

Let us maintain a healthy body.

There are different systems in our body to perform different tasks. The digestive, respiratory, circulatory and the excretory systems help the internal functions of the body. The nervous system, specially the brain, controls the functions of the other systems. It also transmits messages about the environment around us through sensory organs. The nervous system helps in our movements by coordinating the functions of the muscular skeletal systems. Skeletal system also protects the important organs including brain, lungs and the heart. The endocrine glands produce hormones that control growth, functions of the reproductive system and metabolism of the body. The reproductive system helps to reproduce a new life.

In the previous grades we learnt about the sensory organs and the functions of some of the systems mentioned above.

In this chapter we will learn about the digestive, respiratory, circulatory, excretory and the reproductive systems. Diseases related to these systems and the precautions we can take to prevent them will be studied in detail.

Digestive system

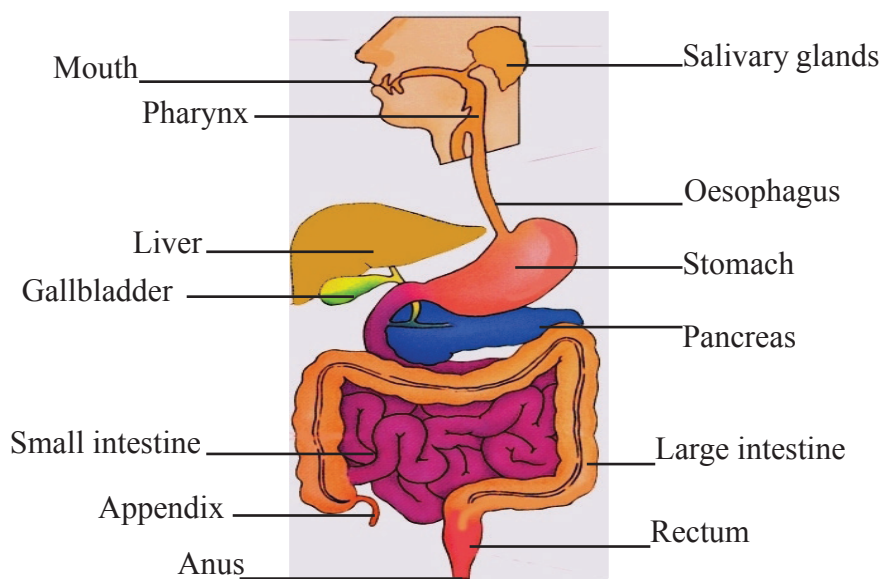


Figure 8.1 - Digestive system

Digestion of Food

Digestion of food is the process in which food is broken into smaller particles both physically and chemically and absorbed. The digestive system consists of the mouth, oesophagus, pharynx, stomach, small intestines, large intestines, rectum and anus. Apart from these, the salivary glands, liver, gallbladder and pancreas which are called supportive organs, also help in digestion.

Mouth

The digestion of food begins in the mouth. Food is broken into smaller particles and mixed with saliva. Teeth and the salivary glands help in this process.

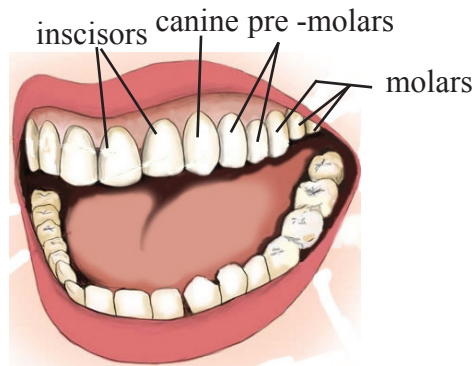


Figure 8.2 - Arrangement of teeth

Teeth

Babies get their milk teeth between 6 to 9 months of age and will continue upto 3 years. There are 20 milk teeth with 10 on each jaw. The milk teeth fall between 6 -12 years and are replaced by 28 permanent teeth. The eruption of the last four molar teeth can be delayed until 25 years of age. There are 32 permanent teeth.

A tooth consists of two parts. The crown of tooth is the part that is seen outside the gum and is covered by enamel. This consists of calcium and it is very strong. The root is the part embedded in the gum. It contains nerves and blood vessels.

Salivary glands

A human being has three pairs of salivary glands. Saliva is important as it helps to swallow the food. The ptyalin enzyme in saliva, helps to digest the carbohydrate of the food in the mouth.

Pharynx

The nasal cavity and the oral cavity open into the pharynx. The larynx and oesophagus are connected to the pharynx.

Stomach

The Stomach is a J shaped organ. The upper end is connected to the oesophagus while the other end is connected to the small intestine. The glands in the inner walls of the stomach secrete mucous, pepsinogen enzymes and hydrochloric acid.

The food we eat travels down from the oesophagus into the stomach and is temporally stored there. During this time the food gets mixed with gastric juices and the digestion of protein starts in the stomach. The absorption of water, certain medicines and alcohol take place in the stomach. After two to six hours the food enters the small intestine.

Small Intestine

The small intestine consists of three sections. They are the duodenum, jejunum and the ileum.

The first part of the small intestine is the C shaped duodenum. The presence of villi in the inner walls of the small intestines increase the surface area and it helps to increase efficiency of absorption. The inner walls of small intestines have glands that secrete mucous. Digestion of carbohydrates, proteins and fat is by the enzymes that are secreted in the small intestine. Due to peristaltic movements the food gets mixed with these juices and is pushed down.

