



Welcome!

Baby Massage Course for Instructors

Insert date and place here (e.g. Singapore Jan 2016)



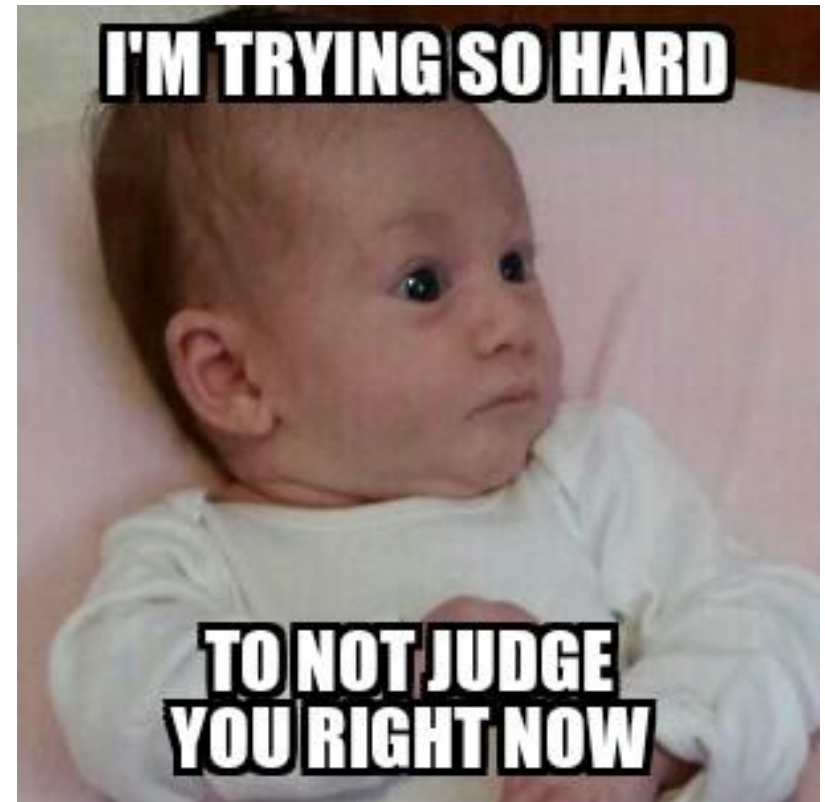
**4 corners
ice breaker**

- Name
- What do you do for a living?

Hobbies	Favourite place
What attracted you to this course	Something you value in your life



Ground Rules





Who are we?

***Insert teacher's
name and
photo here***



Gayle

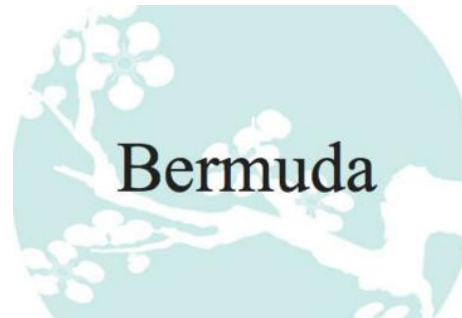
Instructors around the world



Italy

Mexico

Ireland



Malawi

Singapore

Little Blossoms Project



Resources and Community



<http://www.youtube.com/user/Blossomandberry>



General: <http://www.facebook.com/pages/Blossom-Berry-Baby-Massage-Yoga/116163920976>

Insert Facebook page link of correspondent country (if applicable)



@blossomandberry

<https://vimeo.com/blossomandberry/videos> (public videos)

<https://vimeo.com/album/2420532>

Password for album: 04julybabymassage

<https://vimeo.com/album/2435146>

Password for album: 04july



We will upload all the materials in their electronic versions using Glip.
We will use this platform to keep in touch and keep sharing good practice.

What we will learn...

Day 1

- ✓ Professionalism, ethics and the role of the instructor
- ✓ Origins of baby massage
- ✓ Anatomy and physiology of the infant
- ✓ Infant sensory awareness
- ✓ Benefits of positive touch and research studies relating to baby massage
- ✓ Setting up your class, oils and creating the right environment for baby massage
- ✓ Baby massage routine

Day 2

- ✓ Teaching techniques for successful learning
- ✓ Presentation skills and how to face challenging situations
- ✓ Baby massage assessment
- ✓ Marketing and setting up a business



Accreditation

- Course
(face to face)
- Written
assignments
- Case studies



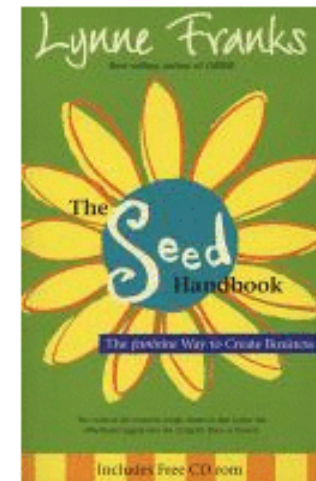
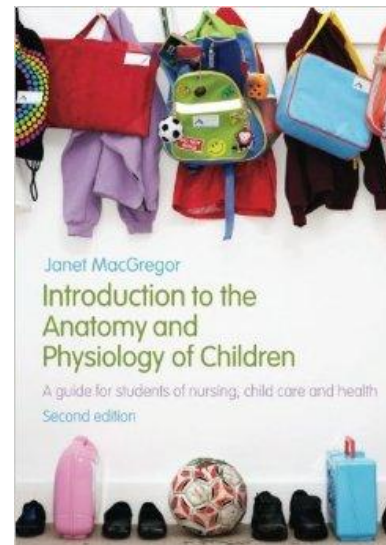
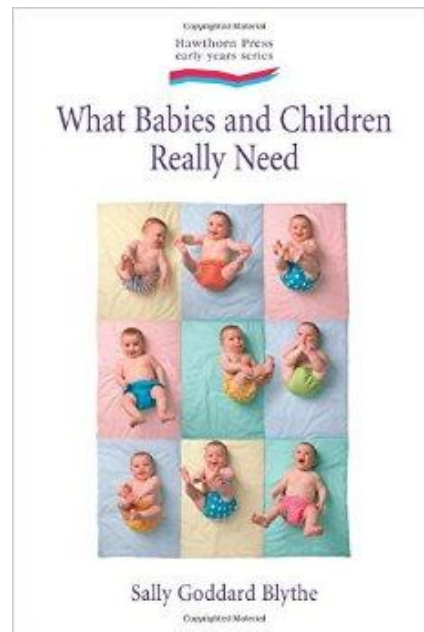
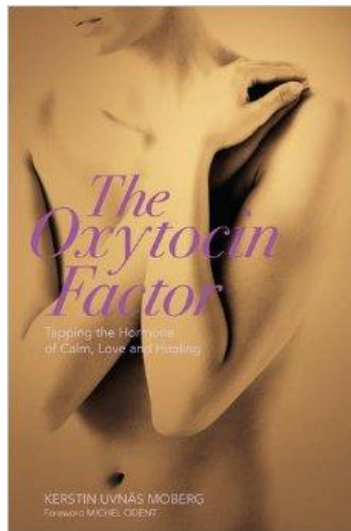
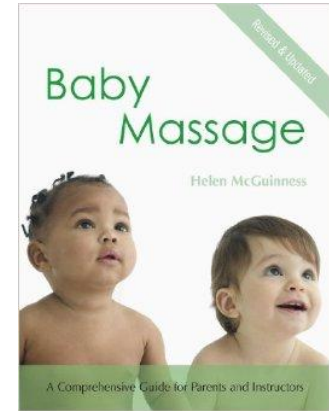
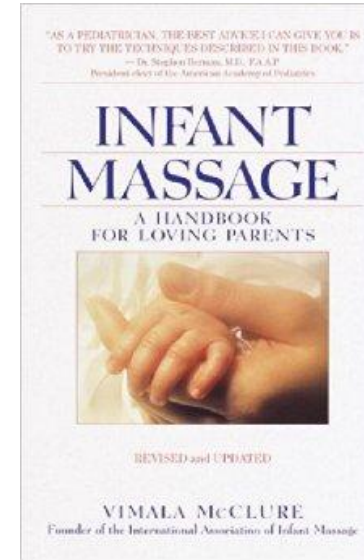
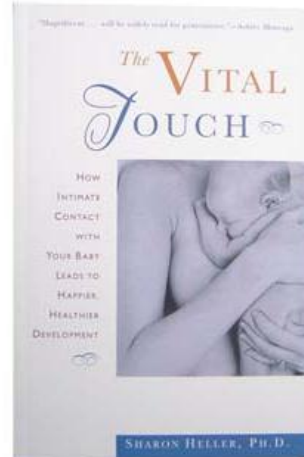
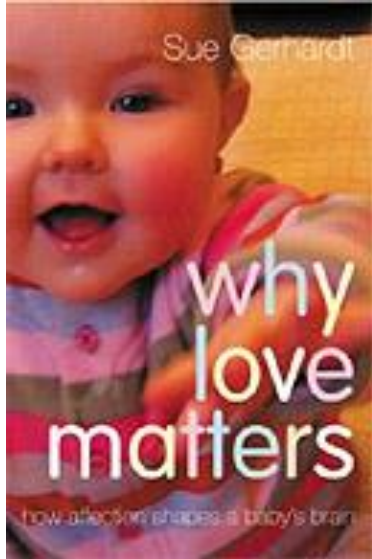
Accreditation



Necessary resources for your classes



Recommended reading



The Blossom & Berry Philosophy



Our classes provide:

- Time for baby
- Relief for colic and support unsettled babies
- Enhance parent/baby communication
- Opportunities for parents to meet the early developmental needs of babies through touch, movement, sight and sound
- Opportunities to enhance the bonding process between carer and baby
- Time for parent and baby to spend together

Classes also aim to:

- Encourage instinctive parenting
- Build confidence
- Enhance a sense of community amongst parents
- Help parents be inspired by baby and understand baby more
- Present an opportunity for time out from a hectic world and domestic/life pressures
- Allow parents to feel “normal” and share experiences
- Teach parents a new skill for life
- Empower parents and help them grow in self belief
- Provide an opportunity to talk about experiences.



Professionalism and Ethics

We are you to respect the following principles as an instructor:

1. The **importance and uniqueness of the parent/child relationship** must always be central to any activities in classes. It must be **respected at all times**
2. During your classes parents should massage with **their own baby**.
3. You may find that a nanny or childminder may ask you to teach him/her baby massage with the baby in their charge. It is possible to do this but the nanny/child minder/third person must have **the written consent of the parent** and it would also be advisable to speak to the parent yourself to make sure that they are aware of what will be going on in the class.



Professionalism and Ethics



Confidentiality



Expert in baby massage
Professional limits



Do not diagnose, make referrals
with appropriate professionals
when applicable



Record keeping (oils, attendance...)
Legal aspects in order (employment, insurance)



Avoid controversial topics



Skills and Abilities



Legal Aspects

- Working as freelance
- Limits of the accreditation (only to give classes to parents and carers)
- Health & Safety
- Consumer legislation
- Professional insurance
- Data protection
- Working from your home



Preparing for your class...

- Necessary equipment
- Find the right place to deliver the classes
- Decide dates and times
- Define price
- Marketing
- Bookings registration
- Setting up the room
- Materials for parents/carers
(oils and handouts)



What is massage?

- Therapeutic practice in which muscles and other soft tissues of the body are manipulated with the aim of improving health and wellbeing.
- Evident benefits in systems: muscular, circulatory, lymphatic, endocrine and nervous.

History of massage...

- **China**

Sui Dynasty 589-617 and Qing Dynasty (1644-1911)

Anmo – antique word that means pressure and friction

Tui Na – of more modern origin, it means press and stretch

Massage in China was commonly incorporated with methods of Acupuncture

- **Japan** – massage was developed through the interpretation of Chinese literature
- **Egypt** – usage of creams and oils (camel fat, almond oil, perfumed oils): as offering to their gods, for embalming and as beauty products
- **India** – oils for cosmetic use, massage for military soldiers, Ayurvedic massage
- **Greece** – Aristotle stated that touch was the most fundamental of all senses. Hippocrates ('father of medicine') described the benefits of massage
- **Romans** – Greek influence. The Emperor Galen wrote at least 16 books related to massage and exercise, he recommended massage to all injured gladiators. Julius Caesar received massage to treat his neuralgia (nerves condition).



History of massage...

- 1517-1590 – **Ambrose Pare** (French doctor, one of the founders of modern surgery), began using massage techniques to treat rigid joints and to treat wounds after operations.

- 1776-1839 – **Per Henrik Ling**

(Swedish physiotherapist and teacher of medicine and gymnastics) (Pehr)

He got inspiration from his trips to China.

Recognised the importance of having anatomy and physiology knowledge before applying massage.



- 1839-1901 – **Johann Georg Mezger** (Dutch masseur) – applies French terminology to name 5 basic massage techniques: *effleurage* (circular stroking movements), *petrissage* (kneading the body), *friction* (deep pressure), *tapotement* (rapid and repeated striking of the body) and *vibration* (trembling movements).

- 1894 (Bond St, London) – The Chartered Society of Physiotherapy

- The term 'Swedish massage' is known in English, Dutch and Hungarian speaking countries. In other places, including Sweden, it is known as 'classic massage'.

- Other types of massage: reflexology, lymphatic, aromatherapy, Ayurvedic



Benefits of Massage



- Promotes healing
- Increases energy levels
- Reduces the recovery time after injury
- Decreases pain
- Encourages relaxation, improves mood and wellbeing in general

- Autism
- Atopic dermatitis / eczema
- ADHD
- Bulimia
- Cystic fibrosis (lung congestion)
- Diabetes
- Arthritis
- Down Syndrome



Baby Massage Origins

- The word 'massage' comes from the Arabic 'to stroke'

Infant massage origins are difficult to trace

- **India** – from generation to generation
- **USA** – 1970s: Vimala McClure, 2000s: Tina Allen
- **UK** – IAIM, Blossom & Berry...
- **Russia** – parents learn baby massage in hospitals
- **Morocco** – henna, butter, mint or some aromatic mixed of marjoram (a type of oregano) is used to massage babies



- **Nepal** – babies are massaged twice per day, using mustard seed oil and breast milk
- **Nigeria** – babies from Borno are welcomed to this world with a massage from the people who visit them after birth
- **Colombia** – 'Kangaroo Care' for premature babies



Anatomy and physiology of the infant



Circulatory System

The circulatory system is formed by the cardiovascular system that carries blood and lymphatic system that carries lymph.

The cardiovascular system consists of the heart, blood and blood vessels. The heart pumps oxygenated blood around the body via arteries, and pumps deoxygenated blood carrying carbon dioxide via the veins.



There are **two types of circulation**:

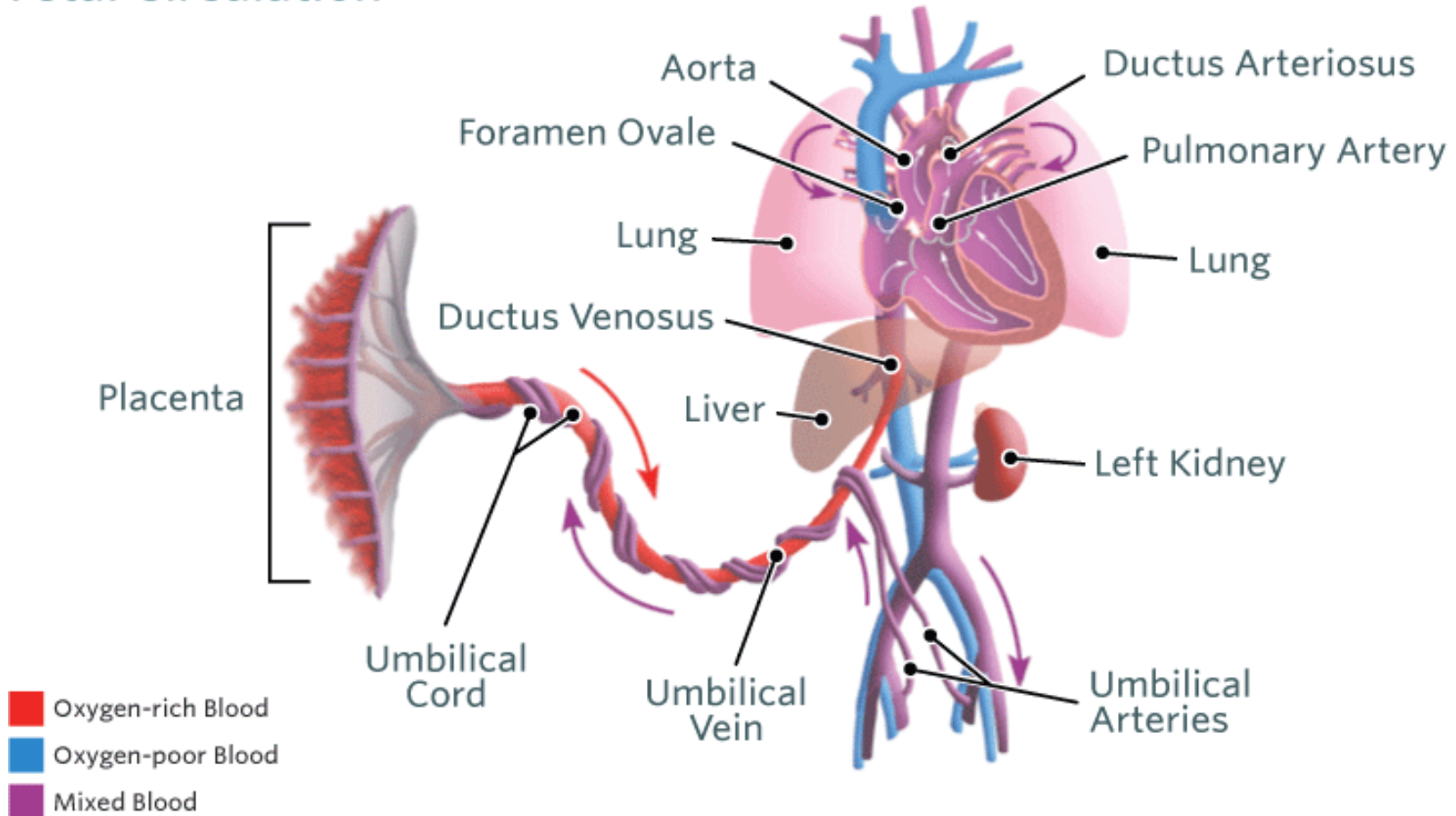
- **Pulmonary** / minor / central – which transports blood to and from the lungs
- **Systemic** / mayor / general – which transports blood to and from the body

