygomatic, 2 nasal, 2 lacrimal, 2 turbinate, 1 vomer and 2 palatine.
The appendicular skeleton supports the appendages or limbs and consists of the shoulder girdle, bones of the upper and lower limbs, and bones of the pelvic girdle.**

**The shoulder girdle consists of two scapulae (posteriorly) and two clavicle bones (anteriorly).
The upper limb consists of the humerus in the upper arm, radius and ulna in the forearm,**

**A joint is a point of contact between two or more bones.
Joints hold bones together via ligaments and provide flexibility by facilitating movement. Structurally joints are classified as fibrous, cartilaginous or synovial.**

Fibrous joints are immovable: an example is the sutures of the skull bones.

Cartilaginous joints are slightly movable: an example is between the vertebrae of the spine.

Synovial joints are freely movable joints and have several different types: ball and socket (hip), hinge (knee and elbow), condyloid (wrist), gliding (between the vertebrae), pivot (between the first and second cervical vertebrae) and saddle (between the trapezium and metacarpal of the thumb).

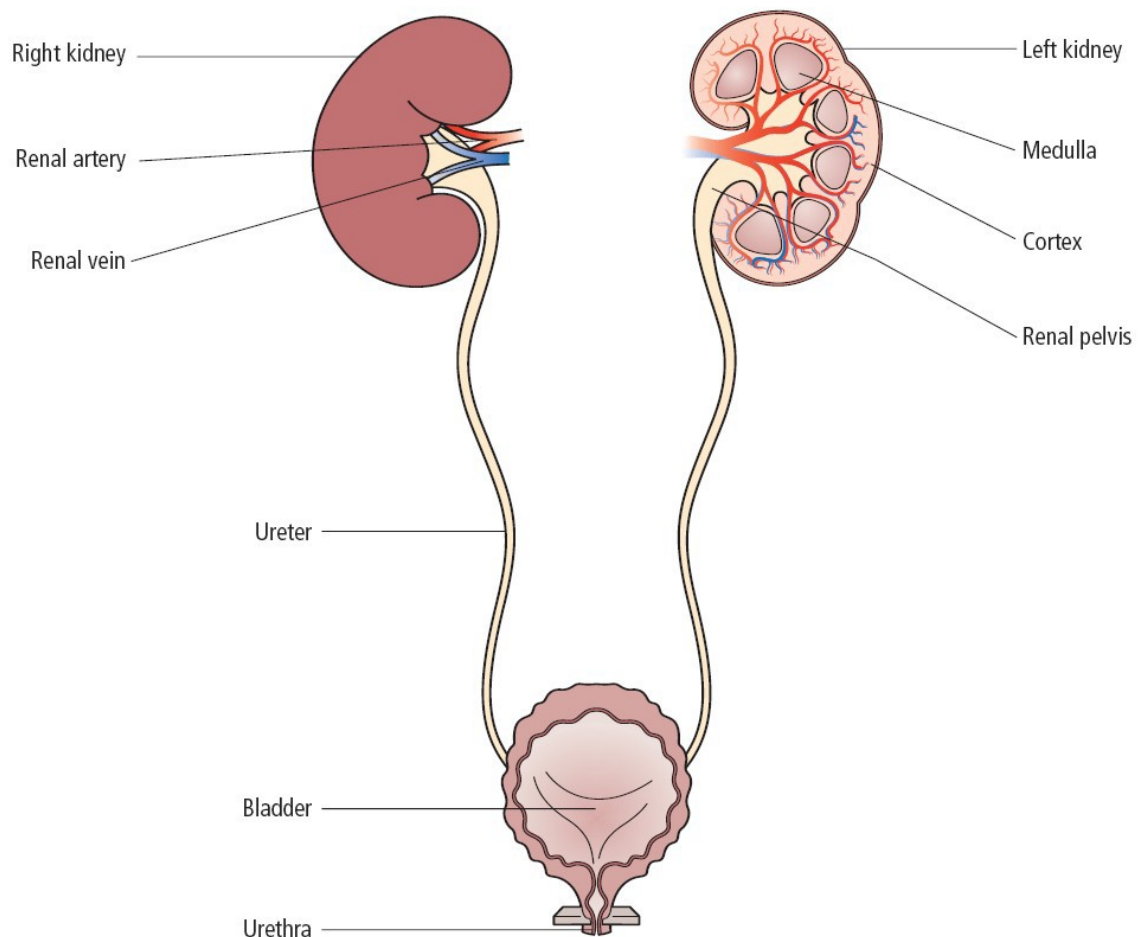
Features of a synovial joint include a joint (synovial) cavity, a fibrous joint capsule and a synovial membrane containing synovial fluid.

Effects of Reflexology on the urinary system

It causes more urine to pass through the bladder due to the increase in the flow of lymph.

It helps to improve the function of the bladder.

It helps to improve the function of the kidneys.



The organs that contribute to the elimination of wastes in the body are the kidneys, lungs, skin and the digestive system.

The organs of the urinary system are the kidneys, ureters, urinary bladder and urethra.

The kidneys are bean-shaped organs lying on the posterior wall of the abdomen.

The kidney has two main parts: the outer cortex where fluid is filtered from blood, and the inner medulla, which is the area where some materials are selectively reabsorbed into the bloodstream.

The cortex and the medulla contain tiny blood filtration units called nephrons.

Urine is produced by three processes: filtration, selective reabsorption and collection.

Blood to be processed enters the kidneys via the renal artery. Filtration takes place inside a network of capillaries in the nephron called the glomerulus.

The sac encasing the glomerulus is called the Bowman's capsule. The filtered liquid then continues through a series of twisted tubes called the convoluted tubules, to the loop of Henle and the distal convoluted tubule, before passing to the collecting duct and to the renal pelvis.

The composition of the filtered liquid alters as it flows through the convoluted tubules.

Some substances in the filtrate, like glucose, amino acids, mineral salts and vitamins, are reabsorbed into the bloodstream via the renal vein.

From the distal convoluted tubule the filtrate then flows into the collecting duct (as urine) and passes to the pelvis of the kidney to be passed to the ureter and bladder.

The composition of urine is 96% water, 2% urea and 2% other substances (uric acid, creatinine, sodium, potassium, phosphates, chlorides, sulphates, excess vitamins and drug residues).

Functions of the kidneys include filtration of impurities and metabolic waste from blood, regulation of water and salt balance, formation of urine, regulation of blood pressure and volume.

The ureters are muscular tubes that transport urine from the pelvis of the kidney to the urinary bladder.

The urinary bladder is a pear-shaped sac which lies in the pelvic cavity, behind the symphysis pubis. It functions as a storage organ for urine.

The urethra is a canal which extends from the neck of the bladder to the outside of the body.

It serves as a tube through which urine is discharged from the bladder to the exterior, and as a conducting channel for semen in men.