The digestion of protein and fat is completed with the help of pancreatic and intestinal fluid and it is absorbed inside the small intestine. The bile produced by the liver helps to absorb the fat. Apart from this, water and minerals are also absorbed in the small intestine.

Large Intestine

Large intestine is about 1.5 meters in length. Although secretion of mucous takes place in the glands of the large intestine, no digestive enzymes are secreted in this section. Villi are not present in the walls of the large intestine. Any unabsorbed food from the small intestines enters the large intestines with water and minerals.

No significant digestion takes place in the large intestine but absorption of water and minerals take place. The unabsorbed material form faeces and is transmitted through the rectum out of the body.

The appendix is located near the junction of the small intestine and the large intestine, as a small pouch.

Diseases related to the digestive system

1. Gastritis

Gastritis is an inflammation of the lining of the stomach. Gastritis can be caused by excessive consumption of alcohol, stress, use of certain medications specially pain killers, smoking, bacterial infections and erratic feeding habits.

2. Cancer in the digestive system

Cancer is common in the digestive system. oesophagus, liver, stomach, pancreas, large intestine and rectum are common sites where cancer could occur.

You can reduce the risk of developing oral cancer by avoiding smoking, alcohol and chewing betel. Using insecticides and harmful flavours increases the risk of cancer. Arecanuts and tobacco are considered as major risk factors for developing oral cancer. If patches, small growths or ulcers appear in the mouth, seek immediate medical advice.

Lack of intake of food rich in fibre (fruits and vegetables) and improper motions lead to cancers in the large intestines. Smoking and consuming alcohol mainly increase the risk of cancers in the digestive system. When one has difficulty in swallowing food, loss of appetite or passing blood with stools, it is advisable to consult a doctor immediately.

3. Cirrhosis

Cirrhosis is a chronic disease of the liver occurring due to germs and chemicals. It is commonly associated with the consumption of alcohol.

4. Appendicitis - inflammation of the appendix

5. Communicable diseases - diarrhoea, typhoid, jaundice.

6. Piles (Haemorrhoids)

Steps to avoid digestive system related diseases

1. Brushing the teeth twice daily (after meals).
2. Avoiding smoking, alcohol and chewing betel.
3. Taking natural fiber containing food.
4. Reducing intake of foods made out of refined flour, containing a lot of spices, taking food on time and managing stress.
5. Avoiding consumption of food with artificial flavours, chemicals or insecticides
6. Drinking adequate amounts of clean water.
7. Having regular bowel motions, at least once a day.
8. Maintaining good hygiene from the time of preparation till consumption of food.
9. If you feel any changes in the functioning of the digestive system, consult a doctor immediately.

Excretory system

The system that removes waste materials from the body, is the excretory system. Kidney filters waste materials and excretes it as urine. Apart from this the lungs and the skin also perform excretory functions.

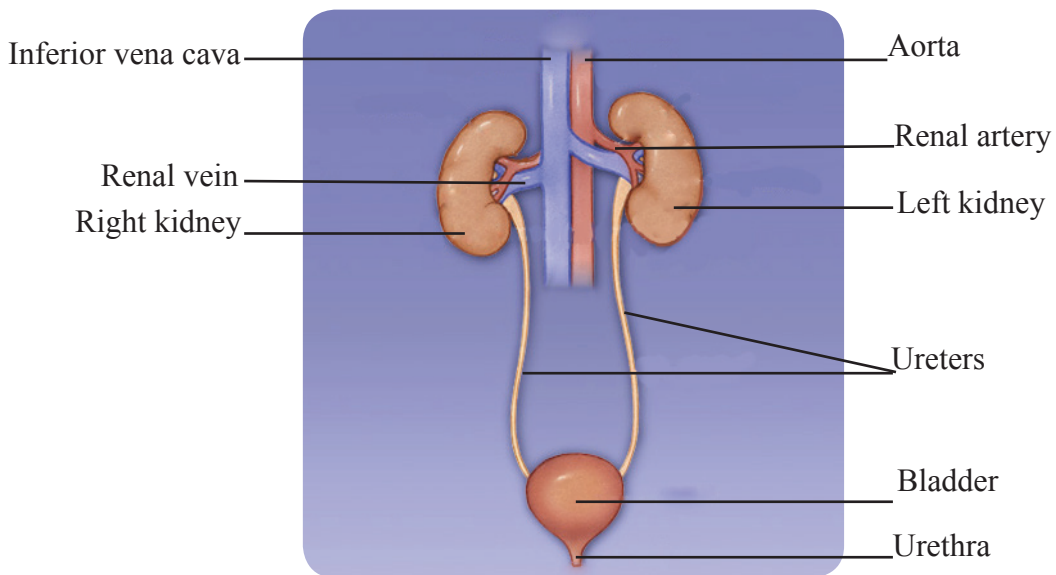


Figure 8.3 - Excretory system

Kidneys

The kidney is a bean shaped organ, red - brown in colour. It is located in the abdominal cavity behind the intestines.

Functions of the kidneys

The main function of the kidney is to remove waste from the body and maintain the balance of fluid and minerals. Apart from this, there are many other functions too.

