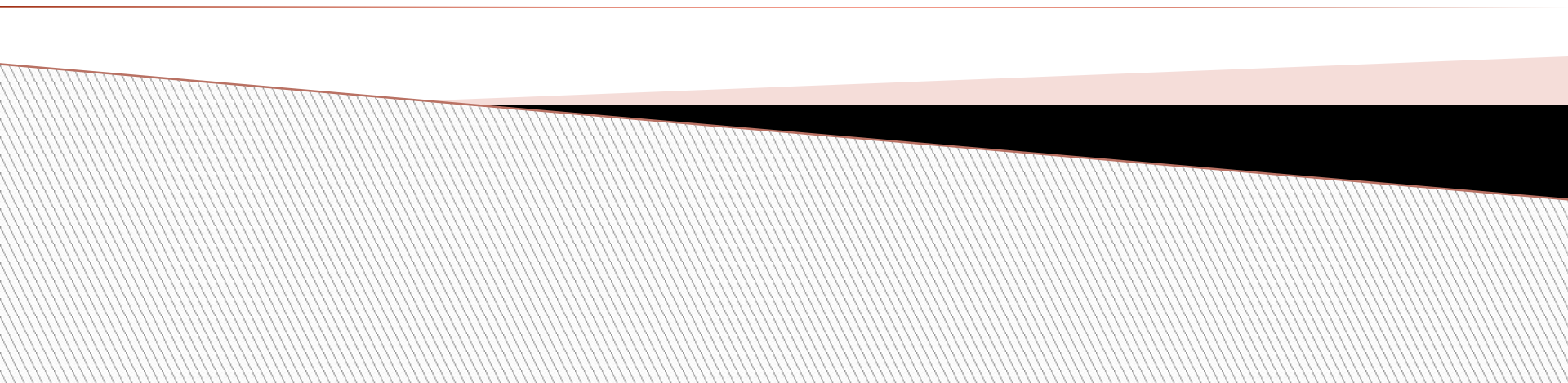


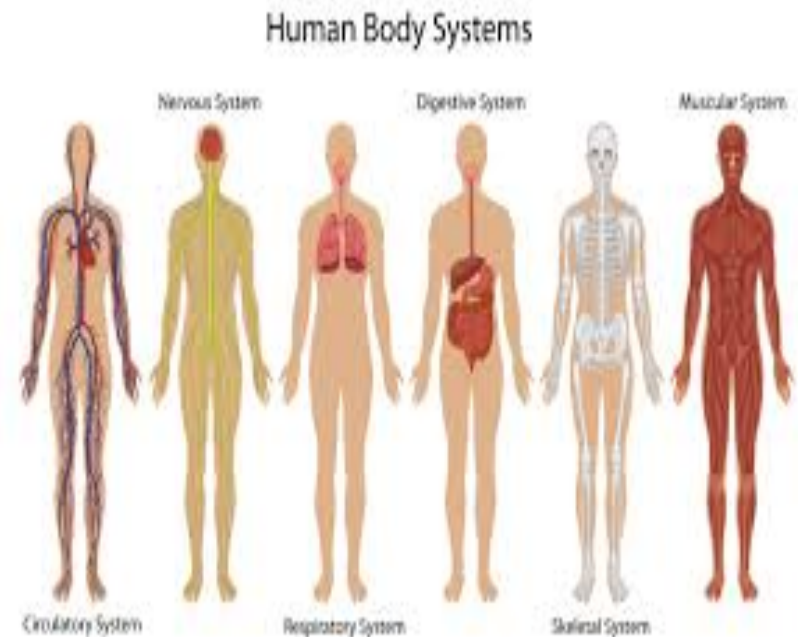


BODY SYSTEMS



The human body is made up of **cells** and **organs** such as the heart and the lungs.

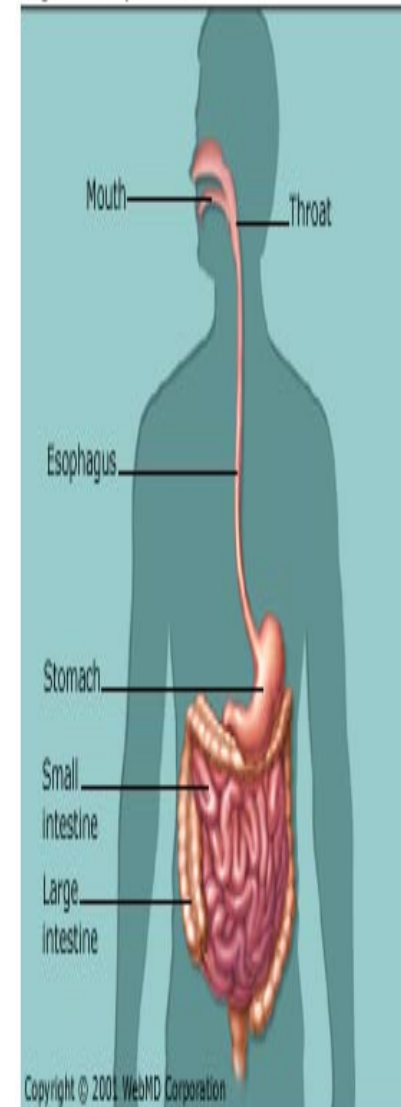
Groups of organs form body systems. Body systems, such as the **digestive system**, the **respiratory system** and the **circulatory system**, **work together** so that our body receives the **nutrients** and **oxygen** that it needs.