Functions:

- ✓ To carry oxygen and nutrients to all body cells
- ✓ Drain waste products to be eliminated by the kidneys via urine or by the lungs when air full of carbon dioxide is exhaled
- ✓ Intervenes in the defence mechanism of the body against diseases
- ✓ Regulates body temperature

Cardiovascular System

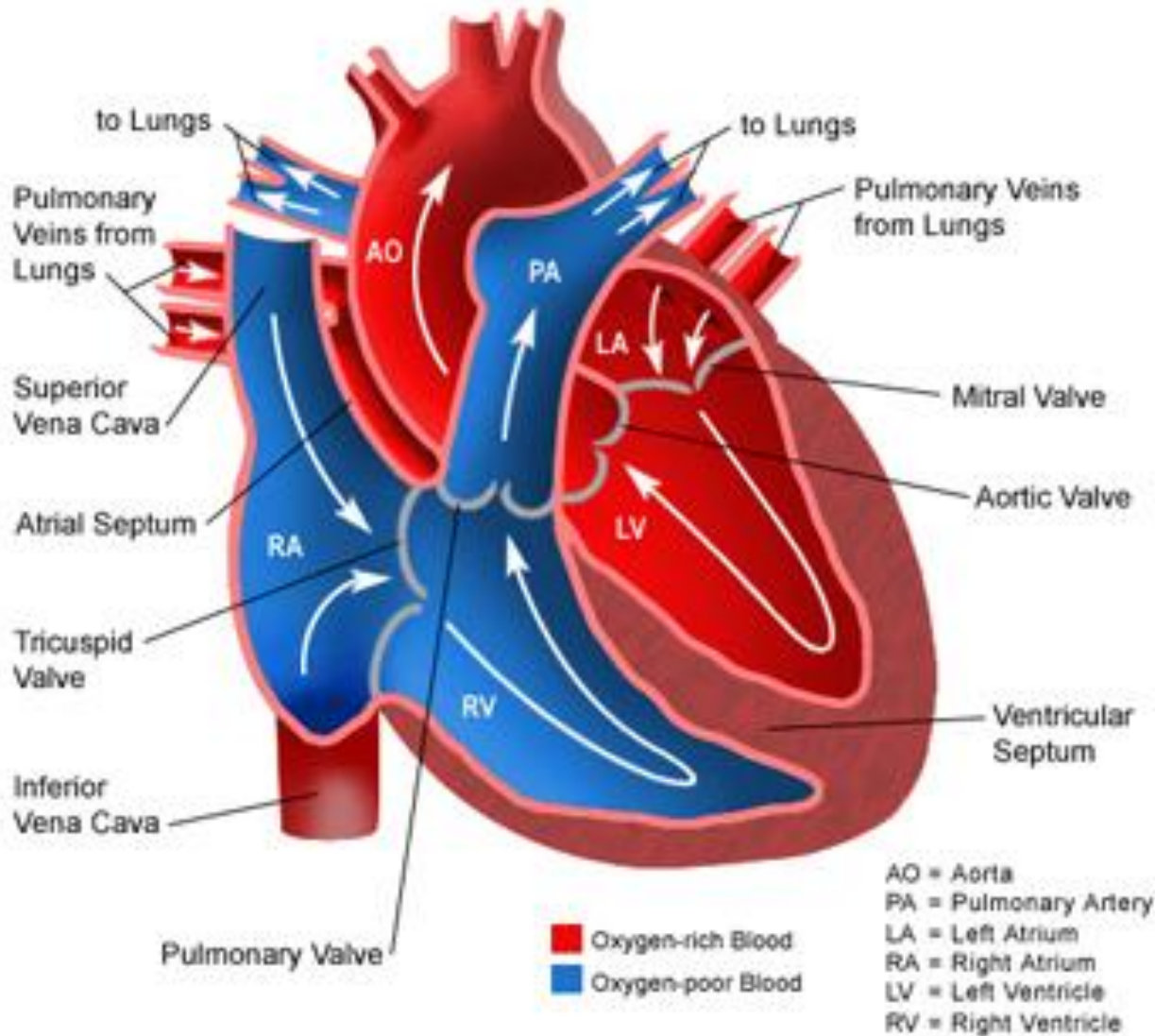
Fetal Circulation



In the womb, the blood circulates through the placenta.

Cardiovascular System

Normal Heart



When the baby is born, the blood starts to circulate through his/her own heart.

Cardiovascular System



The right ventricle of the newborn is thicker than the left one, as the baby adapts to pulmonary breathing, it slims down. At four weeks, both ventricles (right and left) weigh the same.

The weight of the baby's heart doubles in the first year of life, and it grows six times from its original size by the time the child is 9 years old. The growth rhythm decreases 20% from 3 to 15 years of age.

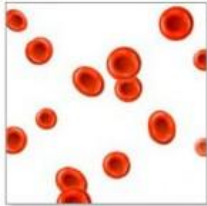
Cardiovascular System



- **Vitamin K** intervenes in blood clotting and its synthesised by a gut bacteria flora. Newborns don't have this flora, besides, they have a low number of red blood cells. That is why babies get a Vitamin K injection when they are born, to prevent hemorrhagic syndrome. The colostrums in breast milk has got high vitamin K content.
- **Iron** is very important to prevent infant anaemia (babies that are breastfed obtain 50% of the recommended dose, bottle fed babies only 10%). A child needs approximately 8mg of iron per day, half than an adult.

Normal amount of
red blood cells

Anemic amount of
red blood cells



Massage helps boosting circulation, removing waste products from the body and transporting fresh oxygen and nutrients to all body tissues.

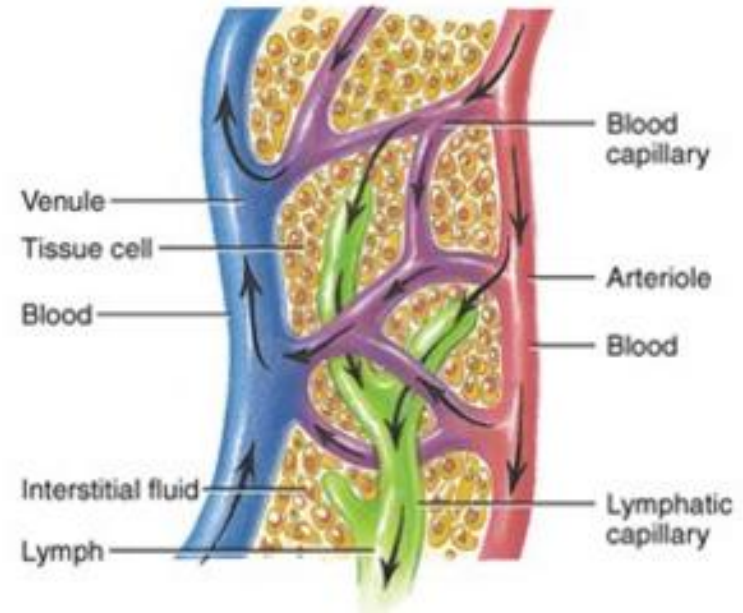


Precaution: massage firmly towards the heart, more gently away from the heart. It is best to obtain medical consent before massaging babies or children with circulatory problems, and if consent is granted, avoid movements away from the heart.

Lymphatic System

Consists of:

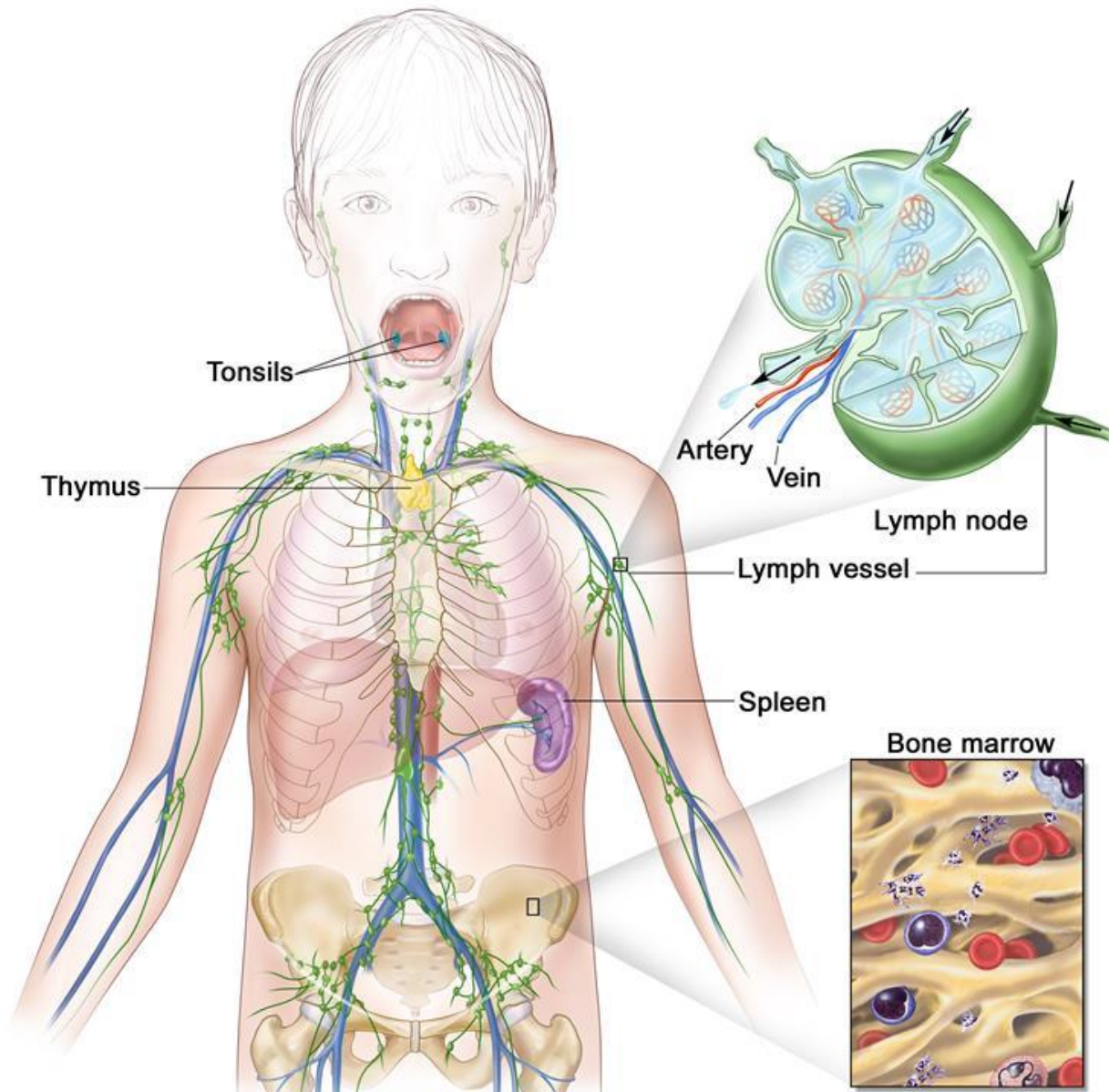
- **Vessels** – structures that transport the lymph.
- **Lymph** – formed by the drainage of excess liquid from the blood vessels to the interstitial space. This excess is picked up by the lymphatic capillaries and ends in the left subclavian vein.
- **Nodes** – small swellings in the lymphatic system where lymph is filtered and lymphocytes are formed so they help the body recognise and fight infections.



The lymphatic organs:

- **The spleen** – located in the upper-left part of the abdomen. Its main function is to filter the blood. It removes old or damaged red blood cells. The spleen also detects viruses and bacteria and triggers the release of lymphocytes.
- **The thymus** - located in the thoracic cavity, just under the neck. It's made up of two lobes of lymphoid tissue. Each lobe has a medulla surrounded by a cortex. The cortex is where immature lymphocytes first go to become T cells, but their maturation finishes in the medulla.

Lymphatic System

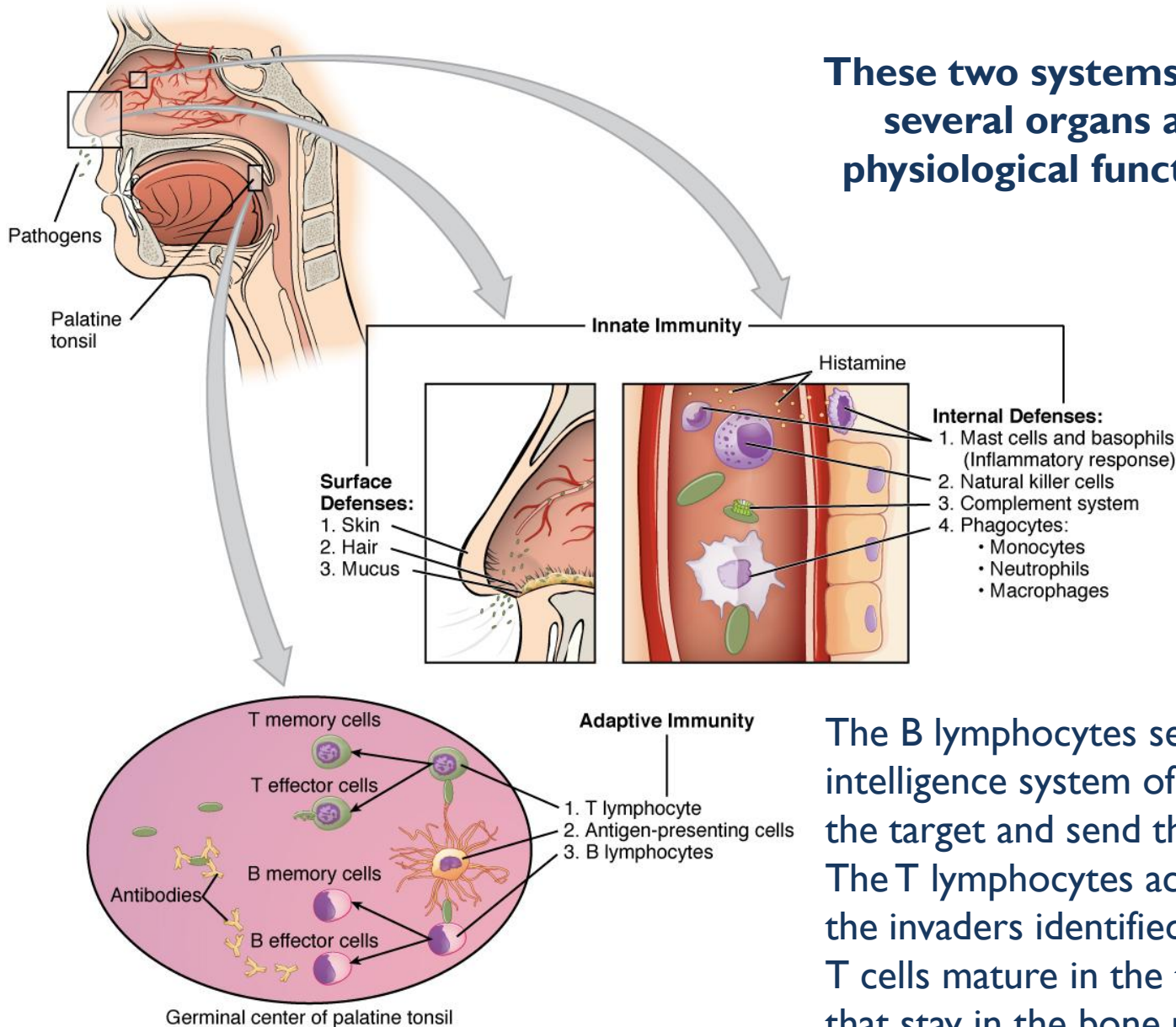


When the lymph doesn't flow correctly, that area of the body can suffer from inflammation due to accumulation of interstitial fluid, this is known as edema.

As well as this fluid, the body can accumulate toxins and waste products which can cause pain, swelling and other issues.

Lymphatic and Immune Systems

These two systems share several organs and physiological functions.



The B lymphocytes serve as the military intelligence system of the body, they identify the target and send the defence to attack it. The T lymphocytes act like soldiers, destroying the invaders identified. T cells mature in the thymus, unlike B cells that stay in the bone marrow.