1. Removing waste products from the body and keeping the internal environment clean.
2. Releasing hormones which help to produce red blood cells.
3. Producing vitamin D.
4. Helping to control blood pressure.

Nephron

The nephron is the functional unit of the kidneys. There are about one million nephrons in the cortex of each kidney. The waste in the blood filter into the nephron. This filtered waste is then passed through nephron tubule and urine is formed. Urine is then passed through the urethra into the bladder. Bladder is an inflated, flexible bag and urine is temporarily stored to pass at regular intervals. Contraction of the walls of the bladder helps to pass urine.

Diseases related to the excretory system

1. Stones in the kidney and bladder

Stones can be formed in the kidney and passed into the ureters, giving rise to severe pain. This pain travels along the back to the lower front of the abdomen. About 60% of these stones pass naturally with the urine. Shock wave method called Lithotripsy is the most frequently used procedure to crush bigger kidney stones thus enabling them to pass in urine. Sometimes surgery is done to remove large stones.

2. Renal Failure

Malfunctioning of the kidneys to perform its functions is known as renal failure. Fatiguability, vomiting, loss of weight, high blood pressure, loss of appetite and swelling of body are some of the complications of renal failure. Diabetes, high blood pressure dehydration, smoking etc. are some reasons for renal failure. Renal failure has become a major health issue in the recent past in some parts of Sri Lanka. The chemicals in the environment can be considered as one reason and there may be multiple reasons. Either kidney transplant or dialysis has to be done on patients with renal failures.

There can be acute renal failure due to some other diseases in the body such as snake bites, hyper dynamic circulation or leptospirosis. In most instances acute renal failure is curable.

3. Cancer in the kidney & bladder (renal carcinoma & bladder carcinoma).

4. Urinary tract infection.

Steps to avoid diseases related to the excretory system

1. Drink an adequate amount of clean water.
2. Avoid taking medication without the doctor's advice (specially pain killers).
3. Delay introducing salt to a baby's food (at least till one year) and also control the amount of salt added to food even afterwards.
4. Control diabetes and blood pressure.
5. Whenever the need arises to pass urine, do it without controlling it.
6. Prevent chemicals from being introduced to the environment, specially to water and minimize the usage of agrochemicals.
7. ~~If there are no suitable water sources, use protective filters.~~

Respiratory system

Oxygen is important for the production of energy inside cells. During this process carbon dioxide is produced. The respiratory system is involved in the process of transporting and exchanging oxygen and carbon dioxide.

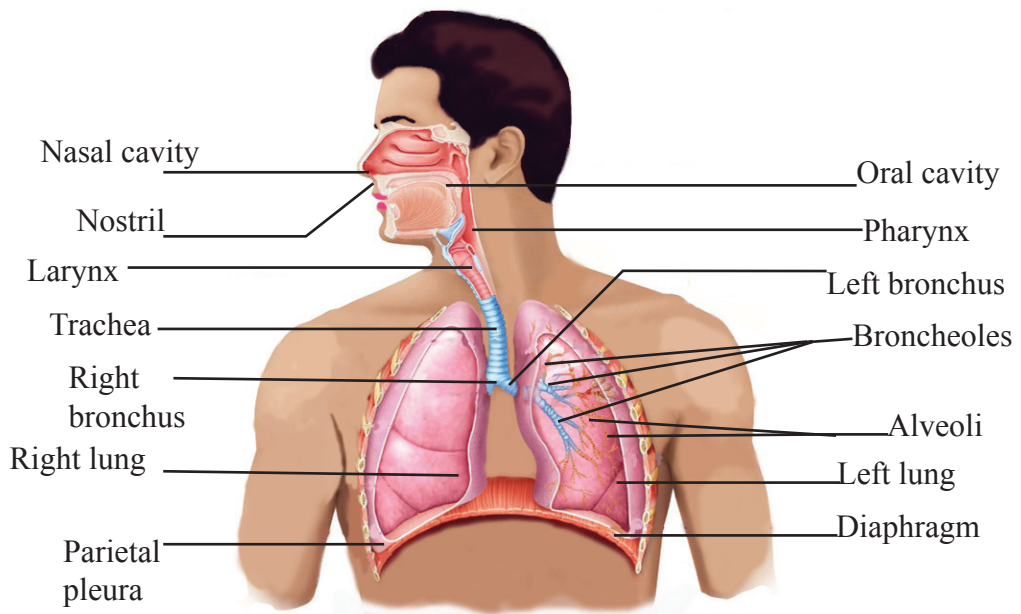


Figure 8.4 - Respiratory system

Nose

The nasal cavity is covered with a mucous membrane. There are mucous secreting glands and some hair cells called cilia.

The cilia around the nostrils and the mucous membrane help to trap foreign particles in the air that enter the nose. Inside the nose the temperature of the air is increased and moisture is added.

What are the reasons for sneezing and getting a burning sensation, when you inhale chilli powder?

Pharynx

The air enters the trachea / wind pipe through the pharynx and larynx. The pharynx is a tube like structure that connects the nasal and oral cavities. The trachea and the oesophagus begin here. Larynx (voice box) is at the opening of the trachea. This part of the body also aids in the production of sound through the vocal cords. When we swallow food, the epiglottis closes the upper end of the larynx and prevents food from entering the trachea. The cough reflex is a natural defense mechanism to emit food that enters the trachea.

