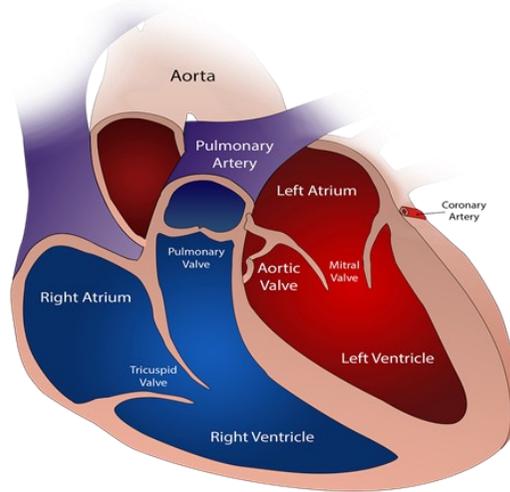


# Science - Animals Including Humans - The Heart and Health

Blood Vessels	The tubes through which blood flows around the body.
Circulatory System	The system which circulates blood through the body.
Oxygenated	When blood is enriched with oxygen from the lungs.
Capillary	A very thin tube which carries blood around the body.
Heart Rate	The speed at which the heart beats or the number of times it beats in a particular period.
Addiction	An inability to stop consuming a substance.
Nutrients	Something from food that helps living organisms to live and grow.
Balanced Diet	A healthy way of eating which ensures that the body has all the essential nutrients needed.

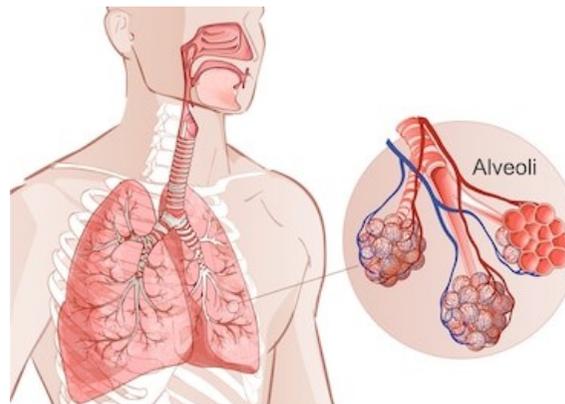


## The Heart

The heart pumps blood to the lungs to get oxygen.

It then pumps this oxygenated blood around the body.

Gas exchange takes place in the alveoli in the lungs.

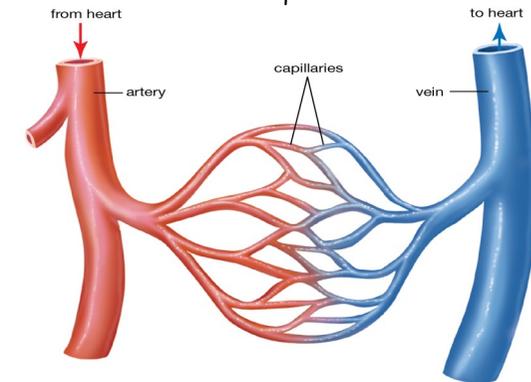


## Blood Vessels

Arteries carry oxygenated blood away from the heart.

Veins carry de-oxygenated blood towards the heart.

Capillaries are the smallest blood vessels in the body and it is here that the exchange of water, nutrients, oxygen and carbon dioxide takes place.



A healthy heart beats between 60 and 100 times a minute.

Regular exercise will keep your heart healthy.

Arteries transport blood away from the heart and veins transport blood back to the heart.

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.

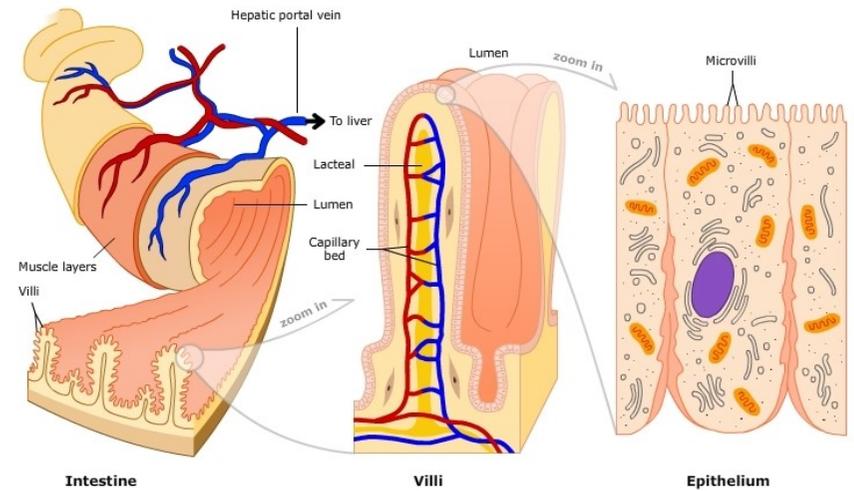
### Inside the Small Intestine

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 nutrients are absorbed.

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



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



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