

C3 Glomerulopathy (C3G)

Overview

C3G stands for complement 3 glomerulopathy, a very rare and chronic disease that causes the kidneys to not work properly. The C3 refers to a key blood protein that plays an important role in your immune system. The G stands for glomerulopathy, or damage to the filtering units of the kidney. Physician experts believe that when complement proteins like C3, which are part of your immune system, are not well-controlled, it results in damage to the kidneys' filtering units (glomeruli).

What is the “complement system”?

- It is a group of proteins that help, or complement, your immune system to fight bacteria and viruses.
- If the complement system becomes overactive, the C3 complement proteins are broken down and trapped in the kidneys.
- The trapped C3 causes a series of reactions that damage your glomeruli (filtering units in the kidney).

There are two forms of C3 Glomerulopathy:

1. Dense Deposit Disease (DDD)
2. C3 Glomerulonephritis (C3GN)

In a kidney biopsy, the kidney tissues of DDD and C3GN look different under a microscope.

Symptoms:

- High levels of protein in urine (proteinuria)
- Blood in urine (hematuria)
- Low levels of protein in the blood (hypoalbuminemia)
- Swelling in many areas of the body (edema)
- Fatigue
- Dark and/or foamy urine
- High blood pressure (hypertension)
- Decreased urine output
- Elevated creatinine in blood

Children with C3G tend to be more responsive to treatment than adults

Genetic changes or the development of abnormal antibodies in your immune system are the most common causes of C3G

DDD used to be called MPGN 2

C3GN used to be called MPGN 1 or MPGN 3

C3G can only be diagnosed with a kidney biopsy

C3G affects 2-3 per 1 million people

Steroids and other immunosuppressive therapies can be effective in C3G

C3G affects people of all ages

Treating Your Disease

SHORT-TERM GOALS

The short-term goal of treatment is to stop protein from spilling completely (remission) or lower the amount of protein lost in the urine as much as possible.

LONG-TERM GOALS

The long-term goals of treatment include preventing relapses of protein in the urine and preventing the deterioration of kidney function.

There are currently no FDA-approved treatment options for C3G. Standard first-line treatments for C3G are blood pressure medications, like lisinopril and ibesartan, and immunosuppressants, like steroids and mycophenolate mofetil (MMF or Cellcept).

How to Live With Your Disease

1. Following a low-salt diet and taking prescribed medications from your nephrologist may help improve your kidneys' function and your C3G symptoms.
2. Finding a nephrologist that specializes in C3G that you trust is very important to your long-term health.
3. Learn about your disease, treatment options, and clinical trials in order to better advocate for yourself.
4. NephCure Kidney International can help you connect with other patients and find support to manage your disease.



NephCure is working every day to leverage support to find better treatments and a cure for rare, protein-spilling kidney diseases.

PLEASE VISIT [NEPHCURE.ORG](https://nephcure.org) TO LEARN MORE ABOUT C3G AND NEPHROTIC SYNDROME.

Reference: *NORD (National Organization for Rare Disorders): <https://rarediseases.org/rare-diseases/c3-glomerulopathy-dense-deposit-disease-and-c3-glomerulonephritis/>*