Trachea

The trachea begins just under the larynx and runs down inside the chest in front of the oesophagus. The trachea then divides into two smaller tubes called bronchi. They are right bronchus and left bronchus. This gets further divided into smaller and smaller branches called bronchioles and eventually ends in air sacs called alveoli.

Lungs

The chest contains two lungs, as the left and the right. They are protected by the rib cage. The bronchioles and alveoli are inside the lungs. Apart from this the lung consists of the blood vessels which transport blood to and from the lungs, the lymph glands and nerves

The process of inhalation and exhalation

When you inhale the diaphragm and intercostal muscles (these are muscles between your ribs) contract and expand the chest cavity. This expansion lowers the pressure within the chest cavity than the atmospheric pressure. Air then flows through the air ways to the lungs. When you exhale, the diaphragm and intercostal muscles relax

and the chest cavity gets smaller. The decrease in volume of the cavity increases the pressure in the chest cavity than the atmospheric pressure and air flows out of the lungs.

Exchange of air in the lungs

Exchange of oxygen and carbon dioxide takes place inside the alveoli. The walls of the alveoli are extremely thin. The alveoli are covered with capillaries. The oxygen concentration is higher within each alveoli than the capillaries, so oxygen enters the capillaries from the alveoli. The concentration of carbon dioxide is high in the capillary, so carbon dioxide enters the alveoli from the capillaries.

Diseases related to the respiratory system

1. Common cold & inflammation of larynx

This is caused by bacteria and virus. The common cold is spread by infected air droplets or by direct contact with infected droplets while sneezing, coughing or breathing. The common cold usually, settles with a person's own immunity and it doesn't need treatment.

2. Bronchitis and Pneumonia

They are diseases in the lower part of the respiratory system. These inflammations are caused by bacterial and viral infections. It is important to take medical treatment for these conditions.

3. Tuberculosis

This is caused by a bacteria. Tuberculosis typically affects the lungs but it can affect other organs and systems of the body. By getting the BCG vaccination at birth, the dangerous forms of tuberculosis can be prevented. Taking a course of drugs continuously, will help cure this disease completely. Therefore it is important to take prescribed drugs continuously as instructed by your physician.

4. Bronchial Asthma

Asthma is a lung disease that causes inflammation and the narrowing of the airways. It obstructs the process of inhalation and exhalation. Cough and difficulty in breathing are some common symptoms. Generally asthma is caused during childhood and disappears as one grows older. Episodes can get precipitated by the common cold, dust and environmental pollutants. Asthma can be controlled by getting proper treatment.

5. Catarrh (Allergic Rhinitis)

This is a disease in the respiratory tract due to an allergy mainly affecting the upper inner side of the nose. Some reasons for this are cool drinks, dust inside the house, cobwebs, mosquito coils (some), cigarette smoke and cold air.

6. Cancer in the lungs

This is a very serious form of cancer. Smoking is the main reason for lung cancer. Smoke released when plastic and polythene are burnt, from vehicles, house hold smoke from fire wood and passive smoking also increase the risk of lung cancer.

Steps to avoid diseases related to the respiratory system

1. People with such infections should avoid crowded places, when sneezing and coughing should cover the nose and the mouth to prevent infecting others.
2. Avoid smoking.
3. Avoid taking foods that are allergic (food causing allergy to an individual may not cause an allergy to another).
4. Inhale clean air and avoid environmental pollution.
5. Use a mask when you are in a polluted environment or when suffering from any diseases.
e.g: A policeman on duty on a dusty road.
6. Take medical advice when you are suffering from cough for a long period or if you feel you are losing weight.

Circulatory system.

Circulatory system consists of the heart and the blood vessels. Systemic circulation means the part of the circulatory system in which the blood leaves the heart from left ventricle to different organs of the body cells and re-enters the right atrium. Pulmonary circulation is the portion of the cardiovascular system which carries blood from the right ventricle of the heart, to the lungs and returns to the left atrium.