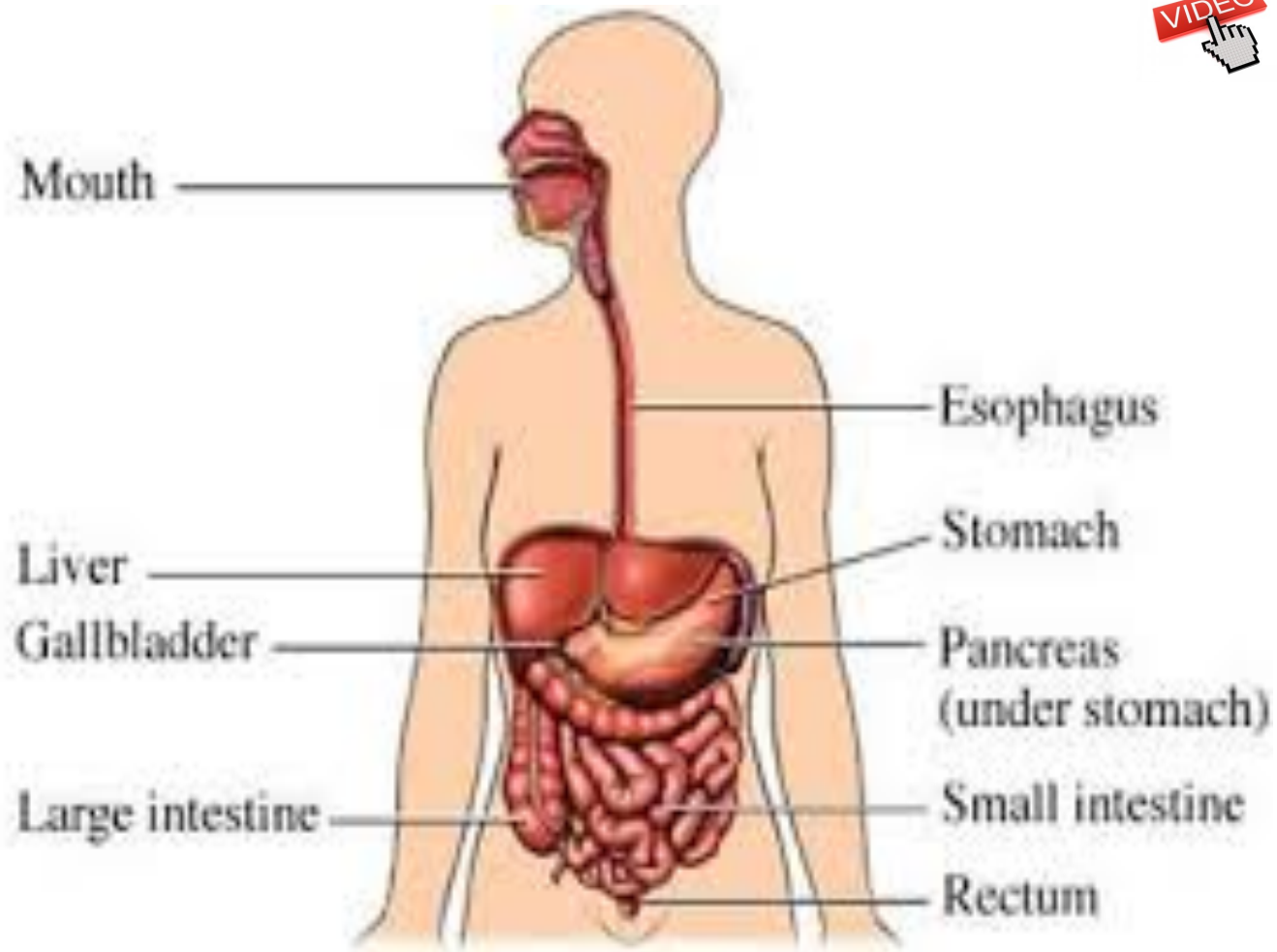
THE DIGESTIVE SYSTEM



Digestive System



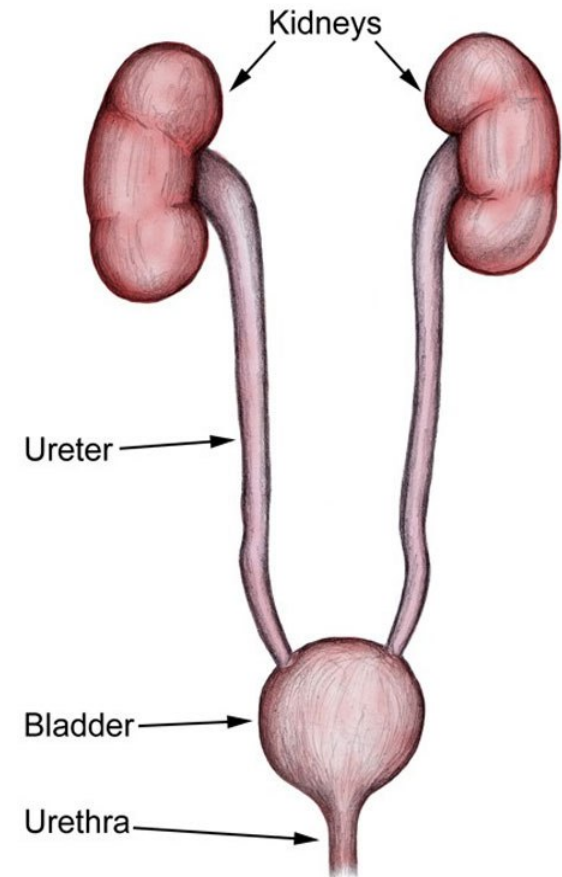
- The digestive system is a group of organs that work together to help us to digest food.
- We take in food through our **mouth** and goes to a tube called the **oesophagus**.
- Then, it passes down into our **stomach** and **intestines**.
- The **liver** and the **pancreas** send juices to the **small intestine** for our body to absorb the nutrients.
- The **large intestine** separates the nutrients from the waste and expels the waste from our body.
