



What do blood and blood vessels do?

Blood carries oxygen, nutrients and waste products around the body to get to where they are needed.

Blood travels in a blood vessel.

There are 3 types of blood vessels:

- **arteries:** these move blood from your heart
- **veins:** these move blood back to your heart
- **capillaries:** these are tiny vessels that allow oxygen, nutrients and waste products to move into and out of the body's cells



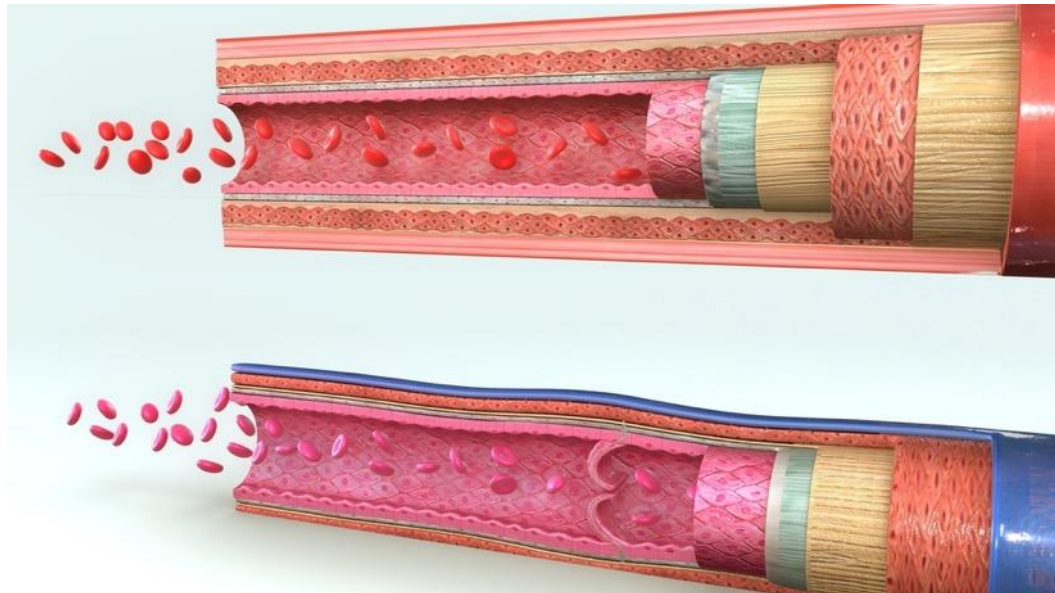


What do blood and blood vessels do?

All the organs in your body have cells and need oxygen or they will become damaged.

Blood vessels need to be healthy to be able to move blood around the body. If they are not, then oxygen and nutrients will not be able to move to where they are needed, and your body will not be able to get rid of waste products properly.

A blood vessel has an inside wall and an outside wall, which acts as a barrier to allow substances to move in and out of the blood.

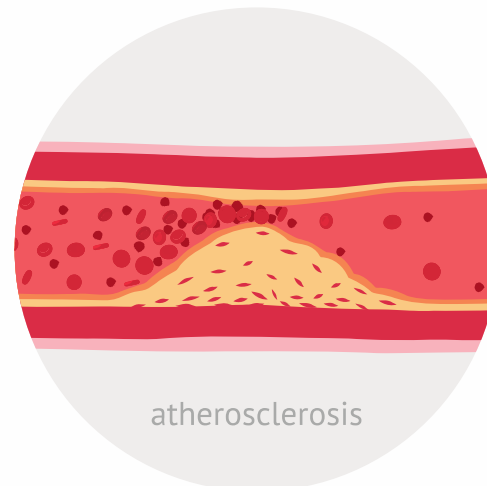
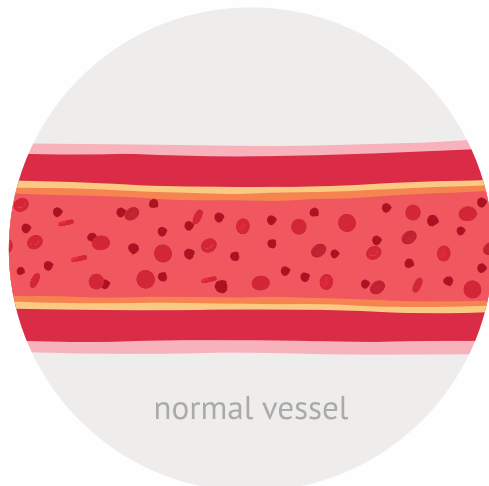




Why can high blood glucose levels cause damage?

Blood vessels have walls through which only certain things can pass. These walls are barriers and can become weakened by high blood glucose levels. This allows fat cells (called cholesterol) to move into the wall. These fatty deposits cause the wall to become thickened and hardened, known as **atherosclerosis**.

High blood glucose over a prolonged period of time can lead to the surface of blood vessels becoming inflamed. If fatty deposits start to build up then this narrows the space inside the blood vessel which causes reduced blood flow.