Heart

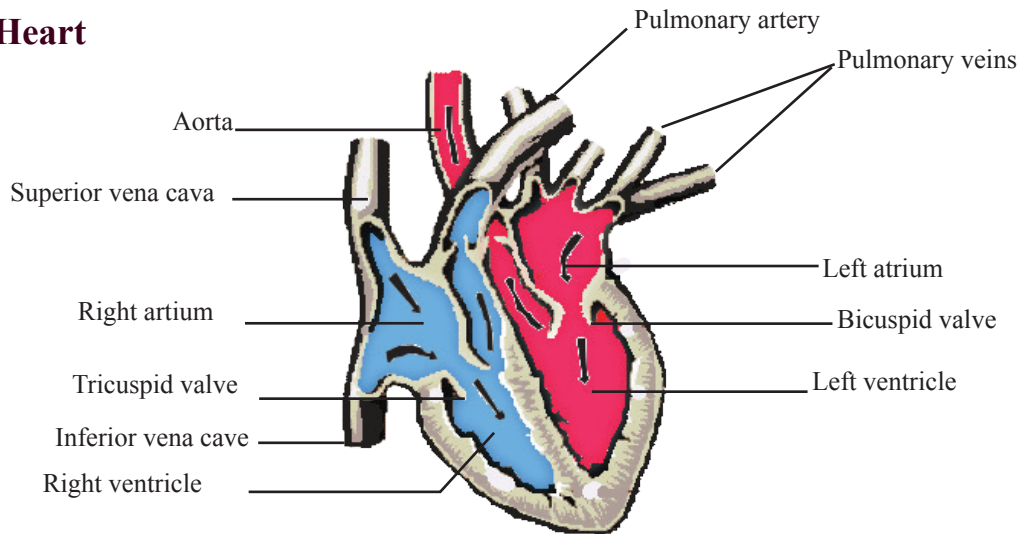


Figure 8.5 - Cross section of the heart

The heart is a muscular organ. It is made up of four chambers. They are right atrium, right ventricle, left atrium and left ventricle. The atria are in the upper part of the heart while the ventricles are in the lower part of the heart. The tricuspid valve is between the right atrium and the right ventricle. The bicuspid valve or mitral valve is between the left atrium and the left ventricle. When the ventricles contract these valves prevent the blood entering the respective atria. There are Semilunar valves located at the beginning of the aorta and left ventricle as well as the pulmonary artery and right ventricle. These Semilunar valves prevent the blood entering the heart when ventricles relax.

The two large veins that carry blood from the body to the heart are superior vena cava and the inferior vena cava. Both these veins open into the right atrium. The blood travels to the right ventricle and through the pulmonary arteries to the lungs. The pulmonary veins which carry blood rich in oxygen from the lungs enters the left atrium. Aorta starts from the left ventricle. Aorta carries oxygen rich blood to the rest of the body.

The function of the heart & blood circulation

When the left and the right atria contract the blood enters the left and right ventricles respectively. Contraction of the left and right ventricles send the blood through the semilunar valves to the aorta and the pulmonary artery respectively. At the time of ventricular contraction, the atria relax and expand leading to the filling of blood.

The superior vena cava and inferior vena cava, carry blood that has a low concentration of oxygen and a higher concentration of carbon dioxide to the right atria. When the right atrium contracts, this blood enters the right ventricle and when right ventricle contracts, the blood travels through the pulmonary artery to the lungs. The blood receives oxygen and passes out carbon dioxide through the lungs and travels through the pulmonary veins to the left atria. When the left atrium contracts, this blood enters the left ventricle and then the left ventricle contracts, the blood enters the aorta through the semilunar valve.

Aorta carries this blood to the rest of the body. The aorta is divided into many branches and supplies blood to all the organs in the body. These branches further divide until it forms the smallest blood vessel called capillaries. Exchange of oxygen, carbon dioxide, minerals, nutrients and waste take place through the walls of the capillaries. The capillaries connect together and form veins which unite with more and more veins ultimately forming the superior and inferior vena cava. Both of these main veins carry blood from the organs to the right atrium of the heart.

Tissue fluid occupies the space between capillaries and the cells of organs. Tissue fluid consists of substances which are diffused from the blood in the capillaries to extra cellular space. The substance that does not enter the veins, but remain in the tissue fluid will be collected by the lymphatic system and delivered to the blood later at a different point. The digested fat is also absorbed in to the body through the lymphatics and this milky substance is called chyle.

The primary function of the lymphatic system is to protect the body from the microorganisms. This is done by the white blood cells found inside the lymph nodules. When there is an infection or a wound, the lymph nodules in that region get swollen and become active.

e.g: Lymph nodes in the neck enlarge when there is an infection in the throat, swelling of lymph glands in the arm pit when there is a wound in the hand.

Diseases related with the circulatory system

1. Angina (Reduced blood supply to the heart)

The heart is an organ which will have a lifelong function. The necessary oxygen and the energy for the heart muscles is supplied by the coronary arteries. In the inner walls of the coronary arteries, plaque of fat gets deposited causing narrowing and stiffening of the coronary arteries. This results in reduced blood flow to the heart muscles and reduced supply of oxygen to the heart muscles. People who suffer

from this condition will find it hard to walk, run, carry heavy things, or engage in daily activities as the blood supply to the heart is reduced. They get chest pain and feel tired even during small exertion.

2. Myocardial infarction (Heart Attacks)

Due to the deposition of fat plaque inside the coronary arteries, blood vessels get narrowed. At these places, blood clots can settle and completely obstruct the flow of blood to the heart muscles. As the oxygen supply is cut off the heart muscle supplied by that coronary artery will die. This is known as a heart attack and it can result in death.

3. Stroke (paralysis)

Similar to a heart attack, the blood flow to the brain can get obstructed due to deposition of fat plaque or a blood clot inside blood vessels and can result in a stroke. The blood supply to the brain can also get interrupted by a rupture of an artery. The patient may suddenly lose the ability to speak or one side of the body becomes paralysed. High levels of cholesterol in the blood leads to early development of fat plaque and are deposited inside the blood vessels causing obstruction to the flow.

4. Hypertension

Blood is supplied through arteries to every part of the body. Blood circulation takes place through the contraction of the heart and as a result of this, the walls of the blood vessels will create a resistance. The artery of a person, who has high blood pressure, is thick. Therefore the flexibility of the arteries are less. So the walls of the arteries will begin to create more resistance with time. Therefore the heart has to make a bigger effort to circulate the blood. The kidneys, heart, brain can get damaged due to high blood pressure. The risk of getting a stroke, heart attack and kidney failure is more when a person is having hypertension. Maintaining a proper BMI, avoiding smoking and consuming alcohol, reducing the intake of salt and being free from stress helps to bring down or even prevent getting high blood pressure.