- The nutrients pass to the **circulatory system**, where they move around the body.





THE EXCRETORY SYSTEM

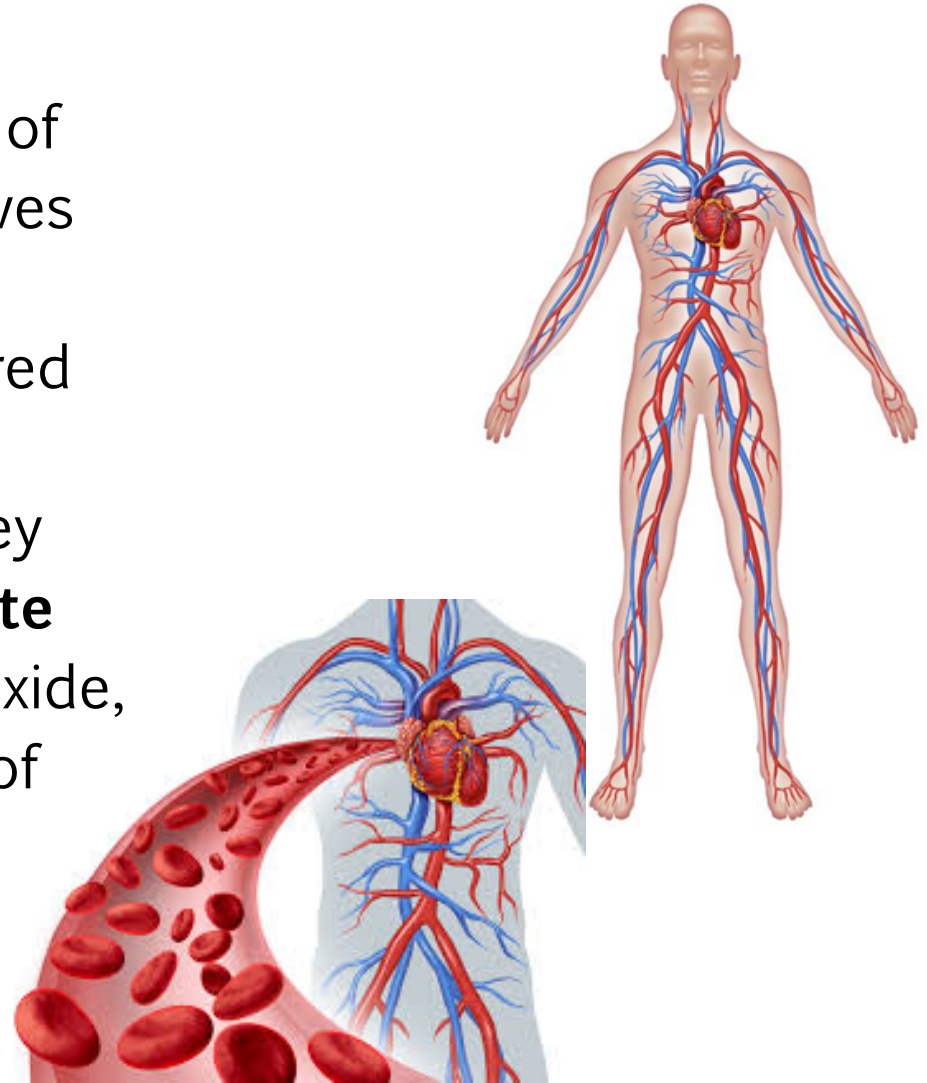
- Our body needs to eliminate the remains of the food that our body can't use and other waste. This is done by the **excretory system**.
- The **kidneys** clean the waste from our blood. This waste combines with water to make urine.
- Urine goes down two tubes called **ureters**, and collects in a bag called the **bladder**. When our bladder starts to get full, we need to go to the toilet.
- Urine leaves our body through the **urethra**.



