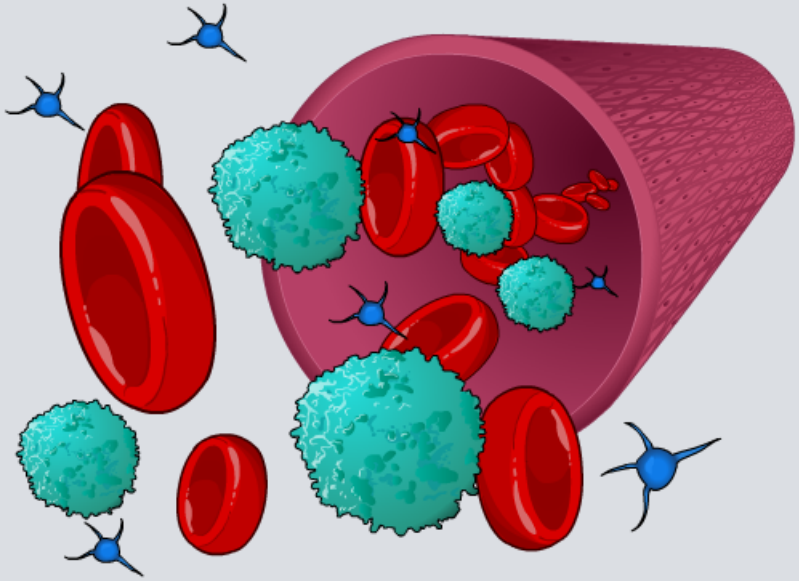
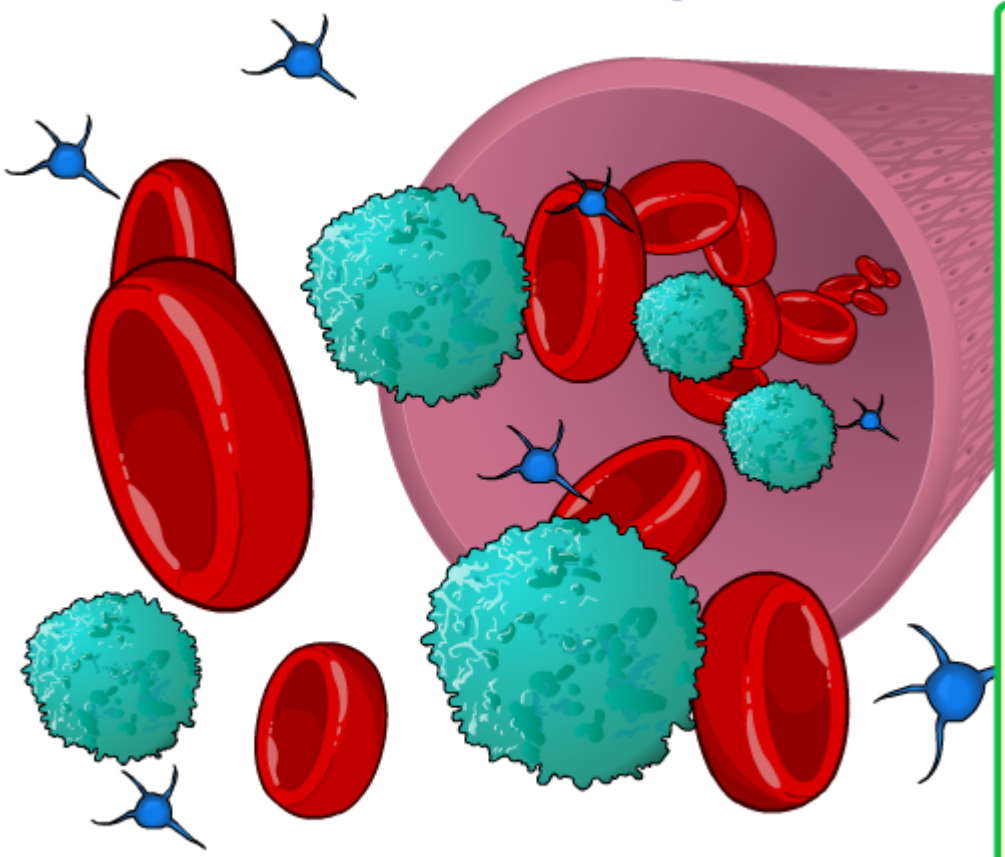
Blood and Blood Vessels



What is blood made up of?

Components of blood



Blood consists of particles suspended in a fluid called **plasma**. Plasma carries carbon dioxide, glucose, urea, antibodies, as well as **red blood cells**, **white blood cells** and **platelets**.

Click on each component to find out more about its function.

Which component?