Lymphatic and Immune Systems

- Babies are born with passive immunity (the antibodies that the mother transferred via the placenta are reinforced through breastfeeding)
- Those antibodies disappear between 6 and 12 months
- As the immune system of the baby develops, the baby is able to produce his own lymphocytes
- The development of the immune system takes years and this is why babies and children are more likely to catch infections and diseases
- Immunisations help to build immunity as well as being exposed to bacteria



Layers of defence of the body:

1. Skin

2. Inflammation and white cells = immune response

Babies have an immature immune response, therefore are more vulnerable to invasions because they have a weaker inflammatory response

3. Acquisition of immunity

Exposure to infections and other viruses (colds, chicken pox)

Immunisations

Lymphatic and Immune Systems

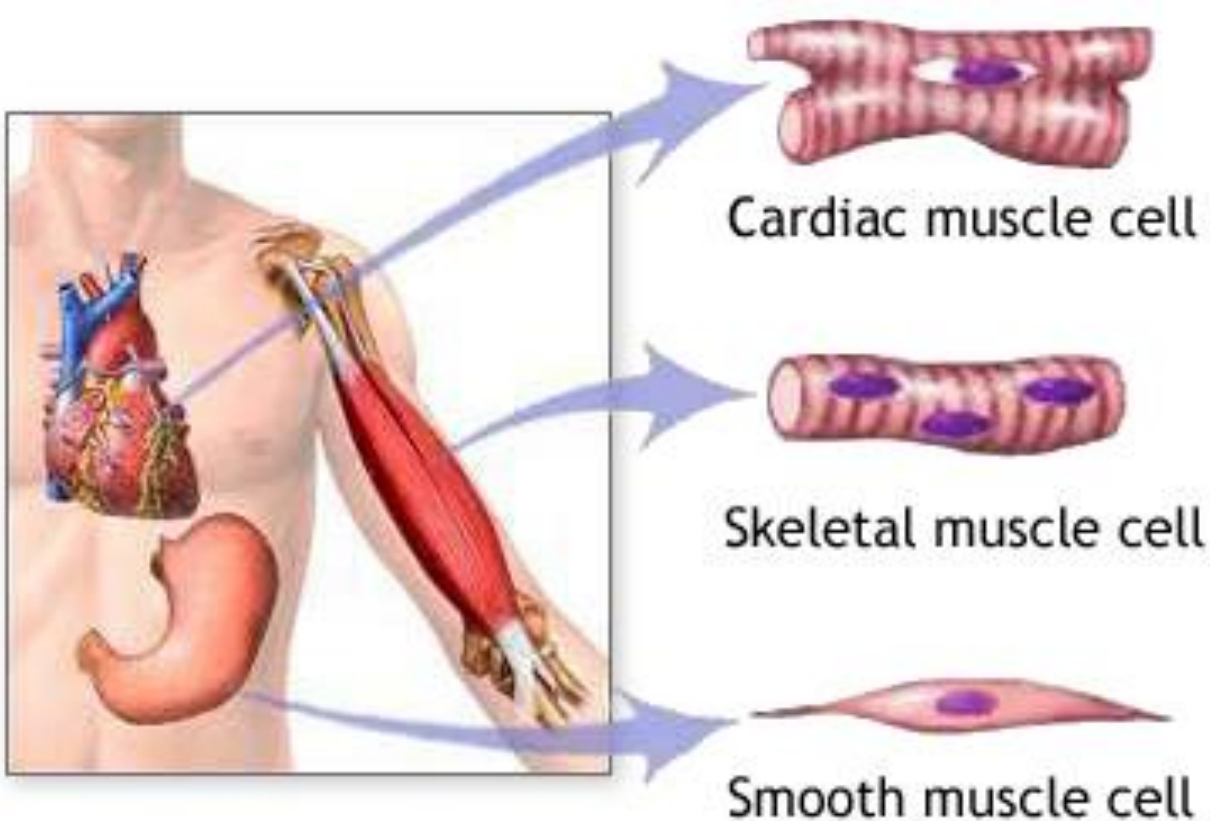
In the lymphatic circulation there is no driving/boosting organ, like in the blood circulation, where the heart acts like a pump. Movement of the lymph is therefore slower, pushed by the pulsation of nearby arteries, muscular and body movements.

Massage can help increase the lymphatic flow of the body, helping processing and expelling toxins and waste products.



Precaution: In time of illness (particularly when there is fever), the lymphatic system will be working very hard to purify the body from unwanted toxins. The lymphatic glands will be very sensitive. To avoid pain and discomfort in case pressure is applied on the glands, is better to avoid massage until the baby is fully recovered.

Muscular System



In what muscles does baby massage focus?

On the skeletal muscles, which allow voluntary and conscious movements such as crawling and walking. In tummy massage, we work in smooth muscles.

Muscular System



The main function of the muscular system is to allow the movement of the body. We have more than 650 muscles which are connected to the skeletal system through the tendons.

Does anybody know which are the most developed muscles in a baby?

Babies tend to have the muscles around the chest very developed, to ease the respiratory vital function.

Massage increases the blood supply in the muscles, bringing oxygenated blood and nutrients and taking away waste products, reducing muscles fatigue and warming up the muscles.

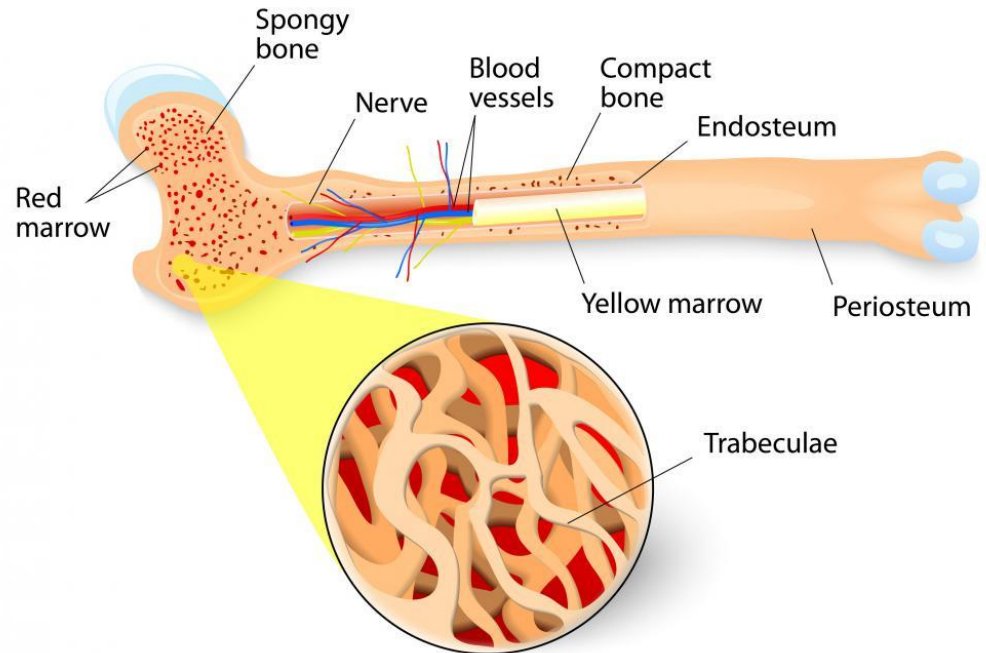
Regular massage helps muscles become firmer and more flexible, more malleable and elastic. Massage is very helpful in cases of hypotonia and hypertonia.

Precaution: Massage firmly in areas with more musculature (like the thighs), be more gentle in less fleshy areas (such as the chest). Apply moderate pressure when massaging so that the strokes are not ticklish, pressure to get into the second layer of the skin to aid relaxation.

Skeleton System

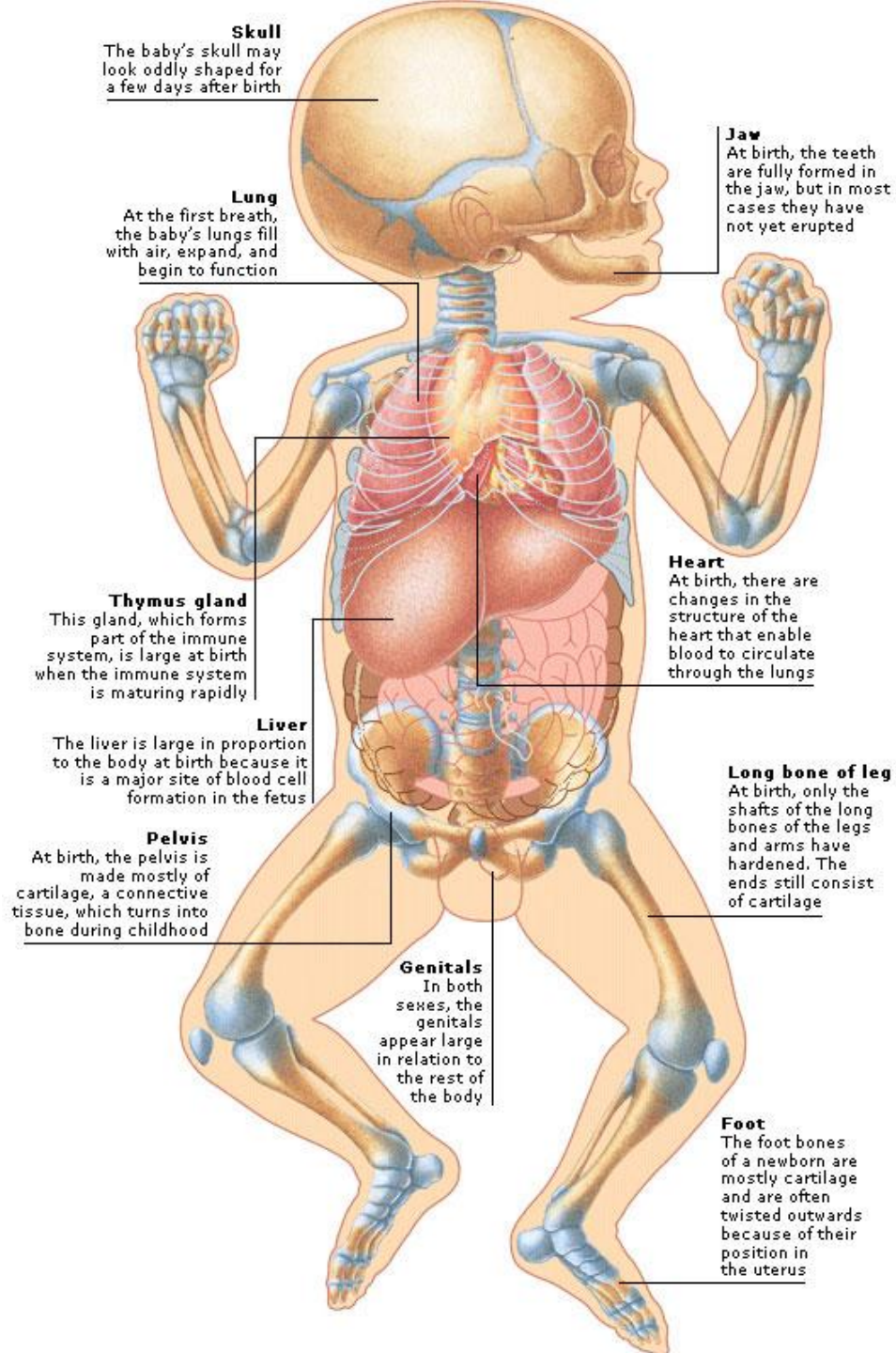
Consists of:

- Bones
- Joints
- The bones remain together thanks to strong fibre tissue called ligaments



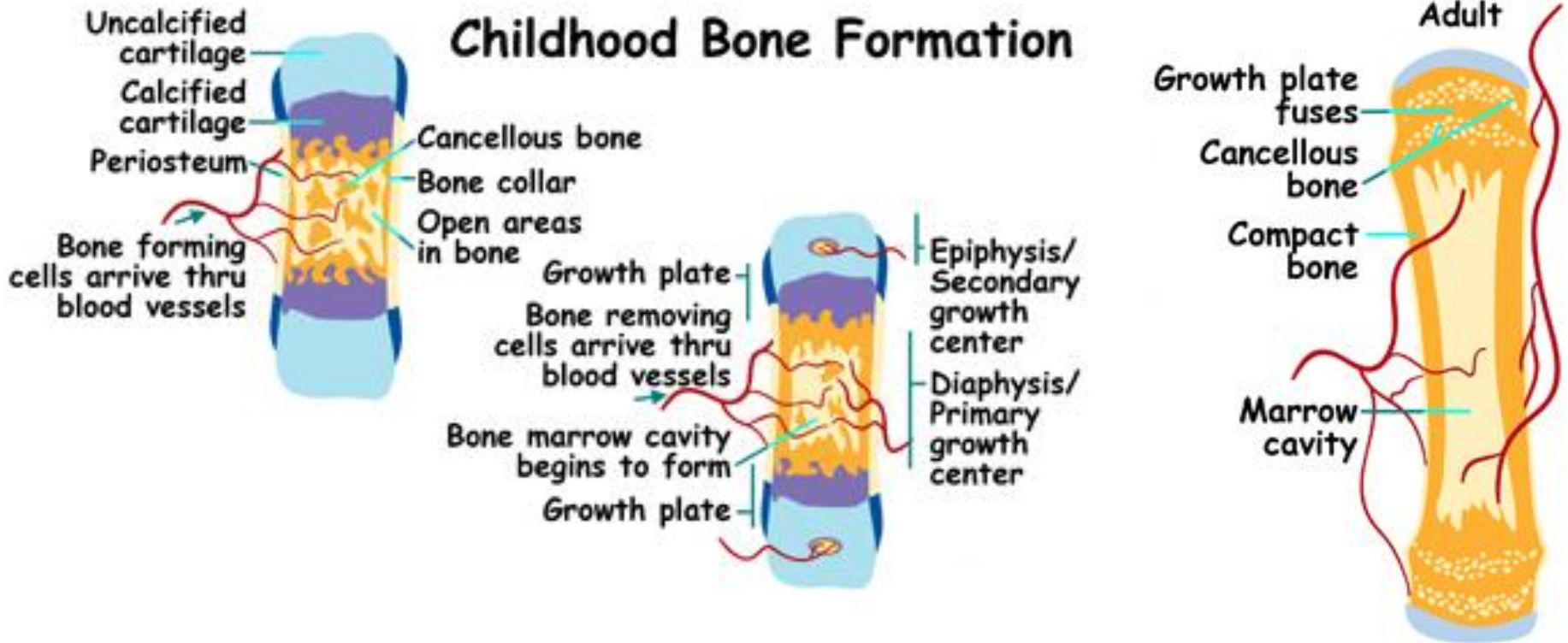
The bones' functions are:

- To provide structure, shape and support to the body
- To protect vital organs
- It is where the red and white blood cells are produced
- They store calcium, which is then freed up into the blood stream and it is of vital importance for the muscles to be able to contract



Skeleton System

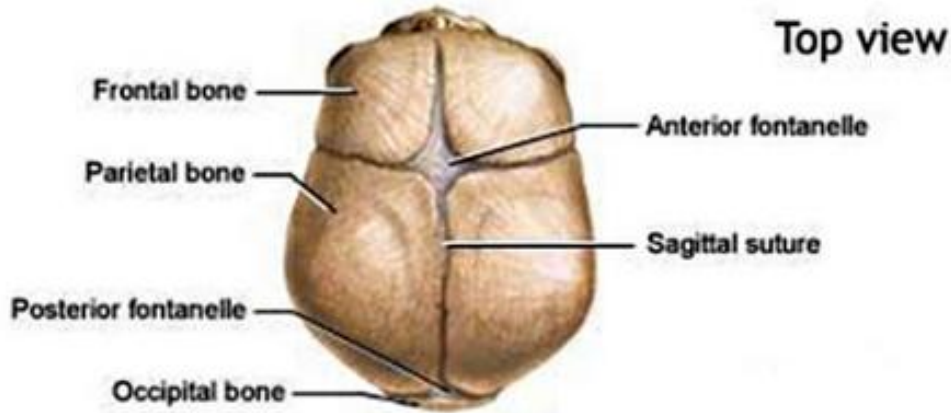
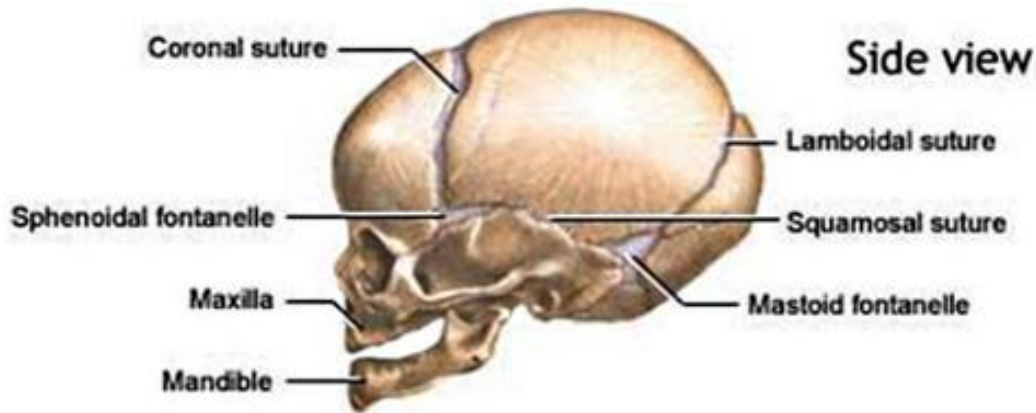
Skeleton System



Why are babies' bones softer?

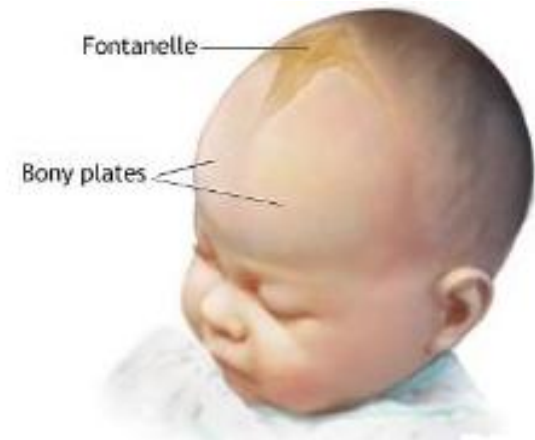
The bones of babies and children are relatively soft because the skeleton consists predominantly of cartilage, which becomes harder through a process called ossification (with doses of Vitamin D and calcium).