THE CIRCULATORY SYSTEM



- The **heart**, **blood vessels** and **blood** are parts of the circulatory system . It moves blood through the heart and around the body. Blood is a red liquid that gives our cells the **oxygen** and **nutrients** they need. Blood also collects **waste products**, such as carbon dioxide, and takes them to the parts of the body which **expel** them.

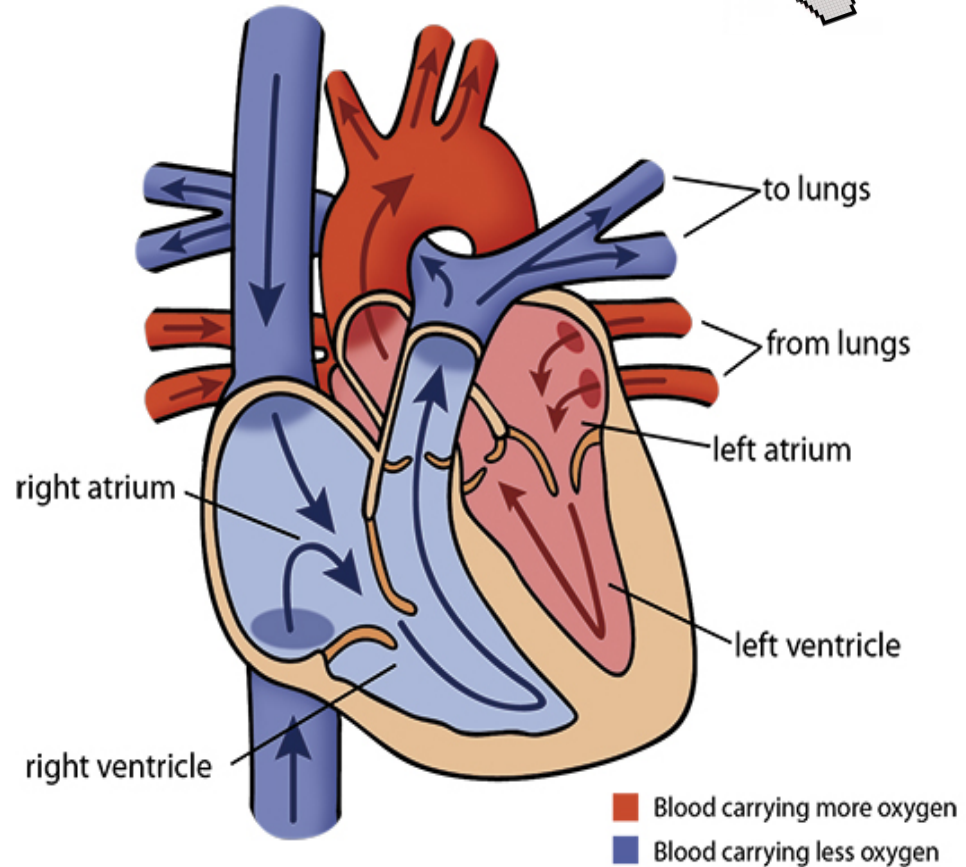


How blood travels through the heart

song



Your **heart** is a muscle which is located in the centre of your chest. Your heart beats about 70 times a minute. The heart is an organ made up of very strong involuntary muscles. It contracts and relaxes to pump blood through the blood vessels in our body.

