



What should I Know by the end of the unit?

- Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.
- Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.
- Describe the ways in which nutrients and water are transported within animals, including humans.

What I should already know

- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.
- Describe the life process of reproduction in some plants and animals.
- Describe the changes as humans develop to old age.

Key Vocabulary

| | |
|---------------------------|---|
| circulatory system | A system which includes the heart, veins, arteries and blood transporting substances around the body. |
| heart | An organ which constantly pumps blood around the circulatory system. |
| pulmonary | Relating to the lungs. |
| alveoli | Tiny air sacs in the lungs where gas exchange takes place. |
| gas exchange | The process by which oxygen enters the bloodstream from the lungs and the lungs receive carbon dioxide from the blood to breathe out. This process happens in the alveoli and the capillaries around the alveoli. |



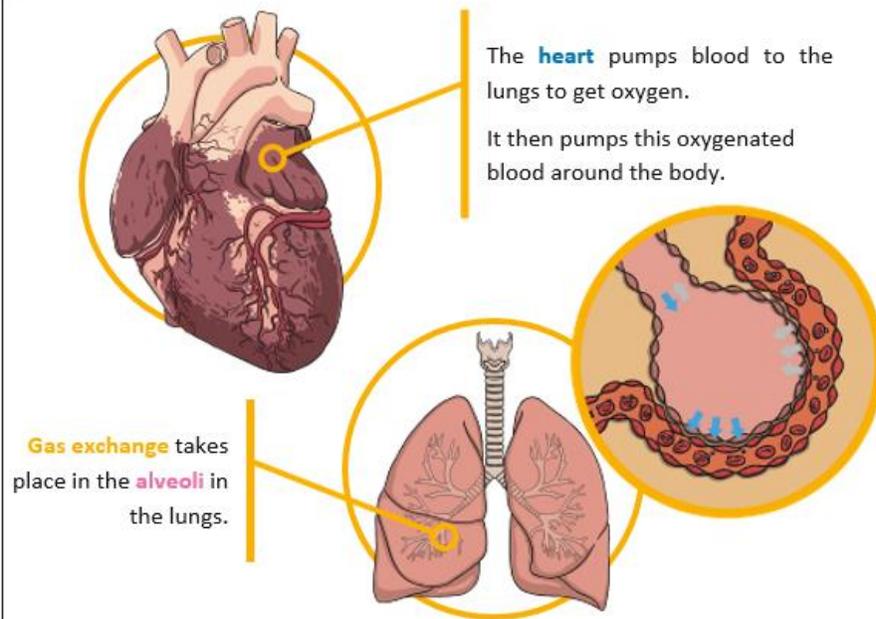
Key Vocabulary

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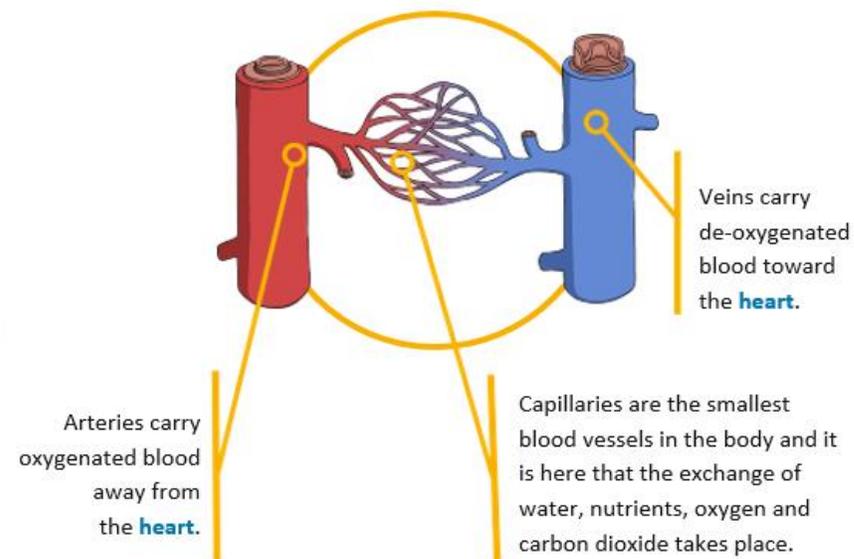
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Key Knowledge