Skeleton System



How many bones do babies have?

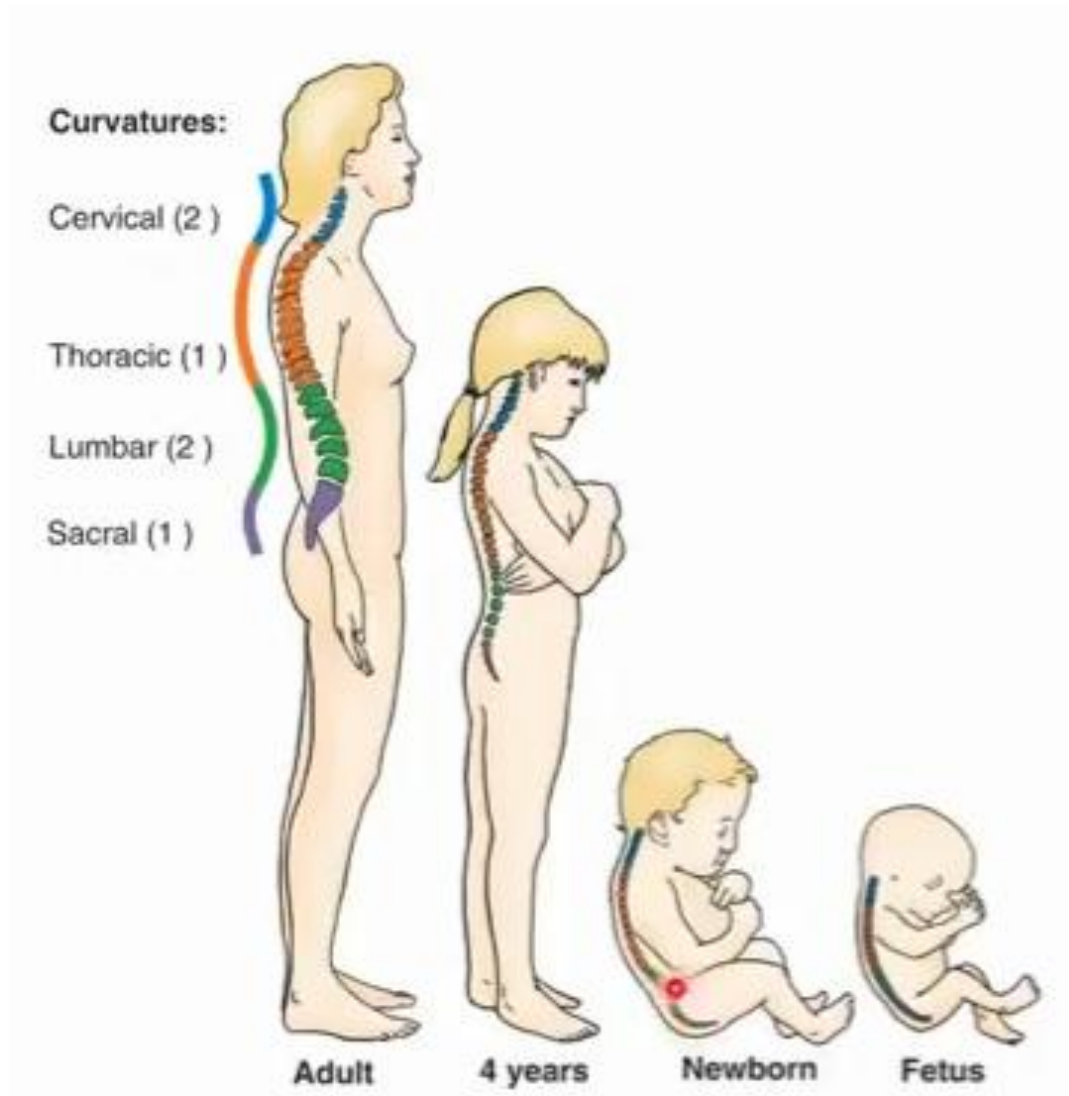
Approximately, babies have got 300 bones when they are born, compared to 206 when they are adults. This is because a lot of bones fuse over time.



Skeleton System

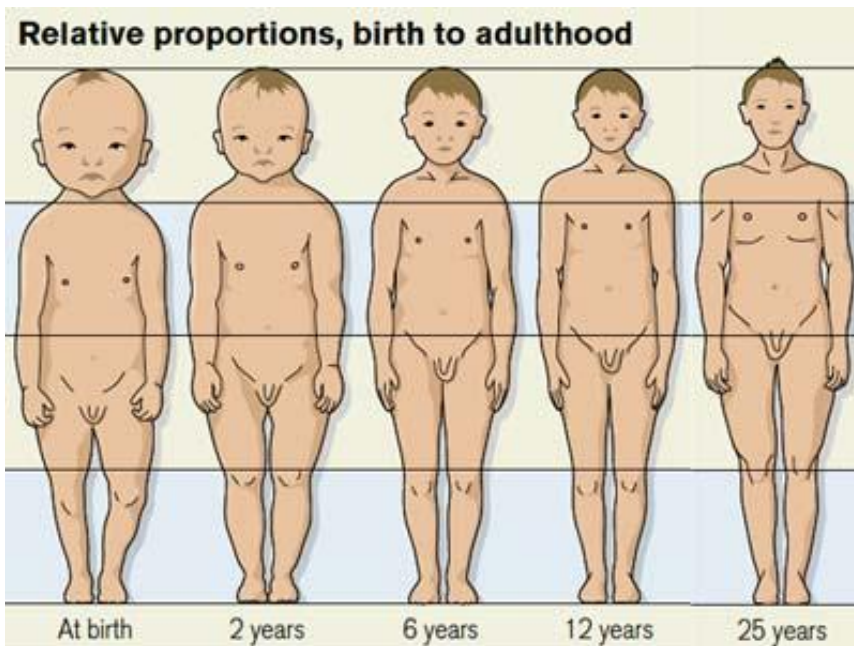
The spinal cord of a baby measures 15-18 cms

It is curved and goes into various stages of development:



Skeleton System

- During pregnancy, 300 mg of calcium go to the foetus everyday via the placenta
- Calcium daily needs:
 - 500 mg – 1 to 3 year olds
 - 800 mg – 4 to 8 year olds
 - 800-1300 mg – 9 to 18 year olds
- The levels of calcium in the blood need Vitamin D to be absorbed in the gut, to maintain circulation of calcium throughout the body and for bones to have the necessary minerals to remain strong. Sunlight is therefore necessary and healthy.



All these changes bring physiological, psychological and social implications.

Skeleton System

Massage helps facilitating mobility in the joints, enhances flexibility and muscle strength as well as increasing circulation to the bones favouring growth (through the production of growth hormone - somatotropin).

Precautions:

- Do not apply pressure on the skull or head during massage
- Avoid putting excess pressure on the joints as they are very malleable, movements should glide on the skin and joints
- Be very careful when massaging arms and legs, do not stretch them abruptly, work with baby's natural flexibility, do not force any movement
- Do not apply direct pressure on the spine when massaging the back



Skin

The skin is the largest organ of the body. When the embryo is developing in the womb, the skin is one of the first organs to form and is made of the same embryonic tissue as the brain.



Vernix caseosa

The weight of the skin in a newborn is 13% of his total weight, compared to only 3% in the adult's

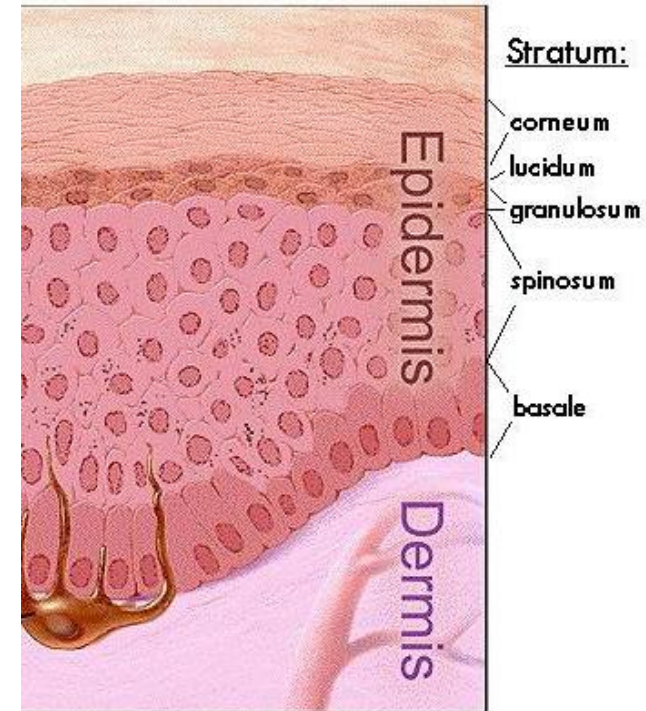
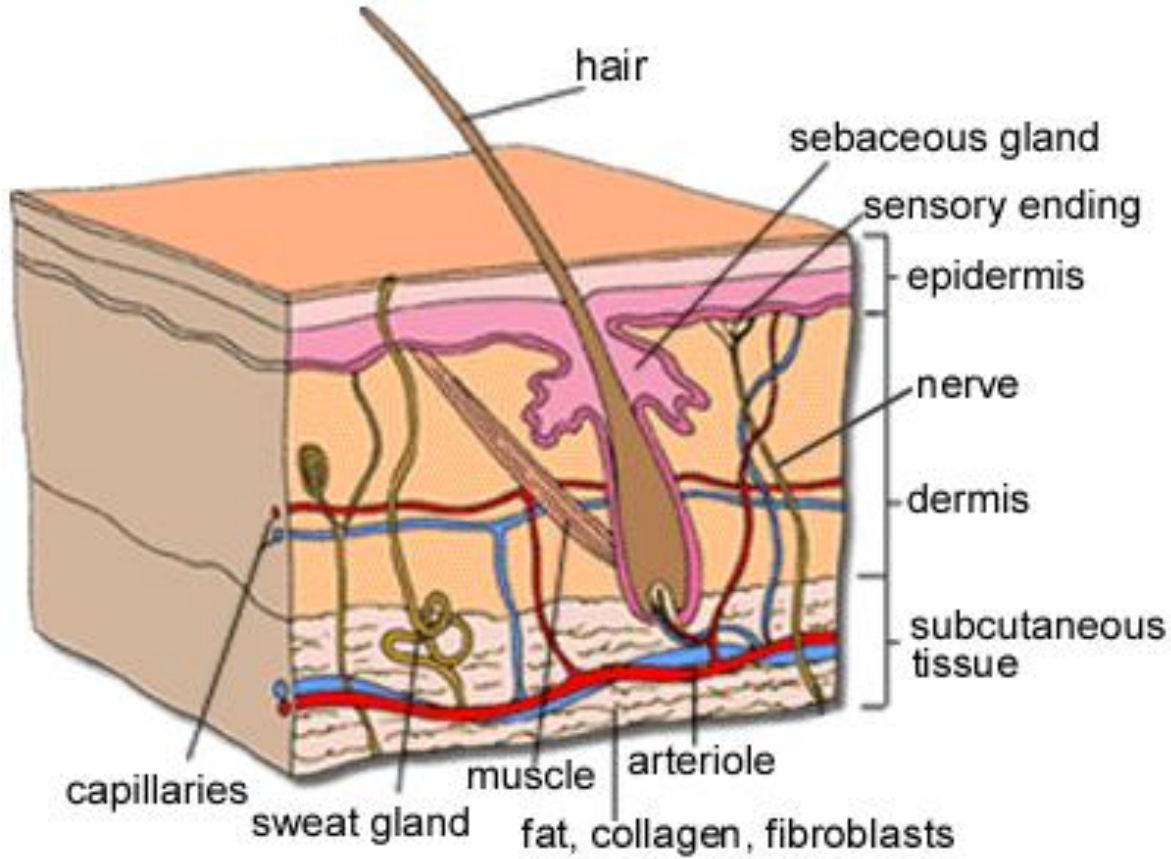
Functions:

- Protective barrier against infections
- Temperature regulator
- Controls fat storage
- Regulates liquid waste and allows the exit of electrolytes and water (sweat)

A newborn is more likely to get infections, irritation of the skin and loss of water. A baby produces less secretion via the sebaceous glands.

The newborn has to develop a skin barrier relatively impermeable to be able to adapt to the outside world.

Skin



The stratum corneum prevents the entry of most foreign substances as well as the loss of fluid from the body

Skin



Babies are very sensitive to touch because of the high concentration of nerve endings in the dermis layer of the skin. Depending on the pressure used in massage, the effect of touch can have a stimulating or relaxing effect on the body.



Massage can help improving the condition of the skin, removing dead cells and stimulating sebaceous glands. It can also help maintaining the skin healthy and resistant to infections.

One third of the toxins of the body goes out through the skin. It is important that skin pores are not blocked to help eliminate waste products. A vegetable based oil helps lubricating the skin, providing nutrients and absorbing more easily.



Skin

The skin is known as ‘the third lung’ or ‘third kidney’ in Chinese culture, which illustrates its role of eliminating waste products from the body



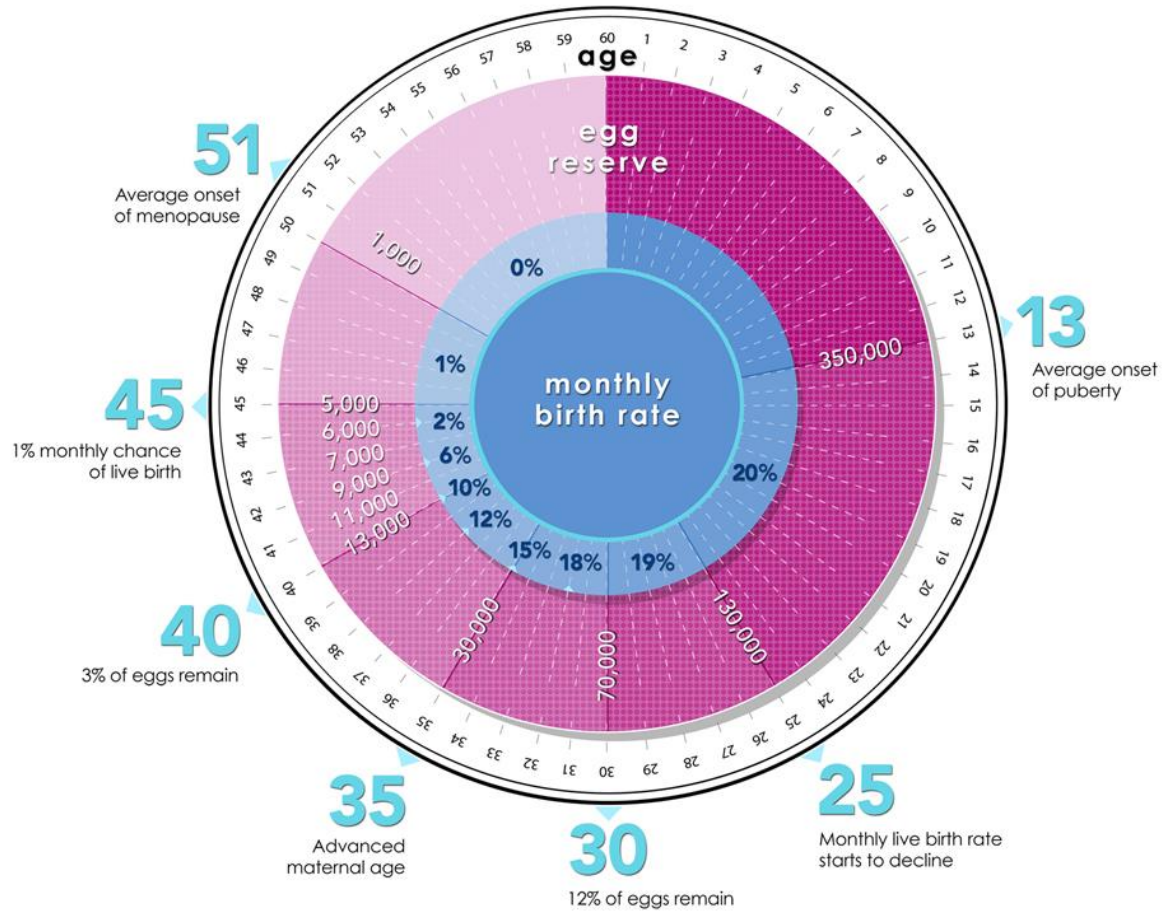
Precautions:

- Massage can help skin suffering from eczema, only in areas where the skin is not opened, severely irritated or weeping. If this is the case, then eczema is a contraindication.
- Avoid mineral and essential oils for baby massage.
- The emollients (like the ones used for eczema) should not be applied in the direction of hair growth and therefore are not appropriate for massage as pores can be blocked.
- The baby's skin is very thin, the epidermis is weakly linked with the dermis, even friction can cause bruises.