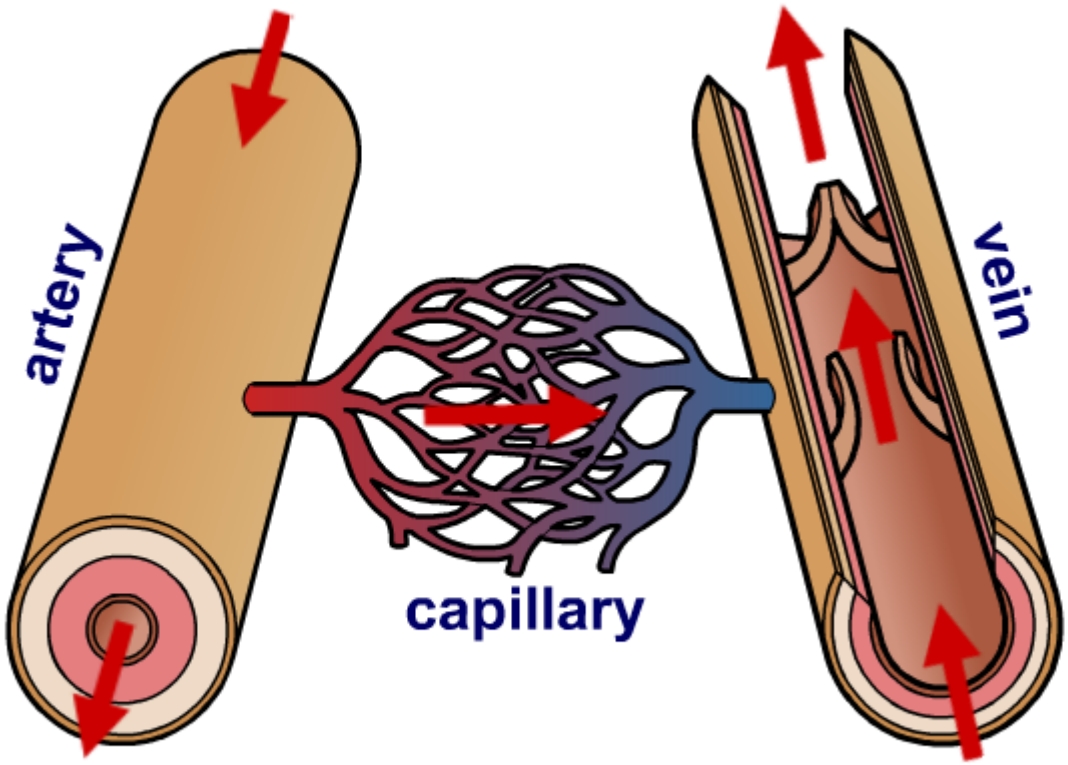
Match each blood component to its function

red blood cell	plays an important role in blood clotting
white blood cell	engulfs invading pathogens
platelet	carries oxygen around the body
plasma	fluid which carries other blood components

solve

Blood vessels

The structure and function of blood vessels



Blood moves around the body in **arteries**, **veins** and **capillaries**. Each blood vessel is adapted to its function.

Click on each blood vessel to learn more about its structure and function.

Which type of blood vessels?

Which blood vessel do these statements relate to?