Steps to prevent diseases related to the circulatory system

1. Engaging in adequate exercises.
2. Maintaining an active life style.
3. Avoid smoking.
4. Avoid consuming alcohol.
5. Getting used to healthy food habits.
(Avoid taking excess amounts of food, too many sweets, salt and fatty food)
6. Controlling obesity and diabetes.

Activity

What are the changes we can do in our day to day life, in order to avoid heart attacks and strokes?

Reproductive system

The main function of the reproductive system is to produce offspring. The male and female reproductive systems differ from each other. The male as well as female reproductive systems produce gametes. The female gamete is called ovum and the male gamete is known as sperm. The reproductive system is not active during childhood. During puberty the secondary sexual features appear and through the reproductive system hormones and mature gametes begin to be produced.

Femal Reproductive system

Functions of the female reproductive system

Ovary - produce ova and hormones

Fallopian tube - transporting ova from the ovaries, and the fertilized ova to the womb

Womb/ uterus - providing nutrients and protection to the growing embryo and fetus till it is born

Vagina - Sexual intercourse and deposition of sperms, the baby is born through the vagina.

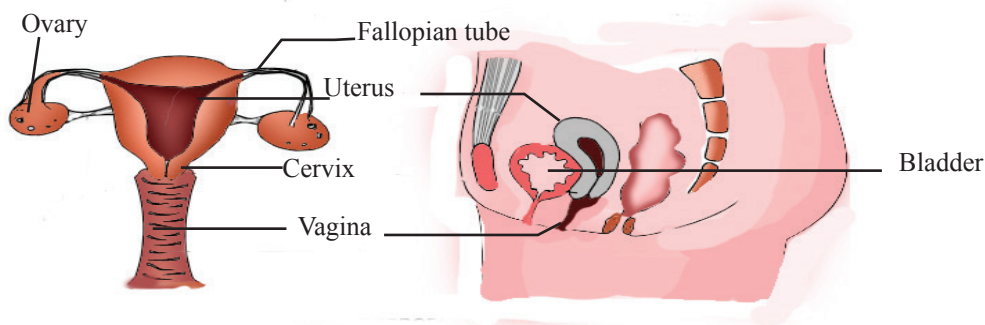


Figure 8.6 - Female reproductive system

The female reproductive system consists of a pair of ovaries, a pair of fallopian tubes, the womb, the vagina and external sex organs.

Ovaries

Female gamete cells or ova are produced by the ovaries. At birth (of a girl) ovaries contain millions of immature gamete cells. During puberty, the matured ova begin to be released from the ovaries. In every menstrual cycle, generally every 28 days, a mature ovum is released by the ovaries.

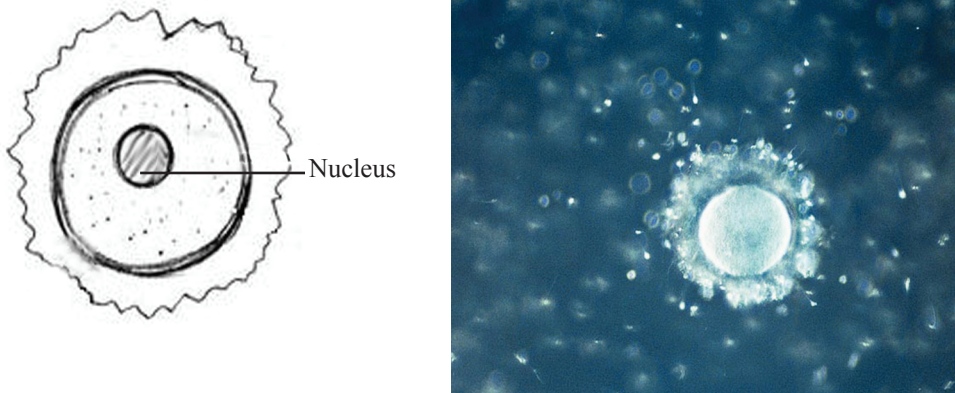


Figure 8.7 - Cross section of an ovum

The other main function of the ovaries is to produce oestrogen and progesterone hormones.

Fallopian tubes (uterine tubes)

The fallopian tubes are located closer to the ovaries and it is about 10 cm in length. It is a narrow tube connecting the ovaries to the uterus. The fallopian tube takes the shape of a funnel and it partly covers the ovaries. Ova, which are released from the ovaries, are carried to the uterus through the fallopian tubes.

Womb/uterus

The uterus is a hollow muscular organ. When an ovum fertilizes with a sperm, it's transported along the fallopian tube to the uterus and gets deposited there. Gradually the uterus expands during pregnancy with the growth of the fetus. The uterus provides nutrients and protection until the fetus is born.

Vagina

The vagina is a muscular canal. During intercourse the sperms are deposited in the vagina and they pass through the vagina along the fallopian tube and fertilization of ova takes place in the fallopian tube. During child birth the baby passes through the vagina.