Reproductive System



Breast enlargement due to maternal hormones



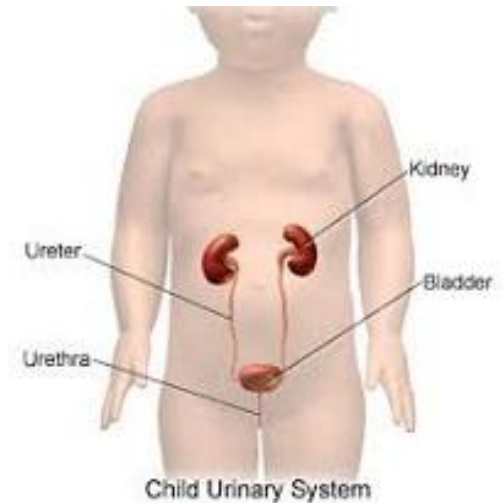
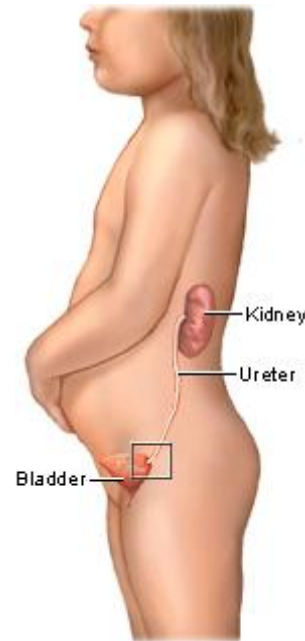
Baby massage doesn't have a significant impact in this body system due to the fact that sexual organs do not develop until puberty.

Urinary System

The role of the urinary system is to filter the blood and excrete any waste products in the form of urine.

The **kidneys**:

- Filter the blood to remove urea, uric acid and creatinine
- Balance the body's fluids (sweat and urine)
- Regulate mineral electrolytes (sodium and potassium)
- Release hormones to help with the production of Vitamin D and red cells
- Helps control blood pressure and volume
- Controls the pH of the blood at 7.4, so that enzymes can work adequately (neutral to alkaline)



The total water content of an infant's body is vulnerable to loss because they ingest and excrete a relatively greater water volume each day. A baby may exchange half of his extra-cellular fluid daily, whereas the adult may only exchange 1/6; so proportionally the baby has less reserve of body fluid at any one time. This is also due to their metabolic rate, infants expend 100kcal/kg of body weight, whereas adults 40 kcal/kg.

Urinary System

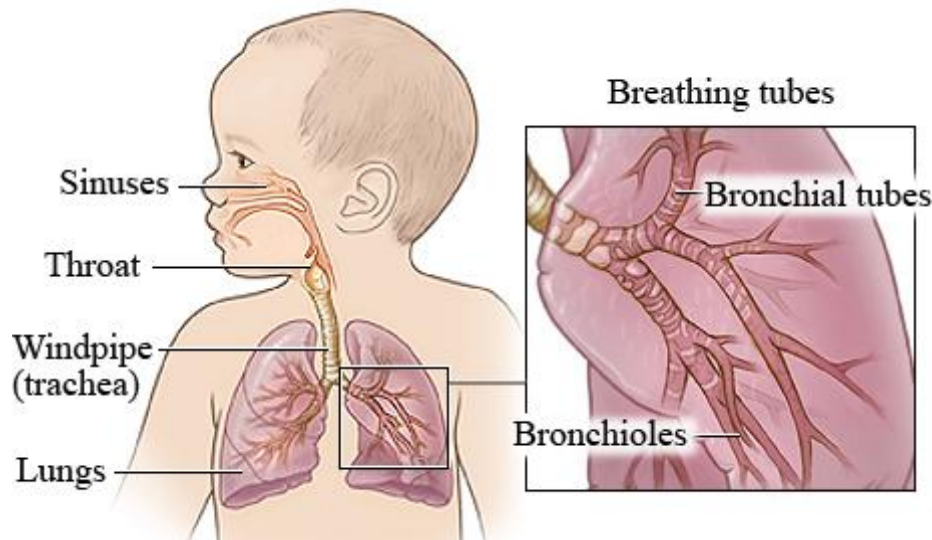
Massage helps increasing the production of urine and therefore, helps removing waste products from the body.



Precautions:

- The kidneys are protected by the ribs and muscles covered with a layer of fat, however, they are delicate and one has to be careful not applying a lot of pressure when massaging the back.
- When massaging the lower abdomen, do not put excess pressure on the bladder as this will be uncomfortable for baby.
- During class, it is recommendable to have spare baby wipes at hand, so that parents feel that it is safe and it is allowed to take baby's nappy off during the massage.

Respiratory System



The respiratory system's is to provide oxygen for the cells and tissues of the body and expel carbon dioxide

In the womb, the baby's lungs are filled with fluid. When the baby is born, this fluid is dispersed. The contractions of the uterus and the passage of the baby through the birth canal helps to clear the lungs of mucus and fluid.

Children breath quicker than adults. The normal respiratory rate changes from 30 to 60 breaths per minute when the baby is born, to a rate of 12 to 20 breaths per minute at 18 years old.

Respiratory System

Age	Rate	Too high
Newborn	30-50	Over 60
1 year	26-40	Over 50
2 years	20-30	
4 years	20-26	Over 40
6 years	18-24	
10 years	15-22	
12 years	14-21	
16 years	11-14	

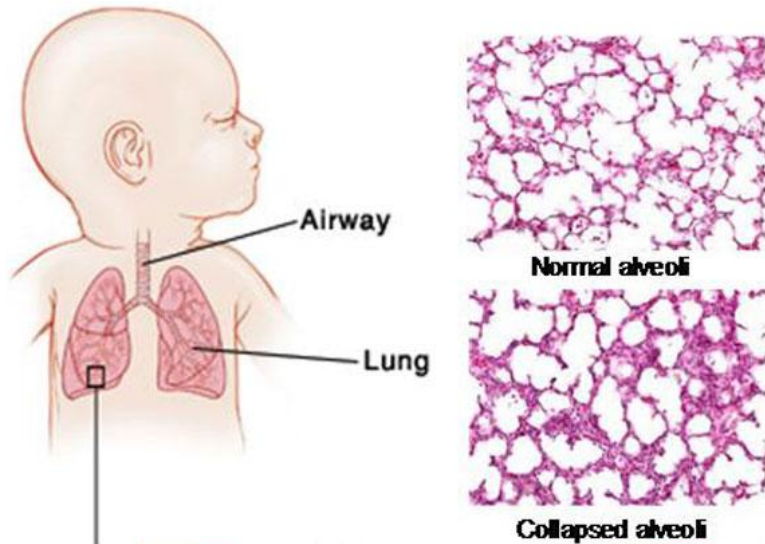
As the baby grows, the airways enlarge, resistance reduces and respiration rate decreases.



Source: Adapted from Wallis et al. (2005) in MacGregor 2008.

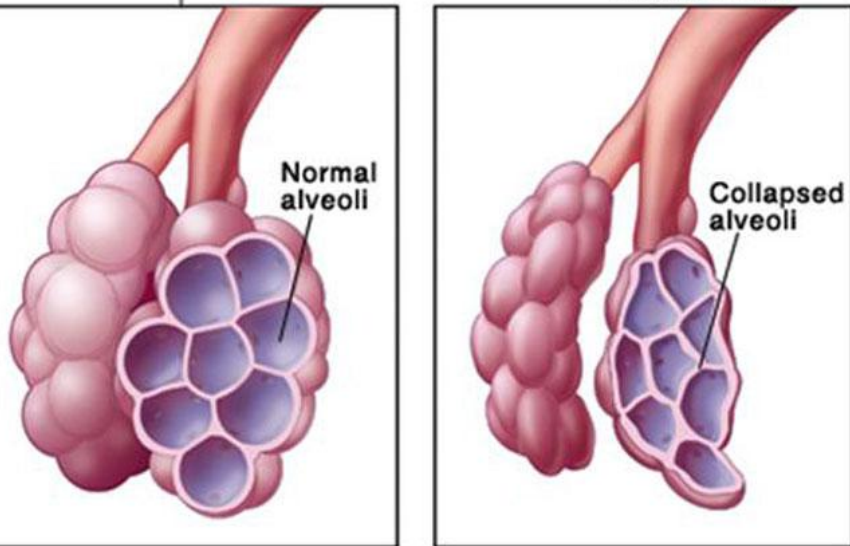
Note: Rates may be higher by 10% if the child is awake, anxious or restless.

Respiratory System



The **pulmonary alveoli** are the terminal ends of the respiratory tree where gas exchange occurs. A baby has 20-70 millions alveoli in each lung at birth, in adulthood this increases to 300-400 million

Until 4 weeks after birth, babies only breathe through their nose, so the risk of lack of air increases if baby has a cold, vomits or is laid on his tummy.



Respiratory System

Massage helps with the circulation of oxygen and carbon dioxide in the body. The chest massage and movements on the thorax's joints, can help improve the condition, strength and function of the lungs, increasing the flow of blood in this area.



Relaxation during the baby massage class encourages deeper breathing, supporting the oxygenation of the body's cells

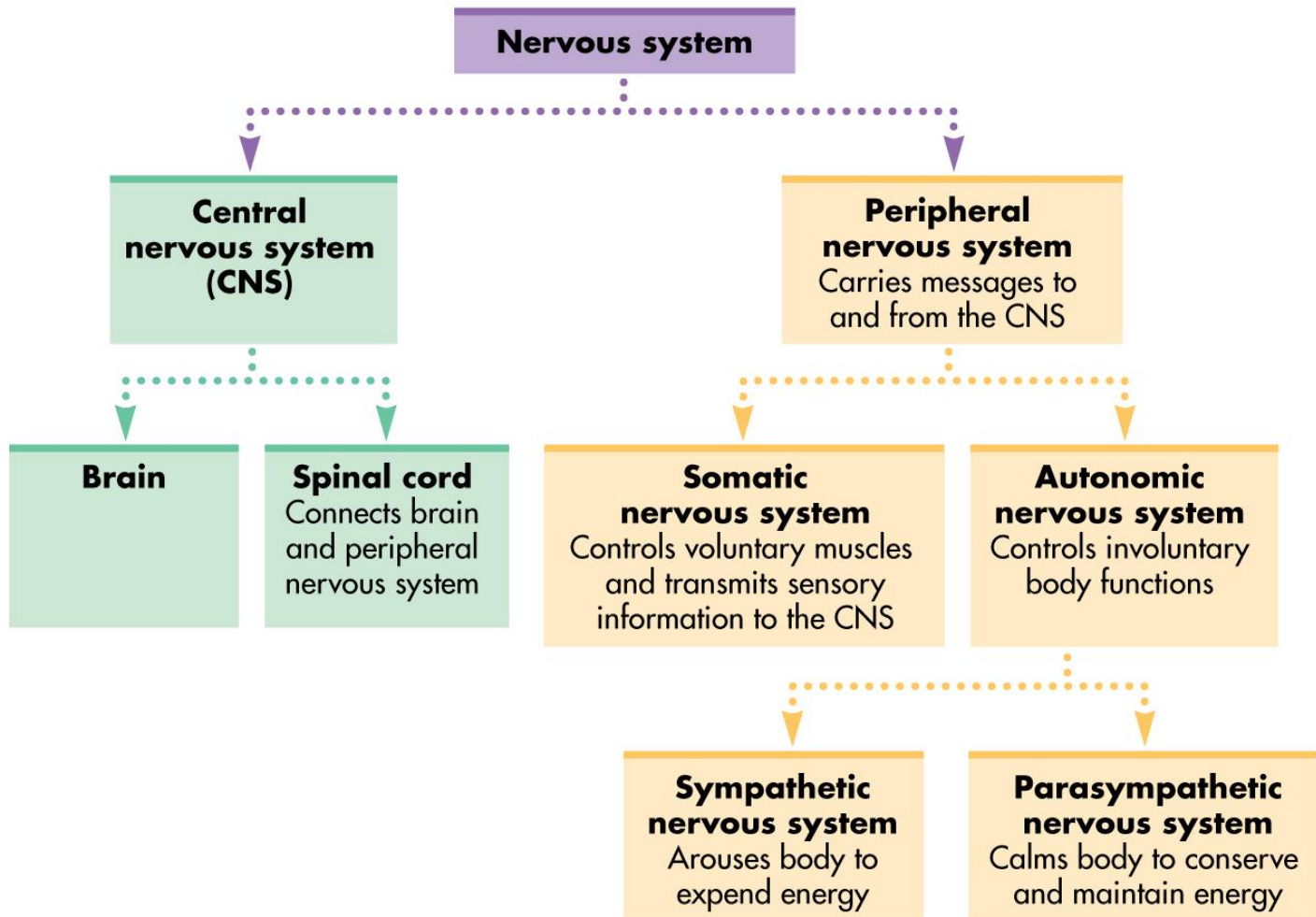
Precautions:

- The movements on the chest should start from the lower ribs upwards, avoiding the abdominal area.
- Do not put pressure on the neck to avoid blocking the pharynx and larynx and to avoid obstructing the flow of air.
- When teaching the back massage, move the head of the demonstration doll to one side, to model a position where the nose is not blocked with the floor.

Nervous System

3 main functions:

- **Sensitive** – reacts to internal and external stimulus
- **Integrative** – analyse the information received and makes decisions on what behaviour to follow
- **Motor** – responds to stimulus initiating muscular contractions or glands



Central Nervous System

Sensory information such as vision, smell and hearing processed here. Higher cognitive functions.

cerebral cortex

corpus collosum

Connects the left and right hemispheres to coordinate information

hypothalamus

Homeostasis: control of body temperature and osmoregulation. Secretes hormones

cerebellum

Fine motor control, posture and balance

pituitary gland

Produces hormones that control growth, sexual development and metabolism

pons

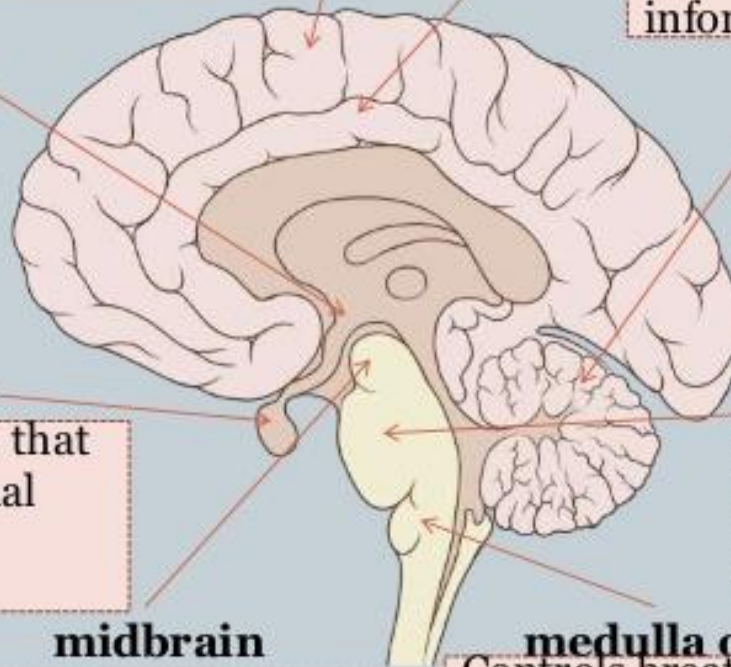
Links the medulla with the thalamus

midbrain

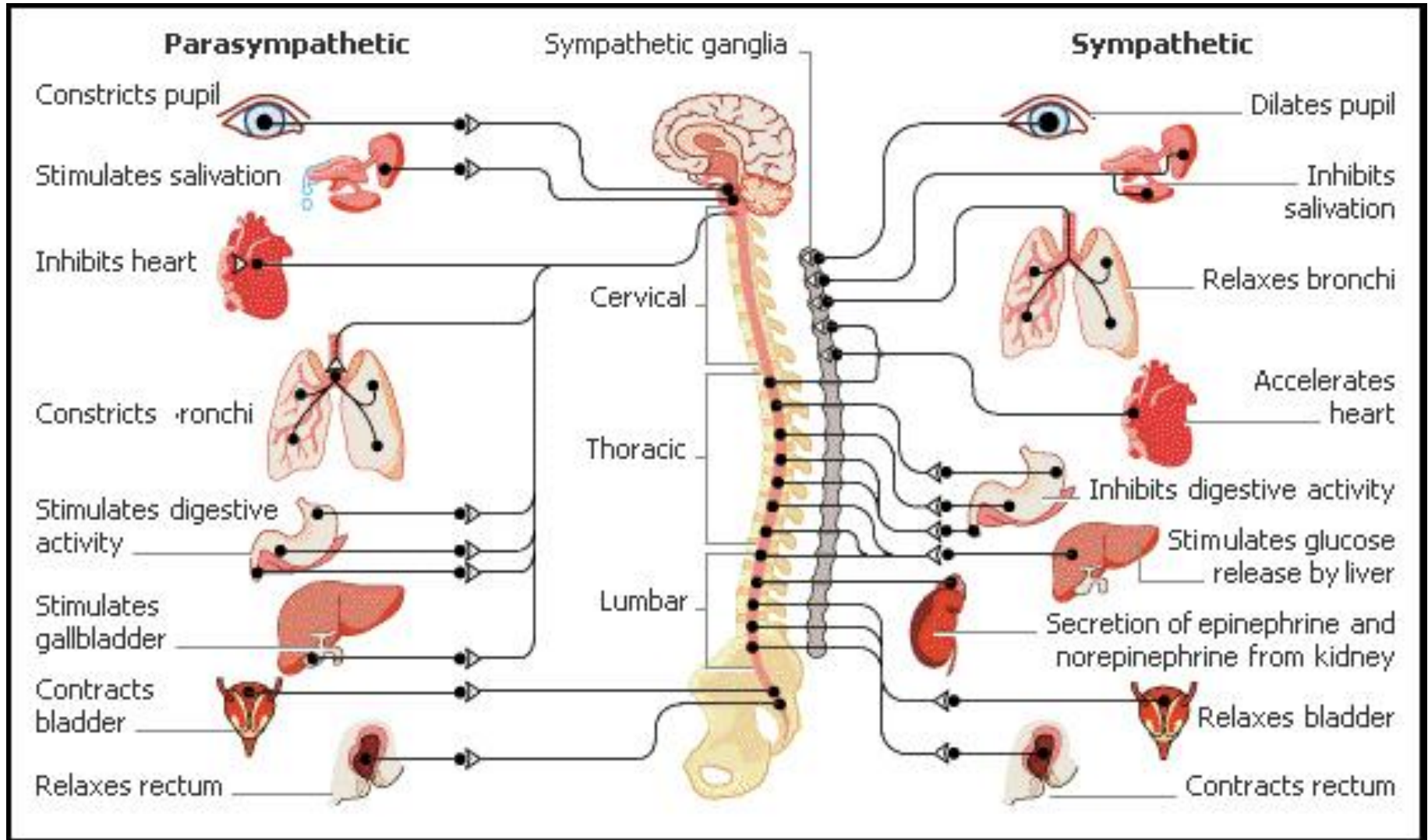
Involved in control of visual and auditory systems. Also controls body movement

medulla oblongata

Controls breathing, heart rate and blood pressure; reflex actions such as vomiting and sneezing



Peripheral Nervous System



Nervous System

Massage helps baby and parent relax, and when they are relaxed, the blood vessels expand increasing the blood flow and oxygen and nutrient levels into the body tissues. All muscles maintain certain tension or contraction of their fibres to help us, for example, to keep a straight posture, it is necessary at times to consciously relaxed the tensed muscles, to facilitate rest and recovery.



