

Patient information from BMJ

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Chronic kidney disease: what is it?

If you have chronic kidney disease your kidneys are gradually losing their ability to filter waste material and excess fluid from your blood. It is a serious condition, but there are good treatments that can help slow the disease.

What is chronic kidney disease?

Having chronic kidney disease means that your kidneys are losing their ability to filter waste products out of your blood. You may also hear it called **chronic renal failure**, **chronic kidney failure**, or **chronic renal insufficiency**. Chronic means it's a long-term condition, and renal means it involves your kidneys.

Your kidneys are two organs located just below your ribs near the middle of your back, with one on either side of your spine. They filter your blood, getting rid of wastes and extra fluid, which go to your bladder as urine.

Chronic kidney disease happens when something goes wrong with this filtering process. Usually this occurs because someone has had diabetes or high blood pressure for a long time.

- People with **diabetes** have too much glucose (sugar) in their blood. Over time this can harm the tiny blood vessels that filter wastes in the kidneys. Diabetes is the most common cause of chronic kidney disease.
- **High blood pressure** can also damage these tiny blood vessels over time. This is the second most common cause.

Other, less frequent causes include:

- blockage in the renal arteries
- kidney problems that develop in the womb
- inherited diseases (such as polycystic kidney disease)
- autoimmune diseases (such as lupus and scleroderma), and
- being around toxic substances for a long time, including leaded paint and soldering materials.

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When the kidneys start losing their filtering ability, wastes and fluid build up. This causes problems throughout the body.

Chronic kidney disease is different from **acute kidney injury**, which happens when your kidneys suddenly stop working properly. This can occur because of a sudden drop in the blood flow to the kidneys, a sudden blockage of the urine flow from the kidneys, or damage from some illnesses, drugs, or poisons.

Acute kidney injury can sometimes be reversed if the kidneys aren't badly damaged. If you've had acute kidney injury you may have an increased chance of getting chronic kidney disease and end-stage kidney disease in the future.

What are the symptoms?

Many people with chronic kidney disease don't have any clear symptoms. In fact, symptoms often don't appear until there has been significant damage to the kidneys.

Possible symptoms include:

- tiredness
- nausea
- urinating more or less often than usual
- puffiness around your eyes or swelling in your limbs (this swelling is called edema)
- feeling generally ill
- loss of appetite and weight loss
- urine that appears foamy
- dark-colored urine (the color of cola)
- rashes and itching.

Many symptoms, such as tiredness and nausea, can also be caused by other conditions. This can make chronic kidney disease difficult to diagnose.

If your doctor suspects that you could have kidney damage, he or she will test your blood and urine for signs of damage, and to see how well your kidneys are filtering out waste.

You might also need an **ultrasound** scan to spot kidney stones and other blockages, or a **biopsy** to look for signs of damage under a microscope. A biopsy is when a small amount of tissue is extracted using a needle so that it can be examined under a microscope.

If you do have kidney damage your doctor will try to find out what caused it. This is important, as treating the underlying cause can help prevent more damage.

What will happen to me?

Chronic kidney disease is a serious long-term illness that eventually leads to complications and reduced life expectancy. But treatment can slow the progress of the disease and many people live with the condition for many years.

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The outlook is best if your kidney damage is discovered early. The sooner you start treatment the sooner you can slow further damage.

But even people with advanced kidney disease can achieve a good quality of life by closely following their doctor's advice and treatment plan.

For more information on treatments for chronic kidney disease see our leaflet *Chronic kidney disease: what treatments work?*

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