

Glomerulonephritis Series

What is Glomerulonephritis?

What is Glomerulonephritis (GN)?

Your kidneys have 1 million filters that clean toxins (harmful substances) from your blood. These filters are called **glomeruli**. They also prevent cells and protein from spilling out from your blood into the urine.

Glomerulonephritis (GN) means an inflammation of the filters in your kidneys. This is a rare condition that affects your kidney and overall health.

How is GN diagnosed?

A kidney biopsy is used to diagnose GN. This means a small sample of tissue is taken from your kidney. There are different types of GN, and your doctor will use a microscope to look at the patterns in your tissue sample to understand what type you have.

What causes GN?

There is often no known cause for GN. Since this condition is quite rare, there is still a lot we do not know about what causes it. Many patients remember having a cold or flu-like symptoms right before they were diagnosed, though, finding an exact cause is not often possible. GN is not hereditary (passed down in families).



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Although it is rare, some infections, medications, or immune diseases have been shown to cause or trigger GN. These could include a hepatitis infection, using ibuprofen (Advil), and having a condition like Lupus.

You will have blood and urine tests done to check if you have other health conditions that may have caused your GN.

Many types of GN are related to the body's immune system not "turning off" properly. The immune system is meant to help your body fight off infections, but sometimes it over-responds and damages your kidneys, and causes GN.

Signs and symptoms

The signs of GN are often silent and can only be found using blood or urine tests. Once you are diagnosed with GN, it is important to continue to have these tests to monitor your condition with your health care team.

Some signs may include:

Swelling (edema) – Swelling is usually first noticed in the feet, but sometimes also in the face, hands, and belly. Swelling, also called edema, can be a sign that protein is leaking into your urine. It can also mean that salt and water are not being filtered properly by your kidneys.

High blood pressure (hypertension) – High blood pressure cannot be felt. It can only be found by measuring the blood pressure in your arm.

Protein in the urine (proteinuria) – High levels of protein create bubbles in the urine. This can be an early sign of GN. When too much protein spills into the urine, the level of protein in your blood is lowered. This can make you more likely to get infections or have other health issues.

Blood in the urine (hematuria) – Blood in the urine may be invisible, or it may make the urine look red.

High creatinine levels – Creatinine is a normal part of your blood. It is measured with a blood test. If your kidneys aren't cleaning your blood well, they will remove less creatinine from your urine, and more creatinine will appear in your blood. Creatinine levels tell us how well your kidneys are cleaning. Low creatinine levels in the blood mean healthier kidneys.

High cholesterol – Cholesterol levels are often high in the blood of people with GN, even if they eat healthy.

Treatment options

There are 2 types of treatments for people who have glomerulonephritis. Your doctor will work with you to decide what treatment is best for you:

- **Option 1: Treatments that do not affect the immune system**

These treatments include medicines to control your blood pressure, manage your swelling, and lower your cholesterol. Quitting smoking and making healthy lifestyle choices are also important ways to protect your kidneys.

- **Option 2: Immune system lowering treatment**

Medicines are used to lower the body's immune system response so that it doesn't attack the kidneys. These medicines can put you at risk of infections. They need to be carefully monitored to be sure you have the right dose.

Do certain foods cause GN?

Diet is not considered to be a cause of GN. Changing what you eat will not cure your GN. But, some changes in your food choices like eating foods with less salt, and other changes, can help your symptoms to improve. Your treatment side effects may also improve. Ask your health care team for tips on healthy living.

What can I expect living with GN?

There are many ways to treat GN. Our goal is to prevent kidney failure and to keep you healthy. GN can cause permanent scarring to your kidneys, which can cause them to not work as well (chronic kidney disease) or to stop cleaning the blood (kidney failure). You may also be at a higher risk of having infections or developing blood clots.

Taking part in research studies

Many researchers are studying new treatments for GN. Some patients find it rewarding to join research studies, but this is voluntary. Ask your care team if you want to learn more about studies that are happening at your clinic that can help find a cure.

Visit www.uhnpatienteducation.ca for more health information.

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