Massage has a heart-warming and relaxing effect and therefore, helps activating the parasympathetic response of the nervous system.

Nervous System

At birth a baby's nervous system is immature. The connections between the body and the brain have not yet fully developed. The result is that newborn babies exhibit **reflex reactions** to stimulus.



Stepping



Grasp



Grasp



Galant



Suck



Moro



Rooting

Nervous System

More reflexes...



Creeping



Forward
parachute



Atonic neck



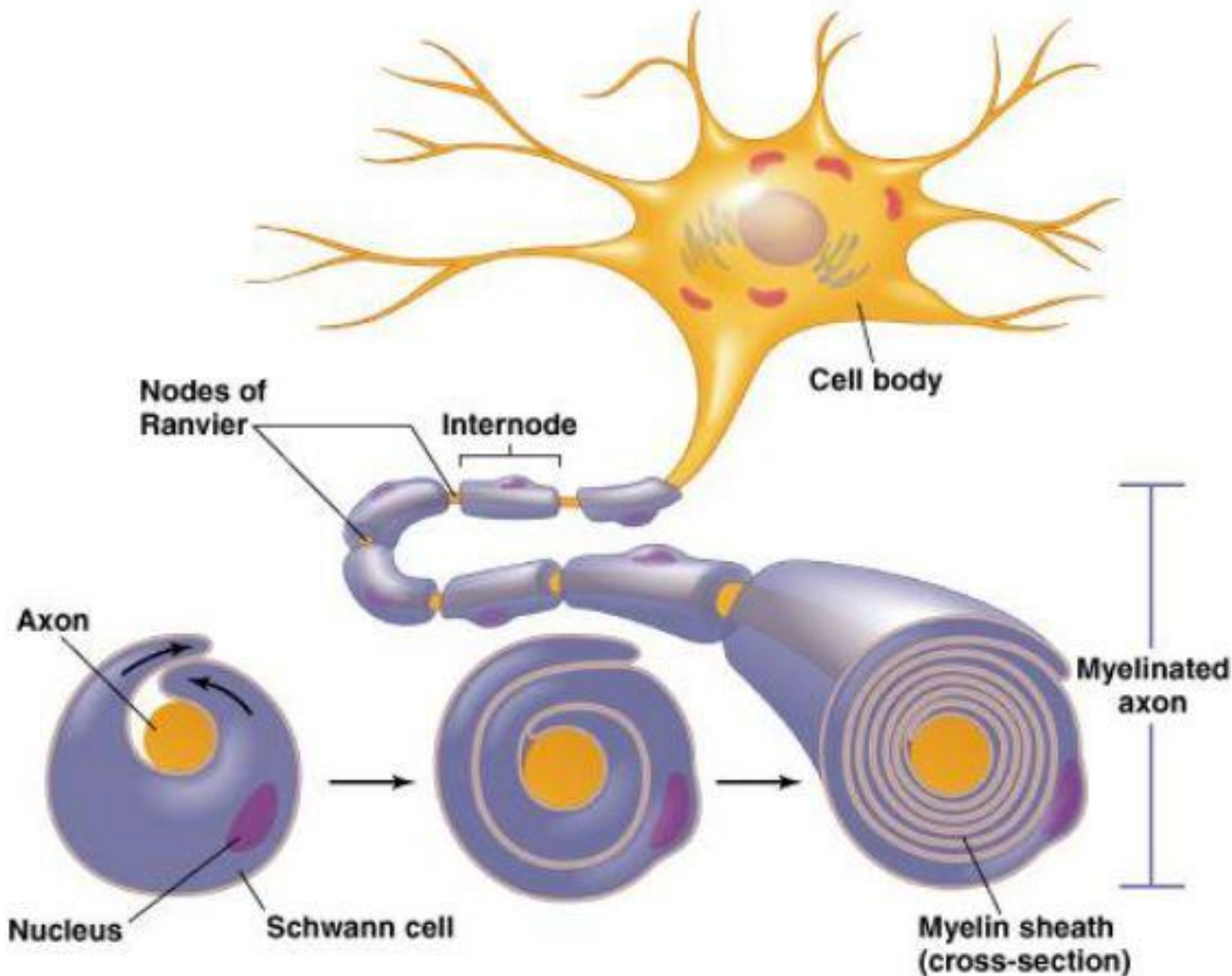
Dive



Crawling

Nervous System

What is myelination?



Myelination enables messages to be transmitted more effectively, and at greater speed, along nerve cells. This helps overall body-brain communication.

Nervous System

Neuron growth and connections over time



Newborn



1 Month



9 Months



2 Years



Adult

Nervous System



Age	Circumference	Hat Height
Premature		
1-3 pounds	10 inches	Less than 4.5 inches
3-5 pounds	12.5 inches	Less than 4.5 inches
Baby		
0-3 months	13-14 inches	4.5 inches
4-6 months	14-17 inches	5 inches
6-12 months	16-19 inches	5.5 inches
Children		
12 months - 3 years	18-20 inches	6 inches
3-10 years	19-20.5 inches	6.5 inches
10-19 years	20.5 - 22.5 inches	7.5 inches
Adult		
Woman	21.5 - 22.5 inches	8 inches
Man	23 - 24 inches	8.5 inches

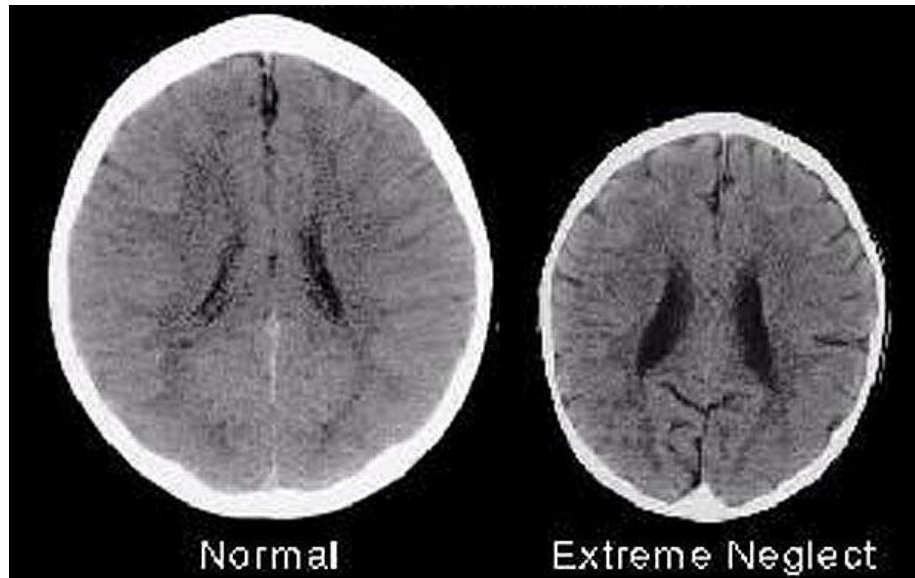
The brain represents between 10 and 12% of the newborn's weight, and it increases to 20-25% at the age of one.

The most active areas in the baby's brain are the motor sensory cortex, thalamus, brainstem and the cerebellum.

The cerebral cortex is not yet fully developed so babies are not able to think in a complex way. This area of the brain keeps developing as myelination occurs thorough time.

Nervous System

Studies have shown that when babies and children are deprived from sensory experiences, or when the nervous system doesn't receive enough information, due to lack of tactile stimulation or lack of social interaction, the development of the brain can be significantly affected and this may result in behavioural problems, social and emotional issues during adulthood.



3 years old child

Through touch, infinite messages can be transmitted to the brain from the outside world.

The sensory stimulation during massage accelerates the myelination process.

Until 12 years old, touch continues being the predominant sense to integrate external information.

Nervous System



Infant massage develops respectful relationships, through trust and emphatic communication, which benefits the part of the brain that concerns with emotions and moral sense.



Precautions:

- Once babies are undressed, if the parent or carer constantly removes his/her hands from baby or separates, the baby can get unsettled or upset, because of the sudden assault of the peripheral nervous system (sense of danger or uncertainty). It is important to keep contact and closeness at all times.
- During the face massage, remember not to cover the eyes or the ears, so that baby can see and listen at all times and doesn't feel invaded.
- Apply moderate pressure, if the massage is too light, then this will cause a ticklish sensation, which can alter the baby's peripheral's nervous system.

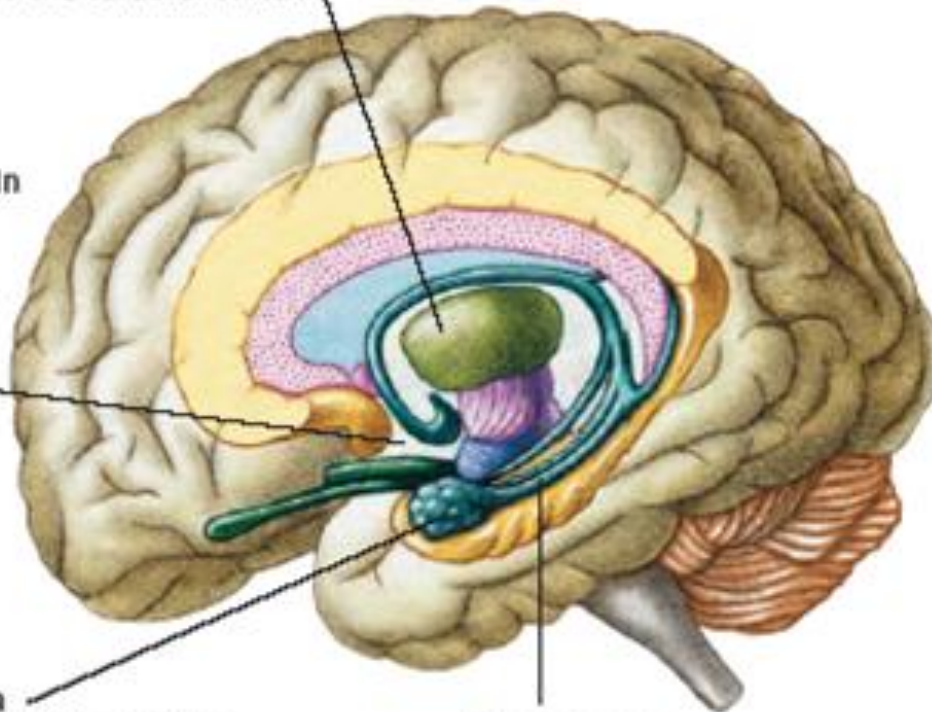
Endocrine System

Thalamus
Part of the forebrain that relays information from sensory organs to the cerebral cortex

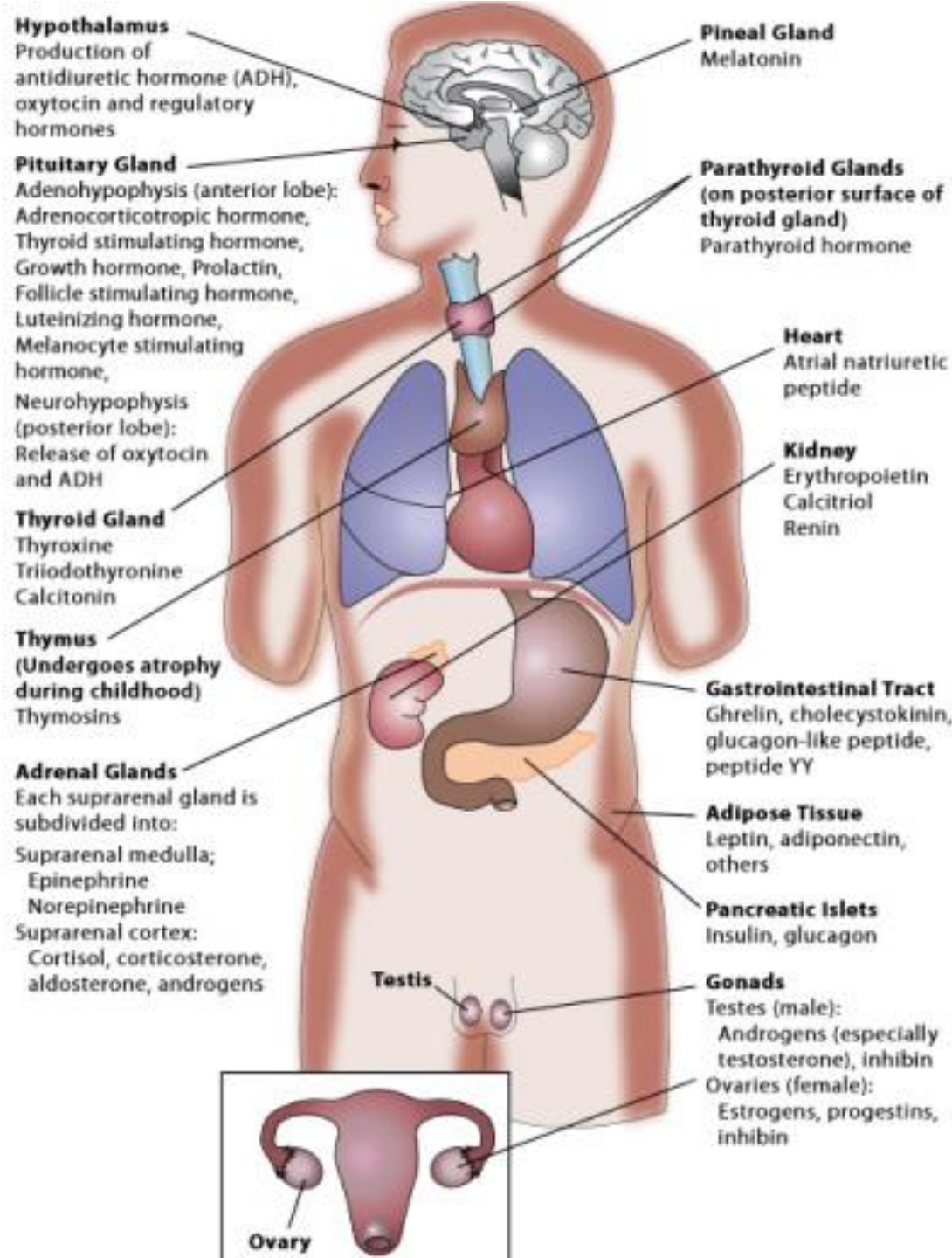
Hypothalamus
Part of the forebrain that regulates the amount of fear, thirst, sexual drive, and aggression we feel

Amygdala
Influences our motivation, emotional control, fear response, and interpretations of nonverbal emotional expressions

Hippocampus
Plays a role in our emotions, ability to remember, and ability to compare sensory information to expectations



The endocrine system is responsible for the production and release of **hormones** which enable slow and long lasting changes. It helps to maintain homeostasis or “balance” in the body. It works closely with the nervous system to control this process.



Endocrine System

Endocrine System

The endocrine system works alongside the primal brain (sub cortical brain) and the immune system (hypothalamus and pituitary gland). Michel Odent (1986) calls 'primal health' to the equilibrium levels achieved by these systems at the end of the first year of life.

Oxytocin: 'the love hormone'

Awakens maternal and loving behaviour, and the need of touch, tenderness, confidence in the other and serenity. Contributes to the reduction of cortisol (stress hormone) in the body.

Stressful moments that last for long periods of time, increase the levels of cortisol in the body and can cause: reduction of the hippocampus, cells death in the frontal cortex, deficient immunity, damage to short memory and distortion of normal heart rate levels.



Endocrine System



Massage contributes to the release of oxytocin, in both, parent and baby, producing a calm effect.