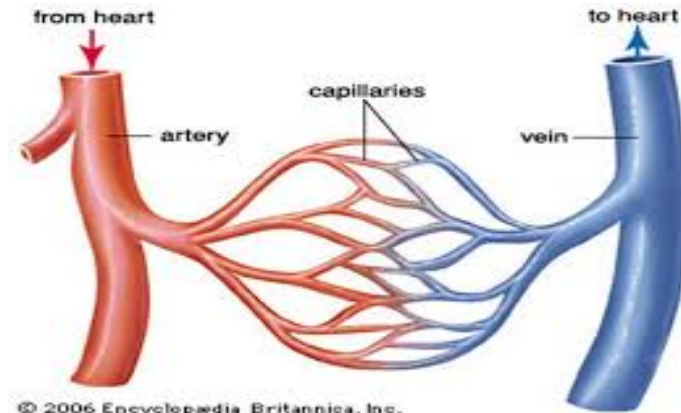




1. **Blood** enters the heart through the **veins** and goes into the **right atrium**.
2. The blood passes from the **right atrium** to the right **ventricle**.
3. The **right ventricle** pumps the **blood** to the **lungs**. Here the blood **picks up oxygen** and **expels carbon dioxide**.
4. The blood carrying oxygen **from the lungs** comes back through the **left atrium**.
5. The blood passes from the **left atrium** to the left **ventricle**.
6. The **left ventricle** pumps the blood **through the arteries** to the **rest of the body**.

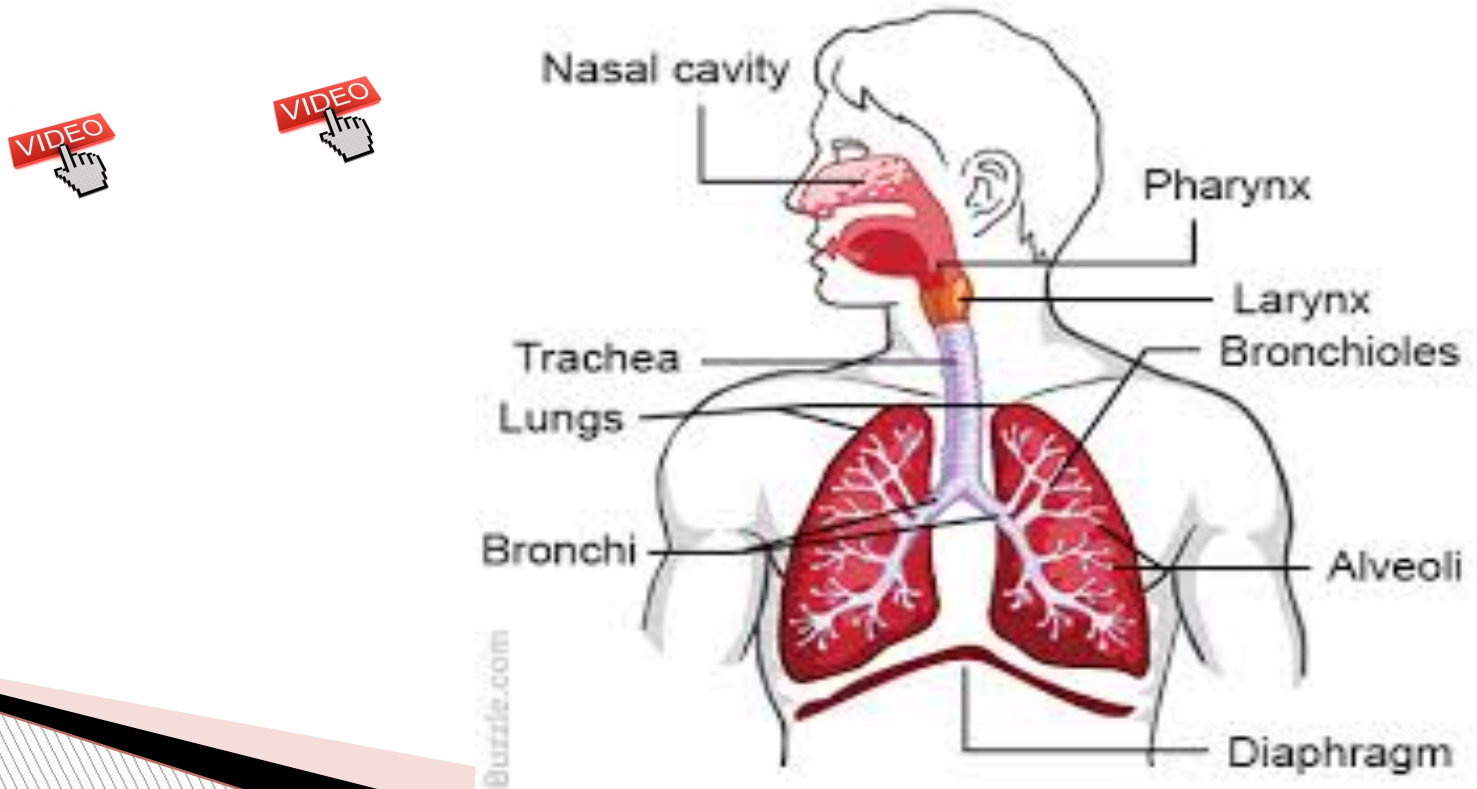
Blood Vessels

- **Vessels** are like **channels** where our blood travels through. The three blood vessels are **Arteries**, **Veins** and **Capillaries**.
- **Arteries** are vessels which carry blood from the heart to the rest of the body.
- **Veins** are vessels which carry blood back to the heart from the rest of the body.
- **Capillaries** are very small vessels that connect our arteries and veins.



