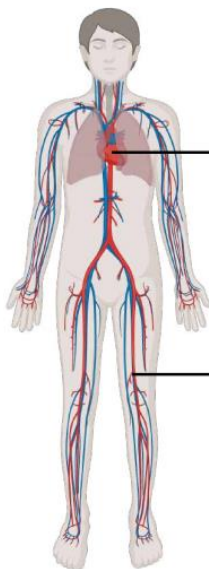


The **circulatory system** is the group of organs that work together to transport substances around the body.



The **heart** is a muscular pump that pushes blood around the body.

Blood flows in blood vessels to every part of the body.

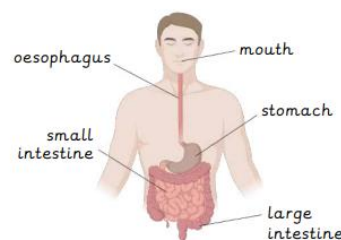
Humans have a **double circulatory system**:

One loop of blood vessels transports blood from the heart to the lungs to pick up oxygen and drop off carbon dioxide. Another loop of blood vessels transports blood around the body to deliver useful substances and pick up waste products.

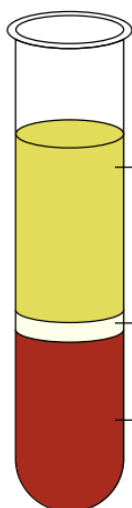


The **heart** is split into two sides - one side pumps blood to the lungs and the other side pumps blood to the body. The heart muscle is under involuntary control to contract and relax so we cannot choose to move it.

Nutrients are absorbed from the small intestine into the bloodstream to be transported around the body whereas **water** is absorbed from the large intestine into the blood.



Blood is a mixture of lots of different things. It **transports** useful substances to where they are needed and carries waste products away to be removed from the body.



The liquid part of blood contains water and transports nutrients, carbon dioxide and other substances.

Some parts of blood help fight disease and others help stop us bleeding.

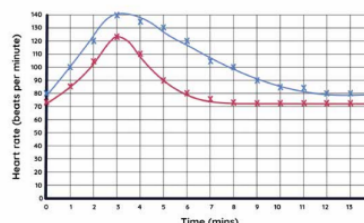
The red-coloured part of blood transports oxygen.

The **resting heart rate** is the number of times the heart beats in one minute when relaxed, sitting or lying down.



Count for 60 seconds or 30 seconds x2.

When we exercise, our **heart rate** increases (goes up). This happens to speed up the transport of substances like oxygen and sugar to the working muscles so they have more **energy**.



Someone who is fitter will have a lower resting heart rate and their heart rate after exercise will return to the resting rate quicker.

drugs
A drug is a substance that changes the way your body works; some are helpful but others are damaging.

exercise
Do a variety of types and intensities of physical activity across the week. Try to spread activity throughout the day to avoid long periods of sitting or lying down.

diet
A balanced diet includes all seven nutrients but in different amounts. Eat plenty of fruit and vegetables every day but less high-sugar and fatty foods. Drink regularly throughout the day.

exercise
Improve your mood by connecting with other people, learning new skills and being active.

Factors affecting health

alcohol
Alcohol can affect judgement, behaviour and reaction times. Regularly drinking large amounts of alcohol damages the organs.

hygiene
Make sure you wash your hands thoroughly before preparing food, after going to the toilet, coughing or sneezing and playing outside.

smoking
The chemicals in cigarette smoke cause damage all around the body, especially the lungs, heart and blood circulation. These are also breathed in by people around the smoker. While vaping is less harmful, the long-term effects are still unknown. It is better not to smoke at all.