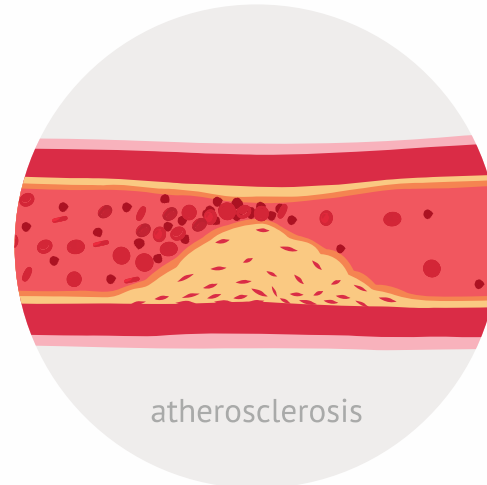
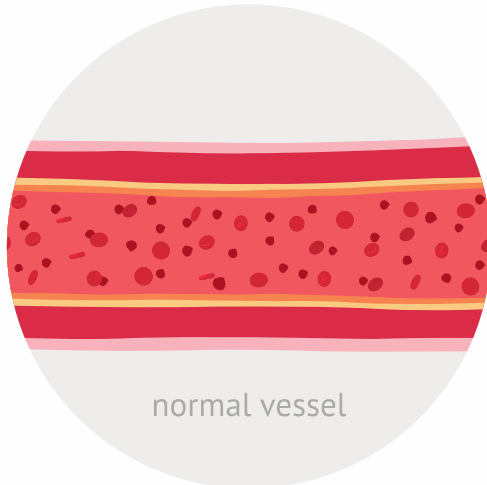




Why can high blood glucose levels cause damage?

Platelets are a type of blood cell that stick together inside the blood vessel and cause the blood to clot, for example if you cut yourself. If blood glucose levels are high, the platelets clump together more which causes further blockage inside the blood vessels.

High blood glucose levels also damage the blood vessel walls and stop oxygen and nutrients from moving in and out of the body's cells, so the cells and organs can become damaged.





What else can cause damage to blood vessels?

High blood glucose is an important factor.

But there are other causes too which include:

- high blood cholesterol
- high blood pressure
- smoking

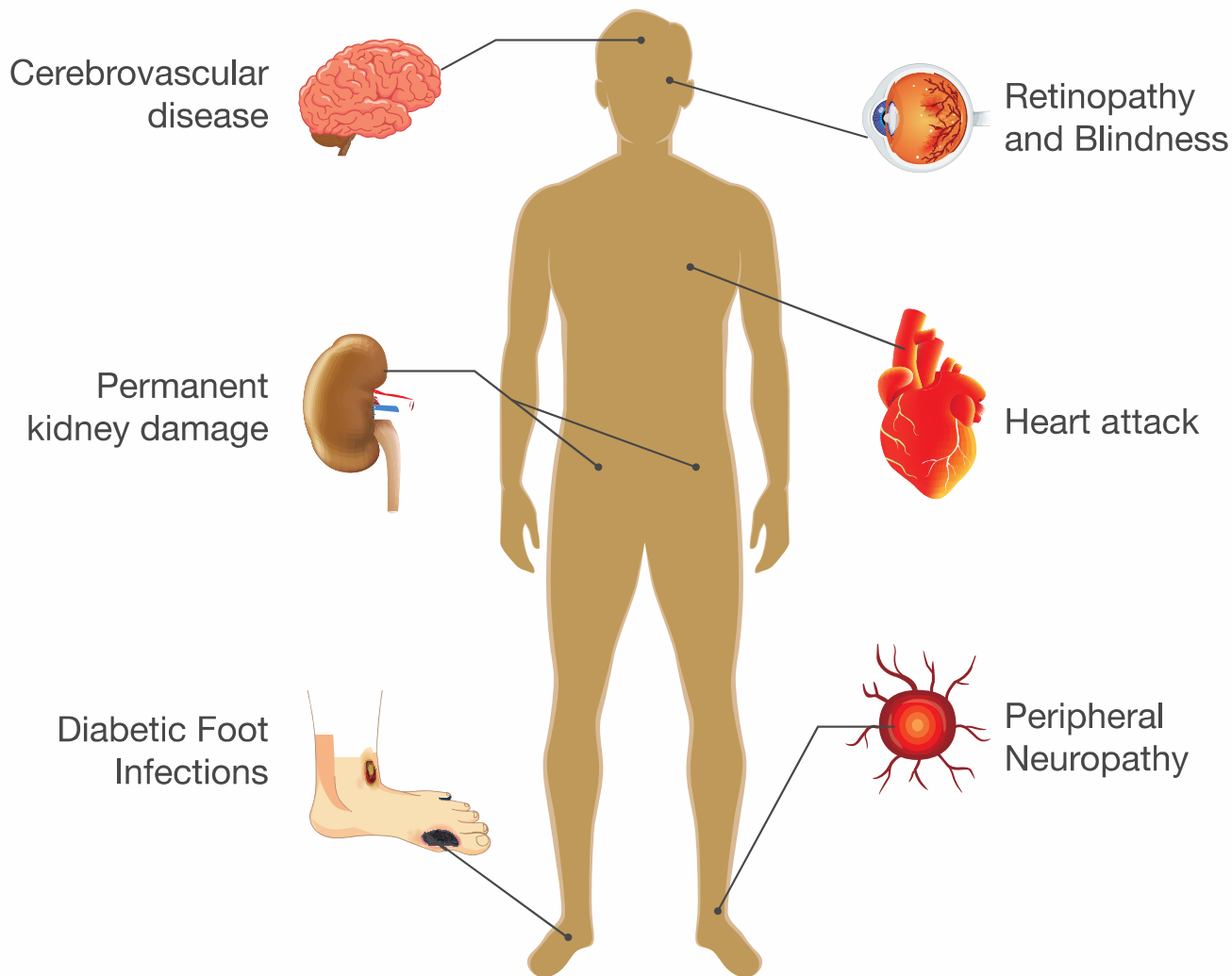




Why does it matter?



Damage to the blood vessels causes damage to the body's organs:



We will discuss how to reduce your risk in the next section.