THE RESPIRATORY SYSTEM

- The **respiratory system** is made up of a group of organs that help us breathe. We breathe in **oxygen** and breathe out **carbon dioxide**.



- 1 • We breathe in air through our **nose** and **mouth**.
- 2• The **pharynx** opens and the air goes down a tube called the **trachea**.
- 3• The trachea divides into two tubes called **bronchi**. The air passes down the bronchi and enters the **lungs**.
- 4• Inside the lungs, the bronchi divide into smaller tubes.
- 5• At the end of the smaller tubes there are tiny sacs, called **alveoli**, which are covered in capillaries.
- 6• The **oxygen** from the air passes from our lungs **into our blood** through the **alveoli**.
- 7• The **carbon dioxide** from our blood passes **into our lungs** through the **alveoli**.
8. When we breathe out, the **carbon dioxide** leaves our lungs.

Organs of the Respiratory system

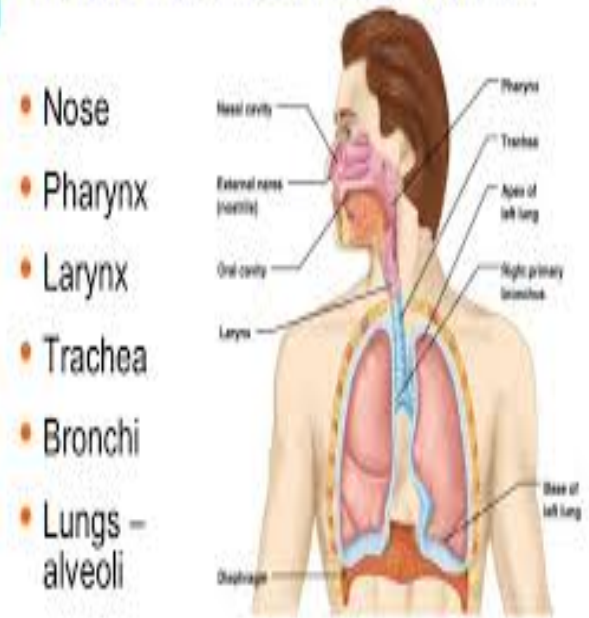


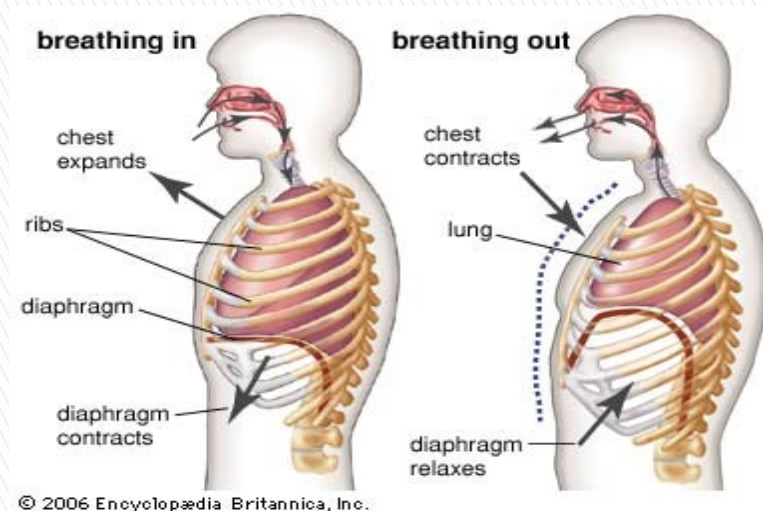
Figure 13.1

Breathing in

- When we breathe in, the diaphragm contracts and goes down.
- The muscles between our ribs push the rib cage up and out.
- There is now more space inside our chest, so air comes in and our lungs inflate.

