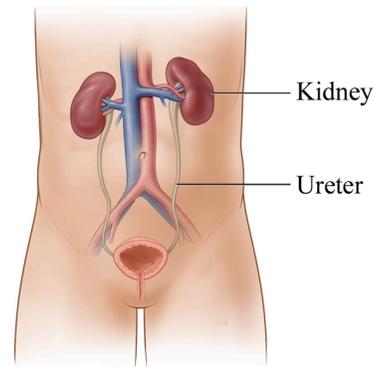


Kidney Disease: How the Kidneys Work

Your kidneys are two bean-shaped organs. Each one is about the size of your fist. They are located in your belly behind your stomach, one on either side of your spine.

You may already know that your kidneys produce urine. But you may not know how many other important jobs they do.

Understanding more about how your kidneys work and how kidney disease develops may help you take steps to keep your kidneys healthy.



What do your kidneys do?

Your kidneys perform several important functions.

- **They remove wastes.** The kidneys filter waste products and excess fluid out of the blood. These wastes are then removed from the body in the form of urine. Waste products and excess fluid are produced by the normal breakdown of food and the chemical reactions that occur in cells throughout the body (metabolism). Filtering waste products is the most important function of the kidneys.
- **They regulate the balance of chemicals in your body.** Your kidneys maintain the proper balance of chemicals, such as sodium, potassium, calcium, and magnesium, that your body needs to work properly. The kidneys remove excess amounts of these chemicals from the blood and flush them from the body as urine.
- **They produce hormones.** Your kidneys produce three important hormones. These hormones help your body make red blood cells, help regulate blood pressure, and help

your body absorb calcium from food to build healthy bones and keep your muscles working normally.

Will you know if you have kidney problems?

You may not know you have kidney problems. Most people do not have symptoms early on. Chronic kidney disease often seems to come on suddenly, but usually it has been developing for many years.

Each of your kidneys has about a million tiny filters, called nephrons. When some of the nephrons are damaged and stop working, the healthy ones take over their work. If the damage continues, more and more nephrons shut down. After a certain point, the kidneys become unable to do their job.

Kidney disease runs in families. If you have kidney disease, encourage close family members to have their kidneys tested.

If kidney disease is found early, treatment can be started to slow or stop the damage.

What are the symptoms of chronic kidney disease?

Some people start to have symptoms only a few months after their kidneys begin to fail. But many do not have symptoms for as long as 30 years or more. This is called the "silent phase" of the disease.

As kidney damage gets worse, you may:

- Urinate less than normal.
- Have swelling and weight gain from fluid buildup in your tissues (edema).

- Feel very tired.
- Lose your appetite or have an unexpected weight loss.
- Feel nauseated or vomit.
- Be either very sleepy or unable to sleep.
- Have trouble thinking clearly.
- Have a metallic taste in your mouth.
- Have severe itching.

You may be able to keep kidney damage from getting worse by taking medicines and making lifestyle changes. For the best results, you will need to partner with your doctor and carefully follow all treatment steps.



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