It also promotes the release of prolactin (essential for breastfeeding) and serotonin (associated with feelings of happiness and wellbeing)

Precautions:

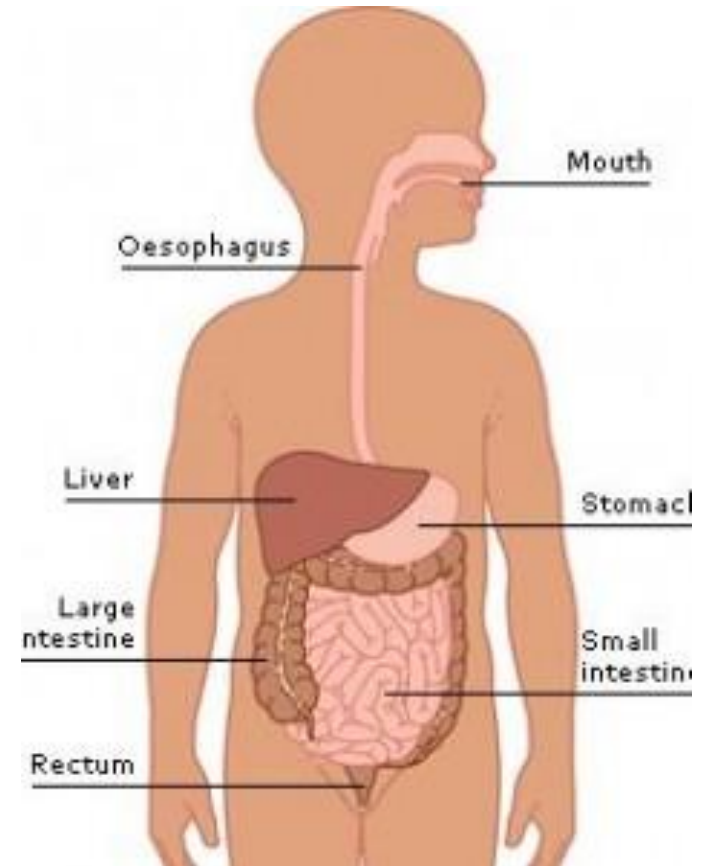
- When teaching parents and carers, it is very important to reiterate that massage should only be carried out when the baby allows it, it must not be forced.
- Mention the importance of 'listening' and responding to the baby's non verbal cues. This allows mum/dad to help regulate the baby's emotions and to reduce the incidents of high cortisol levels.
- Avoid the usage of essential oils as these can cause instability in the endocrine system.

Digestive System

The role of the digestive system is to break down **food** into simple molecules which can be used by the body. The smaller molecules can be absorbed into the bloodstream from the gut and can be transported around the body to where they are needed for metabolism.

The baby's digestive system is immature at birth and a baby will be fed on milk until its digestive system is mature enough to cope with solid foods. In some cases the digestive tract may not be fully toned at birth which can lead to babies suffering from wind because the muscles in the bowel are not strong enough to expel wind effectively.

At birth babies pass their first stool which is called **meconium**. It is a green/black substance containing waste and bile pigments and fatty acids.



Digestive System

What size is the stomach of a baby?



Day 1



Day 3



Day Week



One Month

The baby will ingest the same amount of air than milk when feeding, that is why it is so important to help them burp after each feed.

Stomach capacity in ml

Newborn	1 week	2-3 weeks	1 month	3 months	1 year	2 years	10 years	16 years	Adult
10-20	30-90	75-100	90-150	150-200	210-360	500	750-900	1,500	2,000 – 3,000

Source MacGregor 2008.

Digestive System

How many calories does a baby need?

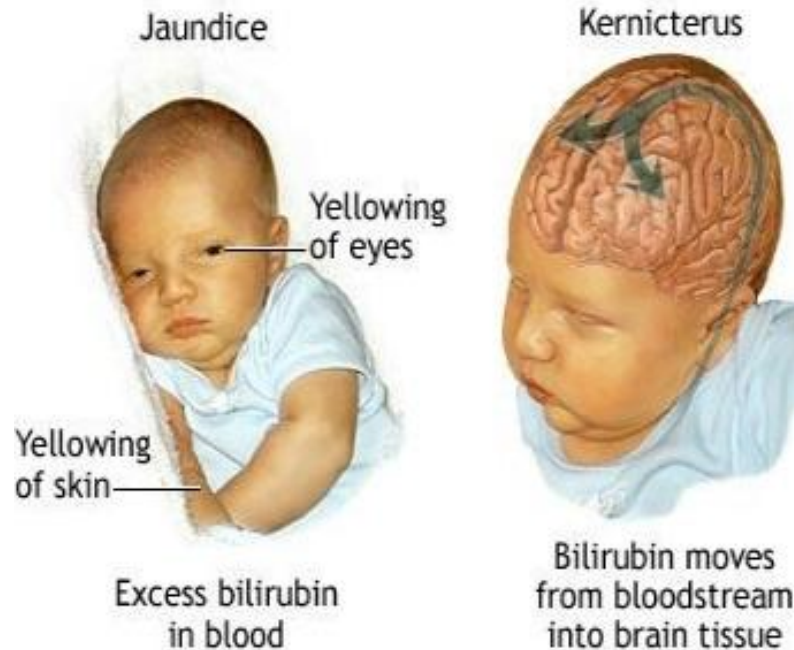
Age	Average daily calories need
0 – 5 months	650
5 – 12 months	850
1 – 3 years	1,300
4 – 6 years	1,800
7 – 10 years	2,000

Source: www.keepkidshealthy.com en MacGregor 2008.



Digestive System

What is the neonatal jaundice?



This condition is common in 15% of healthy breastfed babies, caused by the immaturity of the hepatic function, it becomes worse with dehydration

If the bilirubin gets to the intestines, it will cause faeces to be dark green

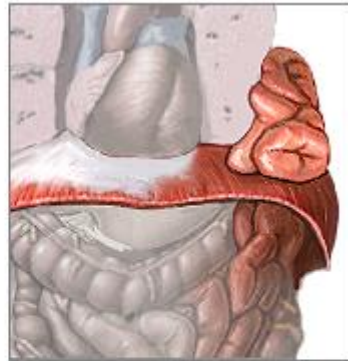
Most of the times this condition doesn't harm long term and improves without treatment within 1-2 weeks

The bilirubin is a yellow substance that the body produces when it replaces the old red cells. The liver helps breaking down this substance so that it can be eliminated via the faeces.

Precaution: it is a contraindication for baby massage.

Digestive System

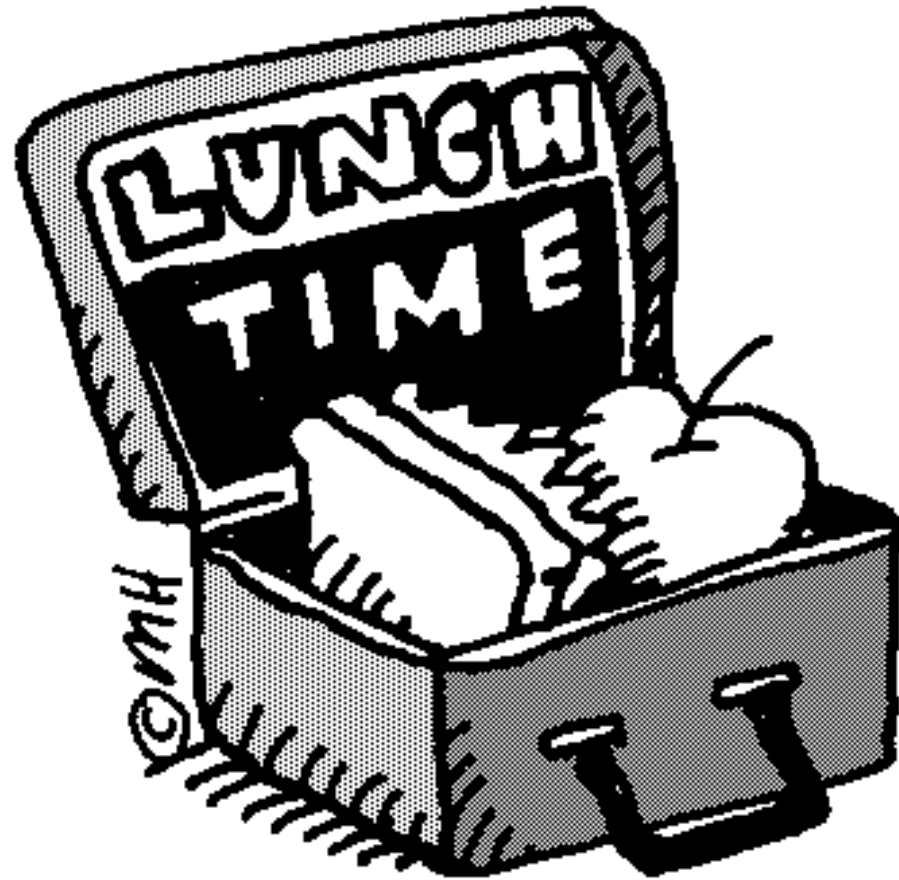
Massage is effective at stimulating the colon thus aiding digestion and excretion of waste products. Peristalsis (the movement of food through the bowel) can be increased by massage over the abdomen. Massing the liver also stimulates cell activity and helps increase baby's metabolism and the expulsion of waste products. Massage on the abdomen can be particularly useful for babies with colic.



Intestine protruding through hole in diaphragm

Precautions:

- When massaging the tummy, movements are always clockwise and downwards, below the ribs. This is because peristalsis occurs in this direction.
- One must be careful not putting pressure directly on the belly button.
- The massage movements must be done below the diaphragm, so that they assist peristalsis correctly.



Baby's Sensory World

Sight



Newborn ----- Six Months

Hearing



From third trimester gestation onwards, the foetus becomes aware of external sounds, the mother's voice will become very familiar.

Taste



Taste manifests from 7-8 weeks gestation and matures at 14 weeks.

Babies prefer sweet flavours as breastmilk is sweet.

Smell



Parental/maternal smells provide baby with very important sensations about her environment and provides security. This is essential to strengthen the bond between parent and baby.

Baby's Sensory World

Touch



The sense of touch is the first one to develop, from only 3 weeks gestation.

From 12 weeks, the whole body (except the upper part of the head) is sensitive to touch.

The baby receives constant massage inside the womb, whilst her mother moves.

Babies explore their world through touch. They use touch to comfort themselves and seek being comforted through touch too.

Importance of skin to skin contact and tactile stimulation

“Born into a confusing world, with simple primitive needs, all babies crave and respond to human touch. Scientists call this ‘skin hunger’. Babies are designed to be physically appealing: a baby’s soft skin compels us to stroke, kiss and protect him. When a baby gives vent to an anguished wail he is often literally crying out to be held”



- Deborah Jackson, ‘Mother and Child’ (2001)

Importance of skin to skin contact and tactile stimulation

Physiological

- ✓ Reduces stress hormones such as cortisol
- ✓ Positively alters the immune system
- ✓ Helps weight gain in premature infants
- ✓ Increases white blood cell count
- ✓ Relieves wind, colic, constipation
- ✓ Relieves respiratory disorders and sinus congestion
- ✓ Increases circulation
- ✓ Improves the elimination of waste through lymphatic drainage and by supporting the venous circulatory system
- ✓ Improves the condition of the skin



Psychological

- ✓ Alleviates depression and anxiety by releasing “feel good hormones”
- ✓ Reduces pain by releasing endorphins (the body’s natural pain killing hormones)

Touch is often an underrated sense however it is quite amazing that stimulation of the skin can have such a profound effect on all of the systems of the body.

Babies' Development



As a baby massage instructor, it is necessary to know about infant development. This will help you create the right environment for your classes and know what babies do in each of their developmental milestones.

All babies develop at a different pace. It is important to make sure parents and carers don't lose confidence or feel disappointed if their baby doesn't do certain thing at certain time. Generally, babies reach their optimum development under the appropriate care, it doesn't matter if they take longer than others.

If parents have more serious worries, the suggestion would be to consult a paediatrician or a health professional.



And later on, when you learn how to walk and run, we can chase cats!

Benefits of Baby Massage

The infographic features a background image of a baby being massaged. It is divided into four numbered sections, each with an icon and a text box. Section 1: A smiley face icon above a purple box with the number '1' and the title 'Relief'. Section 2: A green thought bubble with 'Zzzzzzzzzz' above a purple box with the number '2' and the title 'Relaxation'. Section 3: A purple lightbulb icon above a purple box with the number '3' and the title 'Stimulation'. Section 4: A pink heart icon above a purple box with the number '4' and the title 'Bonding'.

- 1 Relief**
Baby massage can help relieve a variety of health issues for babies such as colic, dry skin, teething pain and nasal congestion.
- 2 Relaxation**
Baby massage releases relaxation hormones which activate the body's relaxation responses.
- 3 Stimulation**
Baby massage boosts circulation to the tissues of the body and stimulates all baby's body systems.
- 4 Bonding**
Baby massage uses touch, the release of oxytocin, eye contact, singing and smell to help nurture bonding.

Baby Massage and the Importance of Bonding



“A baby is a question mark and his mother the answer he seeks. Sensitive to every encounter, the newborn experiences life through the soft filter of mother’s embrace, her milk, her lullabies.”

- Deborah Jackson, ‘Mother and Child’ (2001)

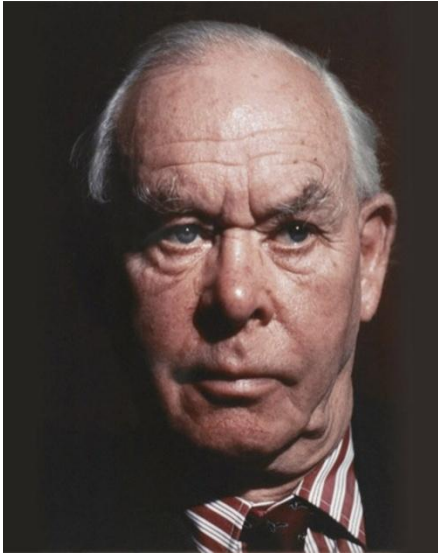
“According to attachment theory our first relationship with our carers acts as a lifelong template, moulding and shaping our capacity to enter into, and maintain, successful subsequent relationships with family, friends and partners. It is believed that these early and powerful experiences with the people who first looked after us will shape our long-term emotional wellbeing.”

- Juliet Neil-Hall, ‘Attachment: Supporting young children’s emotional wellbeing’ (2015)



As baby massage instructors, we can encourage parents and carers to continue communicating with their babies through positive touch, helping them creating loving bonds that will last for a lifetime.

Attachment Theory – Background



The psychologist John Bowlby was the pioneer of the attachment theory, describing it as “lasting psychological connectedness between human beings” (1969).

He proposed that attachment can be understood within an evolutionary context in that the caregiver provides safety and security for the infant. Attachment is adaptive as it enhances the infant’s chance of survival. Bowlby suggested that the attachment figure acted as a secure base for exploring the world. The attachment relationship acts as a prototype for all future social relationships so disrupting it can have severe consequences.

Characteristics of an ‘attachment’:

- **Safe Haven:** If the child feels threatened, he can return to his care giver for reassurance and comfort.
- **Secure Base:** The caregiver provides a secure base for the child to explore the world.
- **Proximity Maintenance:** The child stays near the caregiver, to provide safety and security.
- **Separation Distress:** If separation occurs from the caregiver, the child will become upset.

Attachment Theory – Background

Following on from Bowlby's work, psychologist Mary Ainsworth conducted a groundbreaking study '**Strange Situation**' which examined attachment and child behaviour in more detail.

In the study, researchers observed how children between the ages of 12 and 18 months responded when they were briefly left alone by their mothers and then reunited.



From the research Ainsworth identified three main styles of attachment:

- **Secure attachment** – the healthiest form of attachment where the child is concerned about their care giver.
- **Ambivalent** – insecure attachment-here the children were distressed at their mother leaving but they then did not react when they returned.
- **Avoidant** – insecure attachment- here the children did not seem to mind if the mother was there or not.

Attachment Theory – Background

Which is the fourth attachment style?

- **Disorganized** – insecure attachment where children had a lack of clear attachment behaviour and a mix of avoidant and ambivalent behaviours.

(Mary Main & Judith Solomon 1986)



From these initial research studies into attachment, a number of other studies have been done which indicate that these attachment styles are valid and that the styles continue into later life and can have an impact on social/emotional behaviours and relationship successes.

[Video: The Secret Life of the Brain](#)
[Video: InBrief – The Science of Neglect](#)

Baby Massage and the Importance of Bonding

Baby massage can help encourage the formation of a strong healthy attachment through its many benefits. The effects of responding to an infant's emotional/social needs through gentle and responsive parenting can have lasting positive impact.



Baby massage classes should look at supporting and encouraging parents and carers in their new role. The element of discussion during classes could help facilitate communication about the main challenges of parenting and could help boosting confidence and self-esteem.

What is attachment?



Video...

[What is Attachment?](#)

from Attachment Parenting International

Baby Massage and the Importance of Bonding



Baby massage helps to encourage instinctive parenting rather than a particularly parenting style. Parents should do what feels comfortable to them and remember that their baby relies on them to meet their basic needs – touch, warmth, security, food – as well as emotional needs.

It is important to emphasize that there is no right or wrong way to parent. All babies and parents are different and all will have a different experience. By parents trusting their instincts, they can be relieved from the pressure of trying to act or behave in a certain way and embrace the experiences during the first years of life of their children which are so crucial for their development.

Upbringing in different cultures



“When a baby is born – his parents are too” - Osho.

Becoming a parent is a wonderful experience, but it is also full of challenges and requires to adapt to lots of changes.

[Video: 4 babies, 4 countries, 1 year](#)

Common parenting challenges



- Tiredness and lack of energy
- Lack of structure in the day (and night!)
- Lack of confidence in parenting ability and confusion resulting from conflicting advice
- Changing hormone levels affecting emotional states.
- Adjusting to the role of carer with less time for existing responsibilities and interests
- Concerns over baby's health/weight/sleeping/feeding patterns
- Bonding issues



Confidence in Parenting

The most powerful way to change the world
is to live our lives in front of our children
the way we would like the world to be.