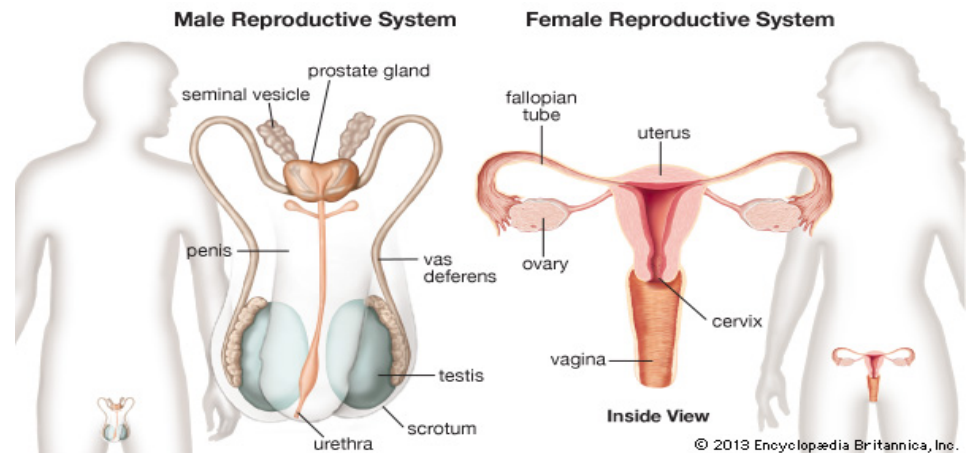
Breathing out

- When we breathe out, the diaphragm relaxes and goes up. The muscles between our ribs also relax, so our rib cage goes in and down. Now there is less space inside our chest, so air containing carbon dioxide is pushed out.



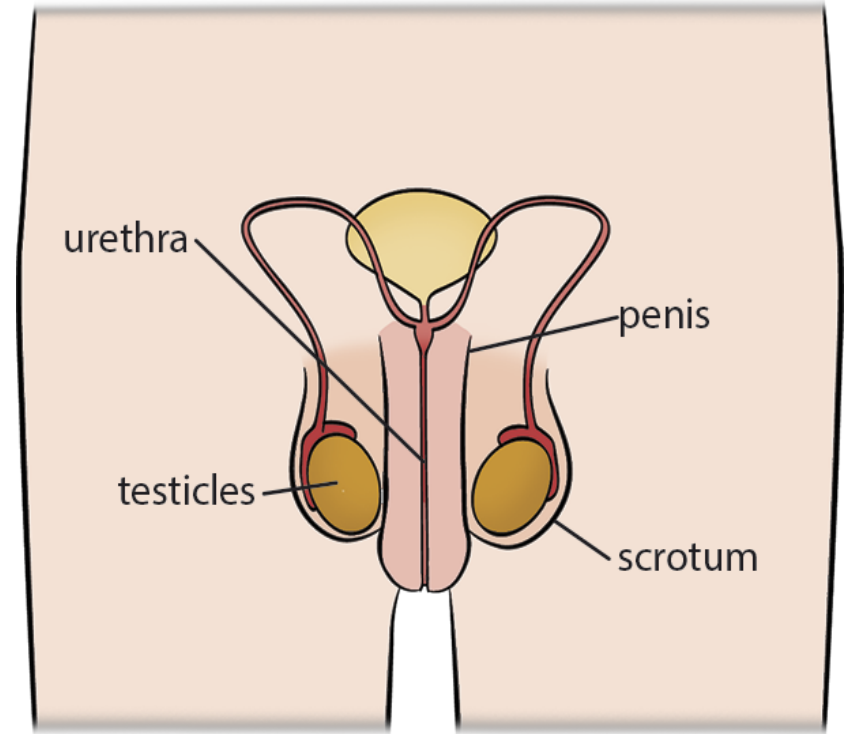
THE REPRODUCTIVE SYSTEM

- As we grow, our body changes and our **reproductive organs** develop. We can have babies thanks to this system. While the other body systems are the same for men and women, the reproductive systems are different. The two reproductive systems need to work together so that we can reproduce.



MALE REPRODUCTIVE SYSTEM

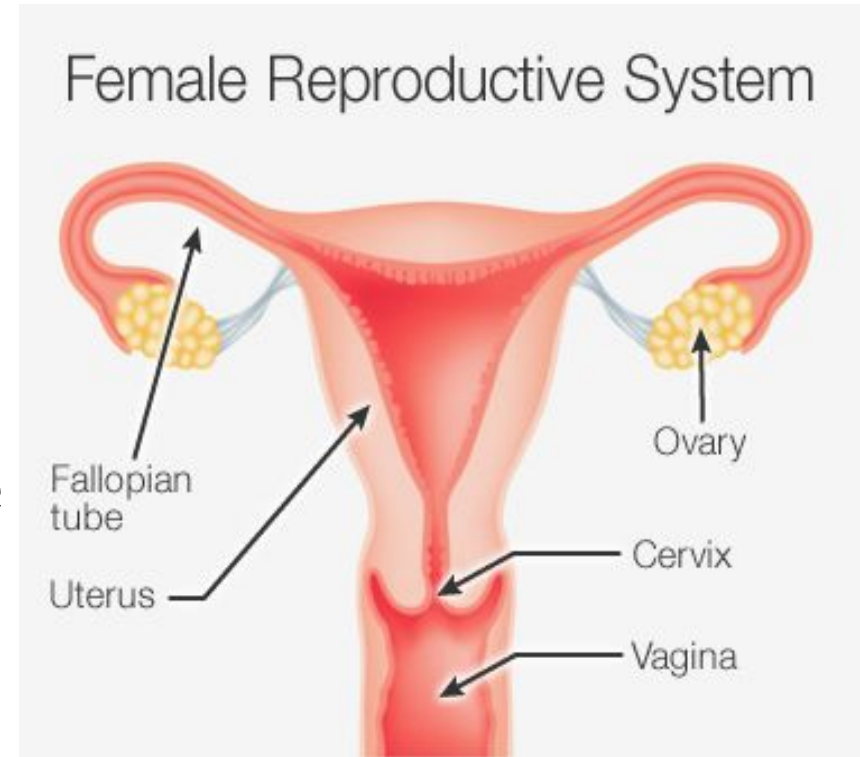
The **testicles** produce **sperm** which is the male sex cell. The testicles are located in a bag of skin called the **scrotum**. The **penis** is connected to the testicles by small tubes. The **urethra** is a tube in the penis. The sperm travels through the urethra to the outside of the body.