Menstrual Cycle and the female reproductive Hormones

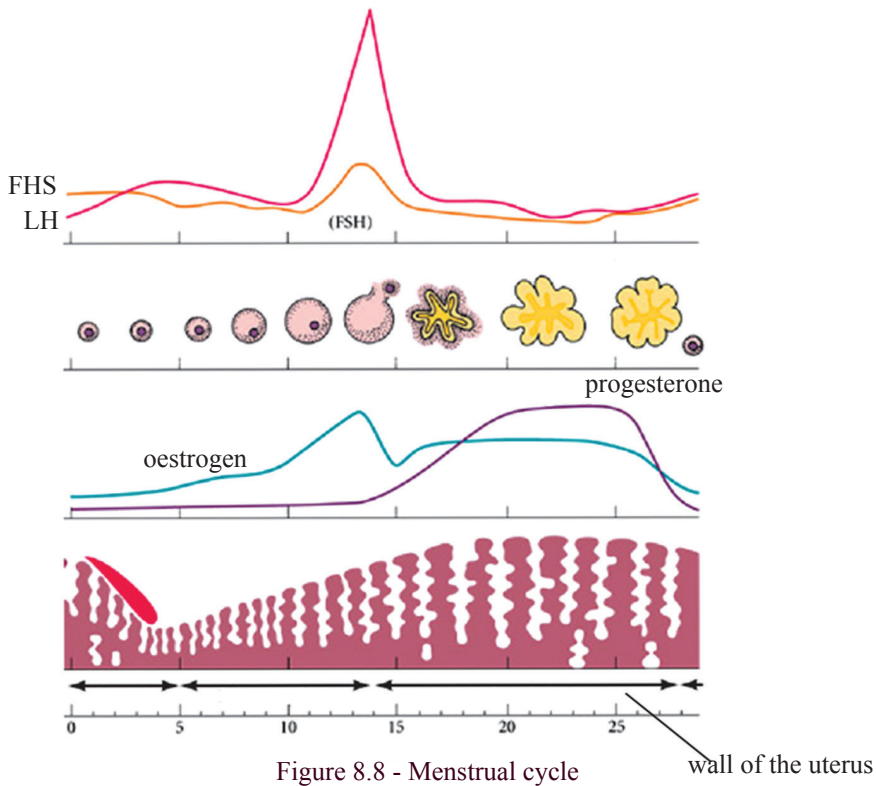


Figure 8.8 - Menstrual cycle

wall of the uterus

During the first week of the menstrual cycle, under the influence of secreted oestrogen hormone, the inner walls of the uterus becomes thick while the blood vessels grow strong. By the 14th day of the cycle the matured ova appear on the surface of the ovaries. Between 14-28 days of the cycle secretion of oestrogen and progesterone hormones increase and further strengthens the formations of inner walls of the uterus. These changes in the walls of the uterus provides a conducive environment for the growing embryo if fertilization of the ovum takes place. If fertilization does not take place, by about the 24th day the oestrogen and progesterone hormone level will decrease. As a result the inner wall of the uterus begins to shed. These broken tissues along with blood travels out of the uterus through the vagina. This is called menstruation. This flow lasts for about 3- 4 days. The menstrual cycle begins with the appearance of the secondary features (at puberty) and ends between the ages of 45 – 50 years of age and is called menopause.

Apart from producing oestrogen and progesterone hormones from the ovaries, the secretion of hormone FSH and LH by the pituitary gland, have an influence on maturation and release of ova and the secretion of hormones by the ovaries.

Male reproductive System

Male reproductive System consists of the following parts.

1. Testes
2. Ductus deferens
3. Seminal vesicle
4. Ejaculatory duct
5. Prostate gland
6. Penis
7. Epididymis

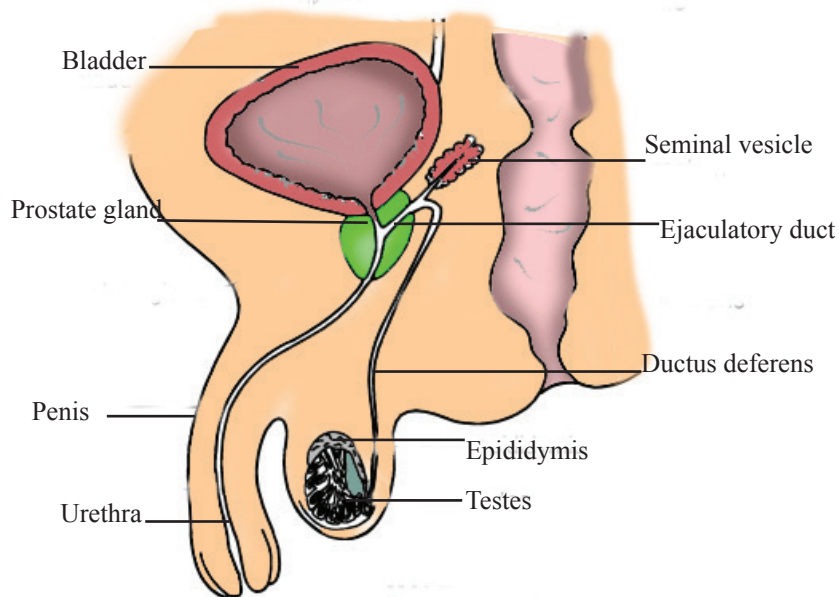


Figure 8.9 - Cross section of male reproductive System.

Testes

The testes are suspended outside the body in a sac, called the scrotum. The testes are on the outside because the temperature of the testicles must be lower than the rest of the body for the optimal production of sperm. The testes contain many seminiferous tubules. They are the sites of sperm production. The male reproductive hormone called testosterone is produced by a different group of cells within the testes.

