Glomerulonephritis



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What is Glomerulonephritis?

Glomerulonephritis, also called *GN* or *nephritis*, is a kidney disease in which the *glomeruli*, the tiny filters in the kidneys that help to clean the blood, become inflamed or damaged.

If GN doesn't respond to treatment, the glomeruli may slowly be destroyed. Over time they can lose their ability to filter your blood and this can lead to kidney failure.

What Do the Kidneys Do?

Kidneys are as important to your health as your heart or lungs. Typically, people have two kidneys, one on either side of the spine below the rib cage. Each kidney is reddish-brown in colour, shaped like a kidney bean, and about the size of your fist.

Healthy kidneys do three essential things:

- They filter your blood, removing waste products as urine (pee), and return cleaned blood back to your body.
- They regulate the levels of water and minerals needed for good health.
- They produce hormones that control other body functions.

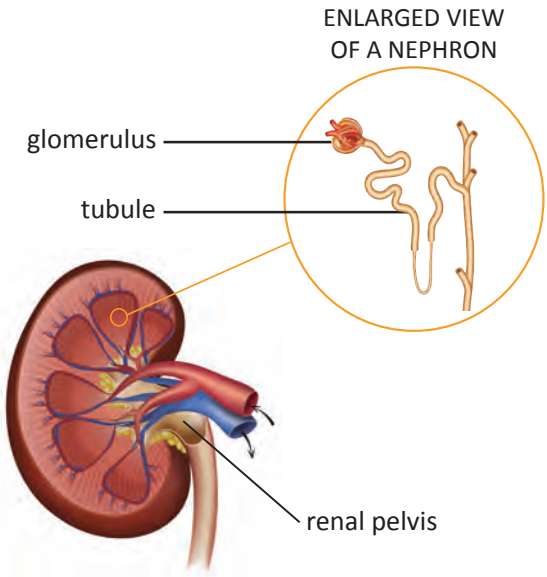
Many other organs depend on your kidneys in order to work properly.

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

How Do the Kidneys Work?

Each kidney contains about a million tiny units called *nephrons*. Each nephron is made up of a very small filter called a *glomerulus*, which is attached to a *tubule*.

In healthy kidneys, the *glomeruli* keep proteins and red blood cells in the bloodstream while allowing excess water, salt, and waste products to pass into the *tubule*. Eventually, the urine made up of those waste products drains from the kidneys into the ureters and then passes into the bladder.



WHAT KIDNEYS LOOK LIKE

What Causes Glomerulonephritis?

There are many different types of glomerulonephritis. For some types of GN, there may be many possible causes, and for many people the specific cause can't be identified.

A problem with the immune system and how it affects the kidney may result in some types of GN. Your immune system normally protects your body against invaders like viruses and bacteria. In some cases, the immune system may mistakenly attack the glomeruli and cause them to become inflamed.

Although GN is not usually inherited, some genetic mutations can lead to the development of the disease.

In some types of GN, only the kidneys are affected. In other types, the kidneys as well as other parts or organs of the body are affected.

What Are the Warning Signs of Glomerulonephritis?

Glomerulonephritis is difficult to detect. In the early stages, you may have no symptoms at all. As the disease progresses, these warning signs may appear:

- High blood pressure
- Excessive foaming of the urine
- Red or dark brown urine
- Puffiness of eyes, hands, and feet
- Nausea and vomiting
- Difficulty breathing

How Is Glomerulonephritis Diagnosed?

A test for protein and red blood cells in your urine can be a clue to whether you have GN. Your doctor may also order blood tests to measure the concentration of waste products or the level of various types of antibodies in your blood.

In many cases, a kidney biopsy may be needed. This is a medical procedure in which a very tiny tissue sample from one kidney is removed using a special needle. This tissue sample will reveal the pattern of kidney damage and help identify the type of GN.

What Is the Treatment for Glomerulonephritis?

Just as there are many types and causes of GN, treatment also varies. In mild cases, your kidneys may recover on their own. The progression of GN may be slowed by lowering your blood pressure with medication and making changes to your diet. Your kidney specialist may recommend other treatments as well, some of which may target the immune system and inflammation in the kidneys.

Sometimes patients may need dialysis treatments to clean their blood while GN treatment is being given. However, if the damage is progressive and severe, the kidneys become unable to perform their usual functions. Eventually you may need regular dialysis treatments or a kidney transplant.

What Can You Do About Glomerulonephritis?

Take any necessary medication prescribed to you for the treatment of GN and high blood pressure. You should also check with your doctor before taking over-the-counter medications. Some of these, such as pain relief medications, can be harmful to your kidneys. This is especially true if they are already damaged.

kidney FOUNDATION

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.

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