

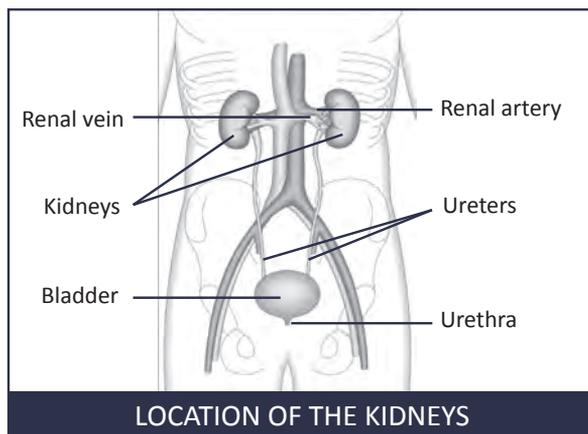
Your Kidneys



Your Kidneys

Did you know that kidneys are very important to your health? They are as important as your heart or lungs.

Normally, people have two kidneys, one on each side of your back under your lower ribs. Kidneys are reddish-brown in colour and shaped like kidney beans. Each kidney is about the size of your clenched fist.



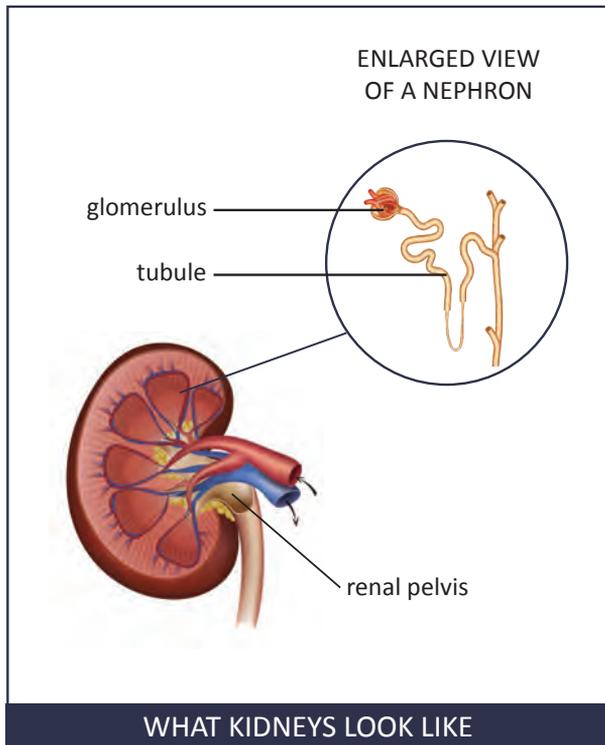
How Do the Kidneys Work?

One of the main jobs of the kidneys is to remove wastes from the blood and return the cleaned blood back to the body. The kidneys also regulate water, help balance the body's minerals, and produce important hormones. Every minute, about one litre of blood enters the kidneys to be cleaned. After the blood is cleaned, it flows back toward the heart.

Model(s) are a depiction of people with kidney disease.

Inside each kidney there are more than one million tiny units called *nephrons*. Each nephron is made up of a very small filter called a *glomerulus*, which is attached to a *tubule*. Water and waste products are separated from the blood by the filters and flow into the tubules. Much of this water is reabsorbed by the tubules and the wastes are concentrated into urine.

The urine is collected from the tubules and then flows into the *bladder*. The bladder stores urine until you urinate (pee). Together, the kidneys normally make one to two litres of urine every day.



Why Are Kidneys So Important?

Your kidneys perform three essential jobs:

Kidneys Regulate Water

For your body to work properly, it must contain just the right amount of water. One of the important jobs of the kidneys is to remove excess water from the body or to keep water when the body needs more.

Kidneys Remove Waste and Help to Balance the Body's Minerals

Many of the substances in the blood and body fluid must be kept at the right level for your body to function properly. For example, sodium (salt) and potassium are minerals that come from food. The body needs these minerals for good health, but they must be kept at certain levels. When the kidneys are working properly, extra minerals, such as sodium and potassium, leave your body in the urine. The kidneys also help to adjust the levels of other minerals, such as calcium and phosphate (which are important for bone strength, growth and other functions).

Your kidneys help remove waste products, such as urea and creatinine, from your body. Urea and other wastes are made when the body breaks down protein, such as meat. Creatinine is produced by muscles and filtered by the kidneys. As kidney function decreases, the levels of creatinine in the blood increase. The creatinine level in the blood is a very useful measure of kidney function. It is measured by a simple blood test.

Kidneys Produce Hormones

Normal kidneys make important chemical messengers called hormones. These *hormones* circulate in the blood like “messengers” and regulate blood pressure, help make red blood cells, and balance calcium and phosphorus in your body.

How Do I Keep My Kidneys Healthy?

You can keep your kidneys healthy by:

- Not smoking
- Achieving and maintaining a healthy weight
- Following a healthy diet, including limiting salt
- Being physically active
- Limiting your alcohol intake (Canada’s Low-Risk Alcohol Drinking Guidelines recommends no more than 2 drinks a day, 10 per week for women, and no more than 3 drinks a day, 15 per week for men, and avoid drinking on some days each week)
- Taking your medications as prescribed
- Keeping your blood sugar and blood pressure in target range



OUR VISION

The Kidney Foundation of Canada is committed to achieving excellent kidney health, optimal quality of life, and a cure for kidney disease.

OUR MISSION

The Kidney Foundation of Canada is the national volunteer organization committed to eliminating the burden of kidney disease through:

- Funding and stimulating innovative research for better treatments and a cure;
- Providing education and support to prevent kidney disease in those at risk and empower those with kidney disease to optimize their health status;
- Advocating for improved access to high quality healthcare;
- Increasing public awareness and commitment to advancing kidney health and organ donation.

For further information, or to help us in our efforts, please contact The Kidney Foundation office in your area. You can also visit our website at kidney.ca.

The Kidney Foundation would like to acknowledge and thank the members of the Kidney Foundation’s National Programs & Public Policy committee for their contributions and professional expertise in the development of this resource.

This material is available in accessible formats upon request by contacting info@kidney.ca or calling 1-800-361-7494.