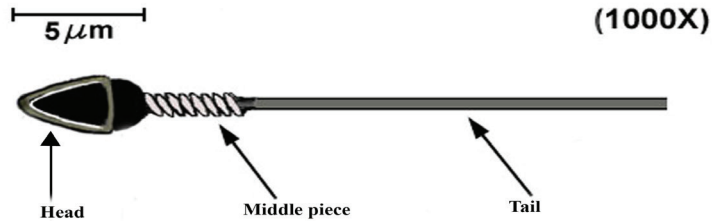
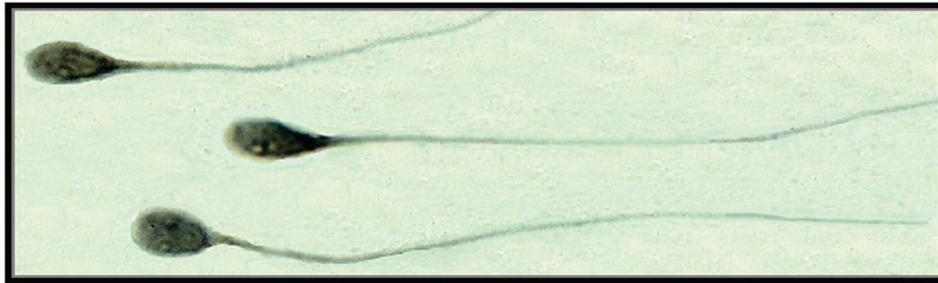


Figure 8.10 - Human sperm

Ductus deferens

The ductus deferens is a muscular tube. It enters the pelvic cavity. The latter part of ductus deferens unites with the duct of a seminal vesicle and forms the ejaculatory duct. This passes through the prostate glands and opens into the urethra.

Seminal vesicles

Seminal vesicles are about 5cm in length. It is situated below the bladder but outside of it. It unites with ductus deferentia and forms the ejaculatory duct. Secretions of the seminal vesicles are added to seminal fluid.

Prostate gland

This is situated below the bladder, around the urinary tract. The secretions of the prostate glands are added to the seminal fluid.

Seminal fluid is formed by the secretions of the seminal vesicles and the prostate gland.

Diseases related to the reproductive system

1. Sexually transmitted diseases

Sexually transmitted diseases are transmitted from one individual to another through sexual intercourse. They are syphilis, gonorrhoea, herpes and AIDS.

Disease	Agent	symptoms
Syphilis	Bacteria - <i>Treponema pallidum</i>	At the primary stage blisters and wounds appear on the genitalia and later it spreads to other areas.
Gonorrhoea	Bacteria - <i>Neisseria gonorrhoeae</i>	Burning sensation while passing urine, passing pus from the urinary track and from the vagina
Herpes	Virus - <i>Herpes Simplex</i>	Fever, rash, in the genitalia, swelling of lymph glands
AIDS Acquired Immune Deficiency Syndrome	HIV virus Transmitted through sexual intercourse and blood transfusion, From infected pregnant mother to new born child, Using unsterilized medical equipments e.g: syringes	Due to reduced immunity in the body they are prone to develop other diseases

2. Cancer in the female reproductive System

Cancer can occur in the ovaries, womb and the cervix. In order to identify cervical cancer at an early stage, it is advised that every woman above the age of 35 under go a PAP smear test.

3. Diseases in the male reproductive system.

Due to the inflammation of the prostate glands at old age there will be difficulty in passing urine. Cancers may affect the prostate glands too.

Steps to prevent reproductive system related diseases

1. Have sexual relationships with one trustful partner. Use protective methods while engaging in sexual intercourse.
2. Be concerned about your personal hygiene and keep external genitalia clean.
3. If you notice any wounds or secretion around the external genitalia, consult a doctor immediately.



For extra knowledge

Subfertility

There can be many reasons why a couple is unable to produce a baby. This can be due to a disease state in both or one person.

Reasons for male subfertility

Inadequate number of sperms, poor state of health of the sperms are some reasons for subfertility. If the number of sperms in semen (Sperm count) is low or if the movement of the sperm is abnormal, fertilization does not take place. Tests will help to identify this condition. Conditions in the male contributes to about 30-40% of sub-fertility in couples.

Reasons for female subfertility

Irregular ovulation contributes to about 20% of subfertility. Another 20% is due to damages or blocks to the fallopian tube. Diseases in the womb also contribute to subfertility. In some instances a cause for subfertility is never found. Different methods of treatment are being used to treat subfertility. Irregular menstrual cycle in obese females may cause delay in getting pregnant.

Summary

The digestive, respiratory, circulatory and the excretory systems contribute to the functioning of the human body. The reproductive system contributes to the purpose of producing a new life. The systems are structured in such a way as to function optimally. Each of the systems could get affected by specific diseases that could interfere with its functioning. Preventing these diseases and maintaining the optimum function of these systems will enable one to lead a healthy life.



Exercises;

1. Write five actions we can take to avoid diseases in the digestive system.
2. Mention two major diseases that affect the excretory system.
3. Write two diseases that affect the respiratory system and write one action that could be taken to prevent each of them.
4. Write five positive actions we could follow to avoid heart attacks.
5. Write four methods how AIDS can be transmitted.