artery	vein	capillary

has a large lumen

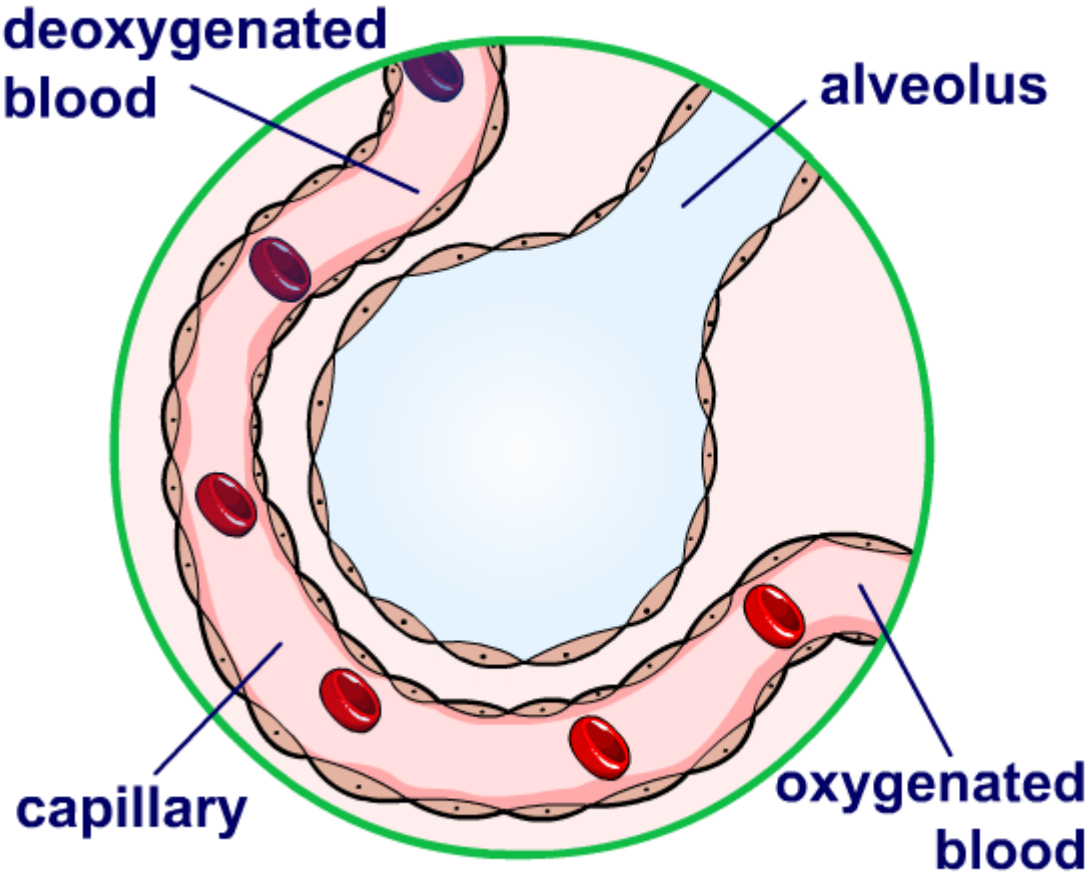
solve

Gases moving in and out of the blood

How do gases move in and out of the blood?

Gas exchange takes place within the **alveoli** in the lungs. Oxygen and carbon dioxide move between inhaled air and the bloodstream by **diffusion**.

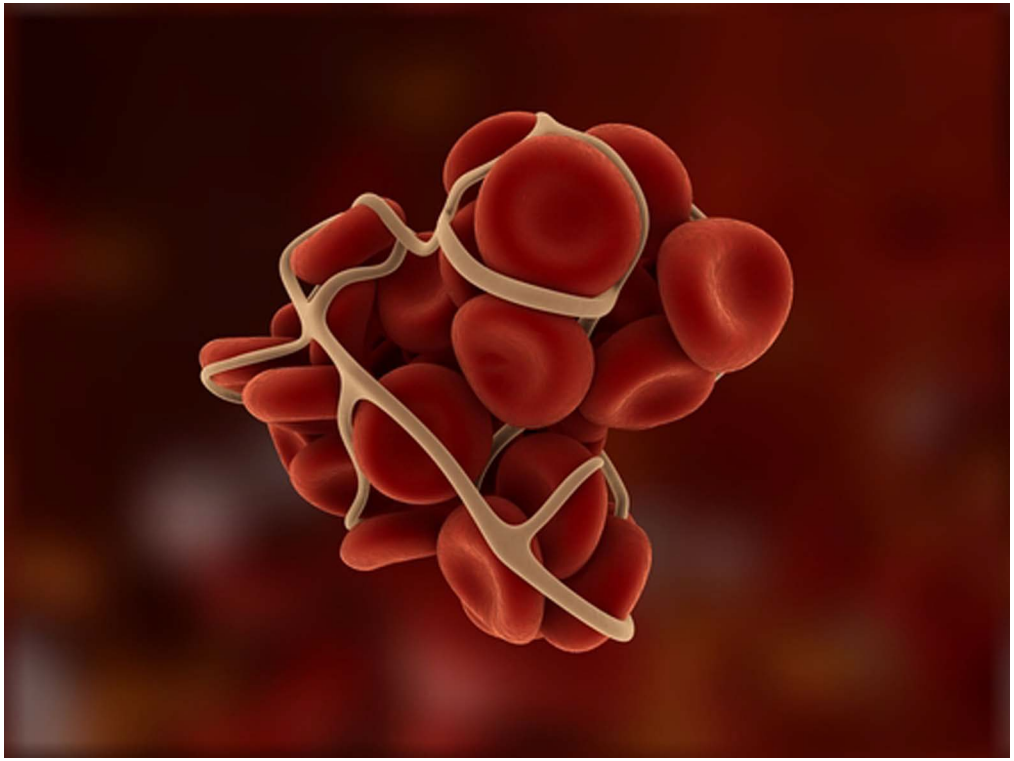
Click "**play**" to find out what happens.



Blood clotting

At the site of a cut or wound the blood will **clot**. This prevents further blood loss, reduces the risk of pathogens entering, and forms a framework for repairing the damaged tissue.

Platelets will rapidly stick to a damaged area, releasing chemicals that start a series of complex reactions. This results in a network of fibers forming that trap blood cells and debris, forming a solid clot.



Why can blood clots be dangerous?

Blood clots normally occur at the site of a cut. However, occasionally clots arise within blood vessels. This can be very dangerous, as a clot could obstruct the flow of blood to a major organ. A blood clot can cause organ damage and even death.

Anticoagulant drugs, such as warfarin, heparin and aspirin can be taken when a person's blood is clotting too quickly. These drugs can control clotting by reducing the ability of the blood to clot. Substances such as vitamin K, alcohol, green vegetables and cranberries can also affect clotting.

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