Graham R. White



- You are the best parent for your baby
- You are getting to know a new person in your life
- You have been through an incredible physical and emotion experience
- You are learning on the job (with not much sleep!)
- No amount of preparation can ever prepare you for how it feels to be responsible for your baby and take on the role of parent
- There is no such thing as the “perfect parent” and it is important to accept and embrace your own unique parenting style and celebrate all your talents and abilities.

Relaxation



Research that Supports Baby Massage



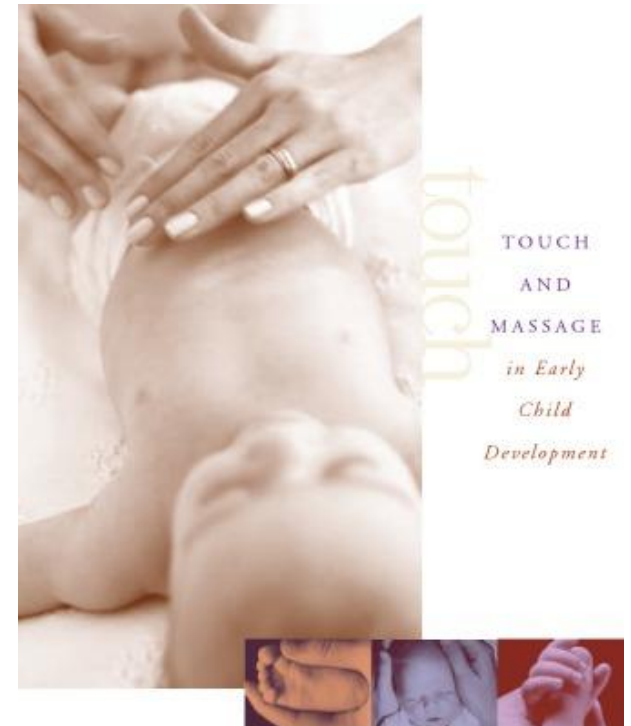
The Touch Research Institute

University of Miami
[website](#)

[Electronic book](#)



Tiffany Field



[What About the Children
website - research](#)



[Research studies in Blossom
& Berry's website](#)

EDITED BY
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University of Miami School of Medicine

Summaries of Relevant Studies

Harlow and Zimmermann (1958)
"The Development of Affectional
Responses in Infant Monkeys"



J.L. Fuller (1967)
"Experiential
Deprivation and
Later Behaviour"

Hammett, F. S. (1922)
"The effect of
thyroparathyroidectomy
on reproduction
albino rats"



Summaries of Relevant Studies



R. Hansen and G. Ulrey (1988)
"Motorically Impaired Infants:
Impact of a Massage Procedure of
Caregiver-Infant Interactions"

University of Warwick (2006)
"Massage Intervention for
promoting mental and physical
health in infants under six months"



Field T. & Hernandez-Reif M.
(2001) "Sleep problems in infants
decrease following massage
therapy, Early Child development"

Tiffany Field, Scanfidi F., Abrams
S. and Richardson S. (1996)
"Massage therapy for infants of
depressed mothers Infant
Behaviour and Development"



Dr. Vivanne Glover (2008)
"Report: Massage and
mother baby interaction
with depressed mothers"



Field T. et al. (1986, 1990, 1998,
2005, 2008). Research that
supports the weight increase
after positive touch interaction



Contraindications of Baby Massage



A contraindication is a reason or circumstance which means that a massage should not occur.

Contraindications can be **'general'** prohibiting any massage or **'local'** where massage can occur but not in the specific area.

Make sure none of these conditions are present when a baby is due to have a massage. Always ask the group if the babies are happy and healthy before you begin each class to make sure nothing has changed since the last time you met.

And before you start a new group, always make sure parents and carers complete a health questionnaire.

General Contraindications

- Acute infections
- Fever
- Sickness
- Diarrhea
- Undiagnosed lumps and bumps
- Contagious disease
- Serious skin complaints
- Inflammation
- Recent haemorrhage
- Jaundice
- Meningitis
- Childhood Leukimia
- Brittle Bones



Massage

Local Contraindications

- Recent immunisations (wait 48 – 72 hours)
- Skin disorders or localized eczema
- Cuts and bruises
- Unhealed or swollen navel
- Open sores



Conditions requiring GP / medical consent

- Congenital heart condition (most commonly seen as aortic valve septum, atrial septal defect, pulmonary valve stenosis, ventricular septal defect, transposition of the great vessel)
- Recent operations or surgery
- Dislocation of the hip
- Spastic conditions where there is an increase in muscle tone
- Dysfunctions of the nervous system
- Epilepsy – where massage can take place, make sessions brief and observe the baby closely
- Asthma – during an acute attack.



Baby Massages Contraindications

A parent may also feel that there are other times when it is inappropriate to massage their baby. Each parent knows their own baby's mood and behaviour. Parents should always listen to their instincts when deciding if a massage is appropriate.

There are areas which should not be massaged:

- Front of neck and throat
- Eye area
- Back of neck and directly on spine
- Under the arm (only soft gliding, no pressure)
- Front of elbow and back of the knee
- Directly on navel
- Groin area
- The skull
- Directly on the bones (no pressure on bones)



Practical elements when teaching baby massage

- **Entry requirements of families in your class**

To join a class it is recommendable that a baby is 6-8 weeks

For premature babies, keep sessions short

- **Resources (mats, towels, cushions)**

Families should bring their own blanket or towel, to maintain hygiene and for baby to feel comfy. They could also bring a cushion.

Adapt positions if parent/carer has back problems or other physical limitations.



Practical elements when teaching baby massage



- **Health questionnaire and booking form**
- **Patch test (oil)**
- **Necessary equipment for your classes**
- **Health & Safety**

- **Hygiene**

- Mats clean
- Each family to bring their own blanket or towel
- Floor dry and clean
- Remove jewellery
- Clean hands and short nails if possible
- Ventilated venue with the right room temperature
- Have handy: cleaning wipes, hand cleaner gel, anti-bacterial spray and cleaning cloth

Creating the right environment



Creating the right environment

- Temperature
- Lighting
- Space
- Noise
- Music
- Items that families should bring



Oils



An organic vegetable based oil is the type of oil recommended for baby massage

- **Sunflower**
- **Fractioned Coconut Oil**
- **Grape Seed Oil**
(low in oleic acid, high in linoleic acid)

- ✓ 100% natural
- ✓ Nourish the baby's skin
- ✓ No harm if they end up in baby's mouth
- ✓ Not irritable if they end up in baby's eyes
- ✓ Unlikely to cause an allergic reaction
- ✓ Easily to absorb by the skin
- ✓ They don't block the skin's pores
- ✓ Safe to use in dry skins

Oils

- ✓ **NO SMELL** – carrier oils – mummy’s smell!
- ✓ **ORGANIC** – the difference in price is not huge, and when it comes to babies, the best is to choose what is most natural.
- ✓ **COLD PRESSED** – these oils come from the seed without thermal or chemical treatments, so they are in their natural state, reducing the risk of an allergic reaction.
- ✓ **EDIBLE** – safe if it ends up in baby’s mouth.



Oils



Precautions:

- Always carry out a patch test in a small area of the body (like the wrists) in both, parent and baby, before applying the oil all over the body. Wait for at least 10 minutes and search for any secondary effects or reactions.
- Avoid oils from nuts, such as almonds or peanuts, to minimise the risk of any allergic reaction. The same applies to oils from wheat germ, to avoid gluten allergic reactions.
- It is not recommendable to give baby massage using essential oils, especially when babies are less than 6 months, unless it is specified by a qualified aroma-therapist or if the product clearly states that it is safe to use on baby's skin.

When to massage?

- Quiet – Sleep
 - Active – Sleep (R.E.M.)
 - Drowsy
 - Active – Alert
 - Crying
-
- **Quiet – Alert**

THE BEST TIME TO MASSAGE

Baby's face is relaxed, bright open eyes, observant, relaxed limbs



By observing the baby as he/she goes through these behavioural stages, a parent can identify when is the most appropriate time to massage.

Being aware of the stages in baby's day is also useful for planning activities and keeping in rhythm with a baby's natural routine.

It is useful to share this information on behavioural stages with parents when talking about when is the best time to massage baby.

When to massage?



Signals that indicate that baby is relaxed during massage

- Frequent eye contact
- Relaxed limbs (arms and legs)
- Hands to mouth or hands at mid line
- Making noises, vocalising



Signals that baby is experiencing stress during massage or is uncomfortable

- Jittery limbs
- Crying
- Hiccups
- Sneezing
- Lack of eye contact
- Frowning

It is a good idea to talk through these signals and cues with parents as a discussion topic during the class so that they learn to interpret their babies needs during massage and at other times.

Familiarising baby with touch

- ✓ Baby massage can be introduced slowly and following baby's pace so he feels secure and comfortable
- ✓ Courses for families should last at least 3 sessions, for one to one classes, and minimum 4 sessions for groups
- ✓ It is perfectly acceptable if massage is suspended during the class, or if massage is shorter for a baby



Two minutes massage on a receptive baby has a much greater benefit than ten minutes massage on a baby who has tried to tell his parent that he has had enough massage and the parent has not listened. Ultimately massaging a baby who does not want a massage is likely to agitate the baby and the parent.

Techniques to help babies familiarise with touch:

- **Skin to skin contact**
- **Touch through clothes**
- **Relaxed touch**

Relaxation techniques for parents



Babies are in charge of the class!



Different reaction to massage

Remember that each baby is unique

They react differently...

Common reactions:

- Alert
- Sleepy
- Tired or unhappy
- Crying



Precautions:

- Parents/carers should clean their hands with a cleaning wipe or wash their hands before and after the massage.
- Babies should remain wrapped up warm after the massage.
- It is recommendable to offer baby a drink after the massage as they can be thirsty.
- Allow the baby to sleep if he/she is tired.
- Avoid exposing baby to sunshine straight after the massage as the oil can make him more susceptible to sun burns.

Course for parents structure

- Lasts 3-6 sessions
- One session per week, each session of 60-90 minutes
- Each week, the massage strokes of a new part of the body are learned
- Classes are relaxed and informal
- Generally, a discussion is included
- Supportive approach and friendly atmosphere
- Babies are always in charge or the rhythm and activities
- The size of the group depends on the aims of the course, the venue...

Examples of ways of structuring the types of services:

- Basic course**
- Tummy Workshop or Special Session for Colicky Babies**
- Dads Workshop (whilst mum rests)**
- The First Massage of the Newborn**

The core element of the course is the massage routine and this should not be changed as it is based on safe and appropriate massage strokes for babies. The rest of the course can be adapted to reflect your personal style



Working with babies with colic or unsettled babies

What is colic?



When the baby is crying, it is **not the parents' fault**, they are the ones who can best respond to their baby's needs. Even when the first attempts to soothe the baby might not seem fruitful, gradually they will start getting to know the baby better and better. If they are experiencing a very challenging time, the best thing to do is to seek help.

Infant massage represents another tool that parents/carers can use to ease colic and calm babies.



Coping with crying



Why do babies cry?

- Physical Needs** – Such as hunger, temperature, shelter, sleep, fresh air, activity, overstimulation, protection from injury or danger, colic.
- Emotional Needs** – These include love, security, the need for comfort and touch, loneliness, fear, confusion, reassurance.
- Developmental Stages** – Babies may cry more when they are reaching developmental goals such as teething, crawling, walking.

Attitudes towards crying



Parenting and Massage



It is very important to only give out information in your sessions which you are qualified to teach. However, it may be tempting to give out generic advice on baby care, always be professional and never diagnose conditions or give out medical advice. If you suspect there is an underlying condition causing baby to be unsettled or unwell always advise a parent/carer to seek medical advice. Although there is no medical treatment for colic, it is worth mentioning about a condition called silent reflux which can often have similar characteristics as colic which can sometimes be treated with medicine.

Discussion time during classes



- When is good to give a massage
- Coping with crying
- Adjusting to parenthood
- Facing colic
- How to adapt the baby massage routine with toddlers or older children
- Attachment and baby's emotional needs

Post Natal Depression (PND)

It is not known for certain what causes PND, but it seems likely that in some cases it is the sudden change in hormones after the birth which may be the trigger. Research has shown that there are a number of things which may make some women more vulnerable to developing PND. These include:

- A previous or family history of depression
- Lack of social support
- No one in whom the mother can confide
- A poor relationship with her own mother or partner
- Major life events in the 12 months before the birth (for example, bereavement, moving house, unemployment)
- Social circumstances (for example, poor housing, financial worries)
- A traumatic birth experience (research has shown that the way the mother feels about her birth experience is more important than what actually happened)
- Unrealistic expectations



Post Natal Depression (PND)

Symptoms:

- Anxiety
- Panic attacks
- Tension and irritability
- Fatigue / exhaustion
- Lack of concentration / inability to make decisions
- Rejection of baby / partner
- Inappropriate / obsessive thoughts
- Loss of libido
- Physical symptoms (lack of sleep, lack of appetite, headaches)



Post Natal Depression (PND)



The first and most important step on the road to recovery is for both the mother and her family to accept that she is ill. The second step is understanding that the more help the mother receives and the sooner she gets this help, the quicker she will recover.

Treatment:

- Ant depressants
- Tranquilizers
- Lithium
- Psychotherapy or counselling
- Electroconvulsive therapy
- Hormone supplements
- Stress management or relaxation classes
- Alternative therapies
- Self-help (balanced diet, exercise, rest, support groups)



STRETCH

The Baby Massage Routine



Time to practice

Baby Massage Routine



Legs and feet

1. Relaxed touch
2. Indian draining
3. Winging
4. Sole stroking
5. Rolling toes
6. Pressure under toes and arch
7. Walking thumbs
8. Foot strokes
9. Ankle circles
10. Swedish draining
11. Rolling

Tummy

12. Stomach hold
13. Stomach stroking
14. Elevated stomach stroking
15. Open tummy
16. Full circle
17. Half circle
18. Full circle/ half circle
19. Walking fingers

Chest

20. Draw a heart
21. Criss-cross

Arms and hands

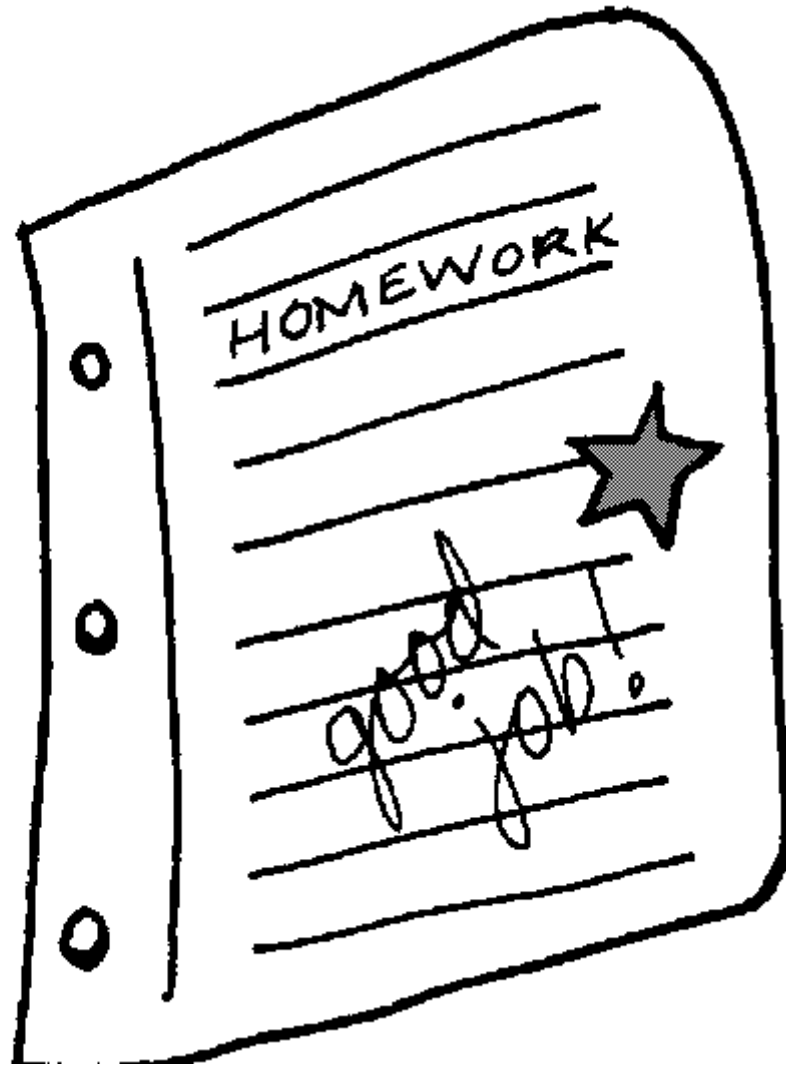
22. Relaxed touch
23. Pit stroke
24. Indian draining
25. Wringing
26. Finger rolling
27. Wrist circles
28. Swedish draining
29. Rolling

Face

30. Face strokes – forehead
31. Stroking eyebrows
32. Breathe easy
33. Happy gums
34. Relaxed jaw

Back

35. Back to bottom and all the way above the ankles
36. Back paddling
37. Circles
38. Combing



Any questions?





**I don't know about you but...
I am ready for the weekend!**

Thank you for listening

Tomorrow... (add here any instruction relevant for day 2 of training)