FEMALE REPRODUCTIVE SYSTEM

The two **ovaries** store and produce **ovum** (eggs). Ovums are the female sex cells.

The **uterus** is connected to the ovaries by the Fallopian tubes. The **vagina** is a muscular tube. It connects the uterus to the outside of the body. The **vulva** is on the outside of the body and covers the opening to the vagina.

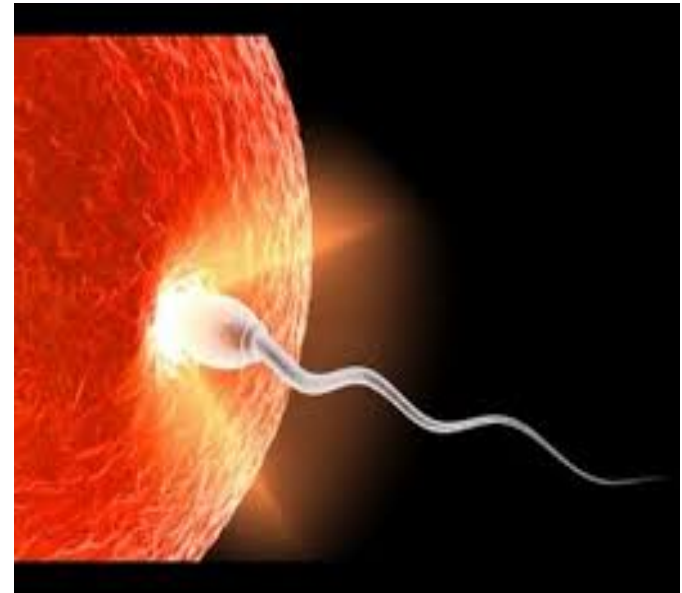


How we are born

When a **sperm cell** joins an **ovule cell** fertilisation takes place and **reproduction** begins.

The next stage is **pregnancy**. The fertilised ovule develops into a **baby** in the **uterus**.

A **human pregnancy** lasts around **nine months**.



* In the first three months :

- The **embryo** is the size of a small seed.
- The embryo becomes a **foetus**. It's the size of a bean.
- Limbs start to grow and organs start to develop.

* In the second three months ...

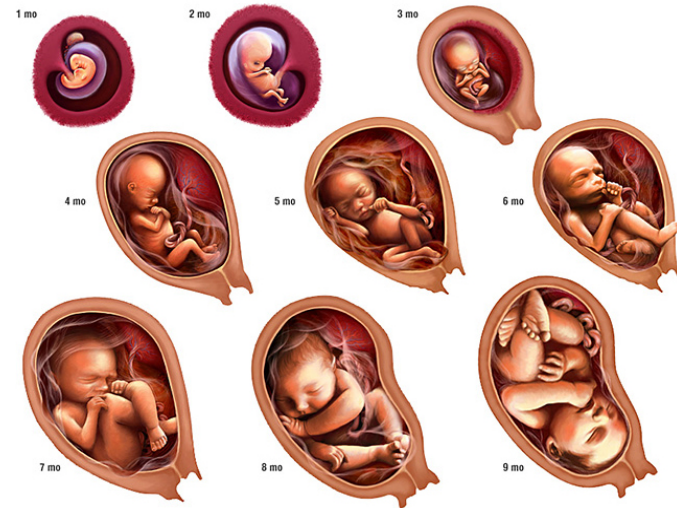
- The face starts to form. The foetus has all its organs and continues to grow.

* In the last three months ...

- The foetus is developed and preparing to be born.

* Birth

- The baby is born.



BODY

RESPIRATORY:

nose, mouth, pharynx, trachea, lungs, bronchi, alveoli and diaphragm.

DIGESTIVE:

mouth, stomach, large and small intestines.

CIRCULATORY:

heart (atria and ventricles), blood vessels (arteries, veins, capillaries) and blood.

REPRODUCTIVE:
MALE (urethra, testicles, scrotum, penis)
FEMALE (ovaries, uterus, vagina, vulva).