Blood Vessels





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| | |
|------------------|--|
| villi | Structures in the small intestine which help absorb nutrients. |
| nutrients | Substances that animals need to stay alive and healthy. |
| kidneys | Organs which filter blood and make urine from waste and excess water. |
| liver | An organ which processes waste from the blood and produces bile. |
| drug | A substance containing natural or man-made chemicals that has an effect on your body when it enters your system. |
| alcohol | A drug produced from grains, fruits or vegetables when they are put through a process called fermentation. |

Key Knowledge

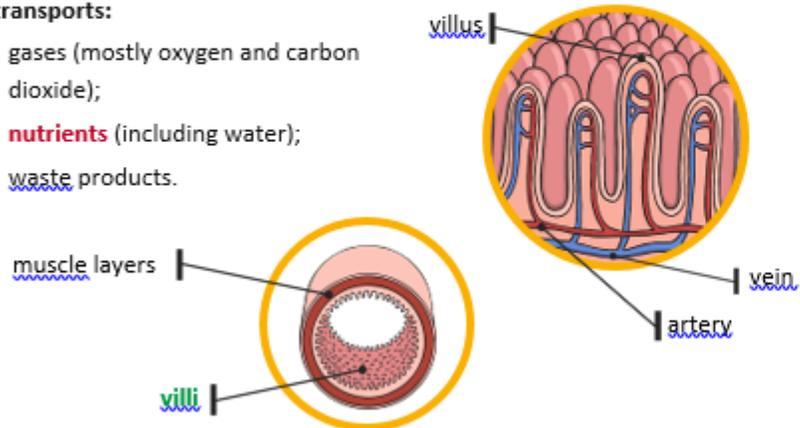
Inside the Small Intestine

The **nutrients** pass through the **villi** and are absorbed into the blood vessels.

Water is absorbed in the small intestine in exactly the same way as other

Blood transports:

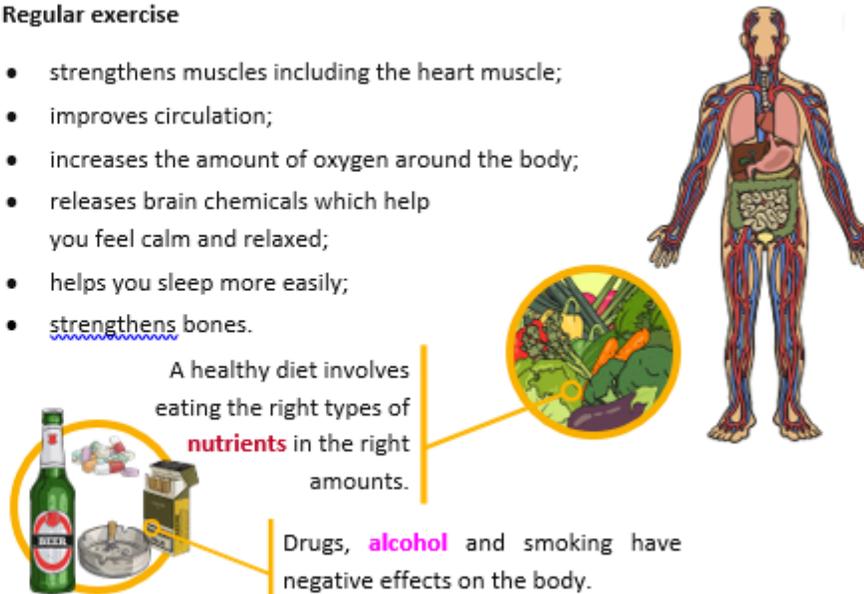
- gases (mostly oxygen and carbon dioxide);
- **nutrients** (including water);
- **waste products**.



Regular exercise

- strengthens muscles including the heart muscle;
- improves circulation;
- increases the amount of oxygen around the body;
- releases brain chemicals which help you feel calm and relaxed;
- helps you sleep more easily;
- **strengthens bones**.

A healthy diet involves eating the right types of **nutrients** in the right amounts.



Drugs, **alcohol** and smoking have negative effects on the body.

Pre and Post Assessment

| Statement | Pre Assessment response | Post Assessment response |
|--|-------------------------|--------------------------|
| <ul style="list-style-type: none">Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood | | |
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