

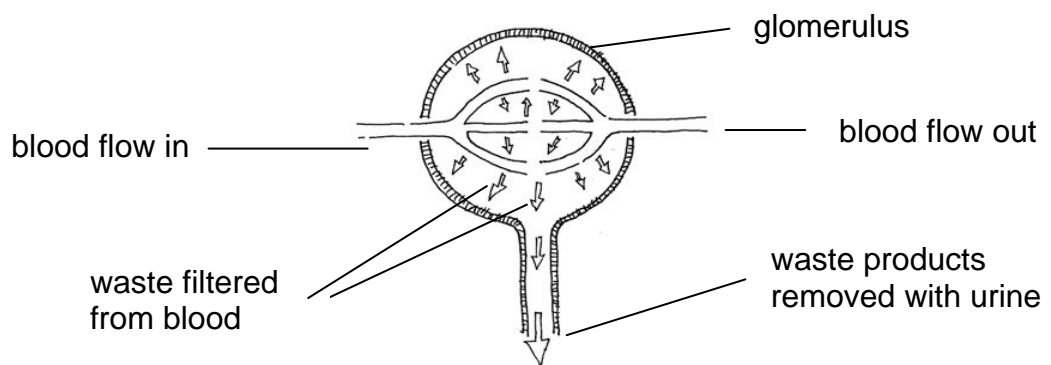
Kidneys

Why do we have kidneys?

People normally have two kidneys. The kidney purifies and filters your blood. Every minute each kidney filters about 600mls of blood. That's a total of 1800 litres each day!

How does the kidney work?

Each kidney contains a million tiny filters called nephrons. These are tiny microscopic structures made up of tubules and a capsule called a glomerulus. They purify the blood by taking out the waste products and extra fluid in the body.



Damage occurs to the nephrons if the blood vessels in the glomerulus become blocked or damaged causing fluid to back up in the kidneys. If the nephrons become damaged the waste products will build up and cause ill health. High levels of waste products in the blood will lead to problems such as uraemia and drowsiness, unbalanced fluid and electrolytes, heart and lung problems, gout and other bone problems.

Well functioning nephrons are important to our everyday health.

Diabetes and kidney function

High blood glucose and high blood pressure cause kidney damage. Glucose attaches itself to the small blood vessels leading into the filtering system of the kidney or to the smaller blood vessels in the nephron, causing damage. High blood pressure causes further damage to the function of the kidney by putting extra strain on the blood vessels. The damage caused is painless and cannot be found by physical examination.

The first sign of kidney damage can be found by a special urine test that measures the small (micro) amounts of protein (albumin) in urine (micro-albuminuria). Blood tests can check for waste products, urea and creatinine and measure the levels of these in the blood.

Prevention is better than cure. So it is very important to control blood glucose and blood pressure and have the above tests yearly.



Diabetes and kidney infections

The waste products that the kidney normally filters are collected in the bladder as urine. A tube called the urethra then passes the urine out of the body.

Glucose in the urine provides food for bacteria (germs) to grow. People with diabetes have a higher chance of developing infections of the bladder, vagina or penis and in the kidney itself.

Signs and Symptoms of Infections

Infection in the vagina or penis can cause itching and discharge. Infections in the bladder or in the kidney cause burning when passing urine and passing small amounts of urine very frequently. An unexplained backache can also be a symptom of kidney infection.

How to protect your kidneys

1. Routine investigations

Regular reviews with your doctor will ensure that you receive microalbuminuria (urine) and creatinine urea (blood) tests every year.

2. Control blood pressure

See your doctor regularly to have your blood pressure checked. If you have high blood pressure, take your medication as prescribed and review your lifestyle such as weight and exercise. With a home monitor you will be able to check your blood pressure first thing in the morning.

3. Control blood glucose

A test called glycosylated haemoglobin can be performed by your doctor to check your long-term diabetes control. You can also check your blood glucose at home.

4. Treat infections early

If you have any symptoms of burning or itching see your doctor immediately. Usually antibiotics are used to treat infections

For more information

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