Your kidneys have about one million tiny filters called nephrons. Within the nephrons are glomeruli, tiny blood vessels that filter your blood. Glomeruli work like the strainers used in cooking. While blood moves through them, they let waste and extra water pass into the nephrons’ tubes to make urine. They also hold back the protein and blood that your body needs.

- Glomerular disease can cause your glomeruli to leak blood or protein into your urine.
- You can get glomerular disease from a drug, another disease, or be born with a greater chance of getting it.

Your urine may look pink or light brown from blood, or it may be foamy from protein.

- Protein in the urine is called proteinuria.
- Some people with glomerular disease also have nephrotic syndrome, which includes edema (swelling, usually in the ankles), nephrotic-range proteinuria (high level of protein in the urine of 3.5 grams per day or more), hypoalbuminemia (a low level of the protein albumin in the blood), and high cholesterol. Nephrotic syndrome may also include high blood pressure, increased risk for getting infections, and blood that clots more than normal. Other people may not have nephrotic syndrome, but still have some signs of it, such as protein in their urine. They may also have other signs that are not part of nephrotic syndrome, such as blood in the urine, inflamed glomeruli, and lower kidney function. If you have all of these extra signs, then you have nephritic syndrome.

Over time, glomerular disease may stop the kidneys from getting rid of waste in your blood. When this continues, waste builds up in your blood, and you may have chronic kidney disease (kidney disease for 3 or more months). This can then progress to kidney failure (the kidneys stop working entirely).

- You may need: a blood pressure drug called an ACE inhibitor or an ARB. These two drugs control high blood pressure and reduce the amount of protein in the urine. Pills that remove extra fluid from your body (diuretics) and a low-salt diet may reduce edema.
- If needed, drugs such as prednisone are used to stop your body’s defense system from hurting your kidneys.
- Your treatment depends on the type of glomerular disease you have and what caused it.
- Sometimes your disease will just need regular follow-up by your doctor.
■ **Urine test** to find protein and blood

■ **Blood test** to find levels of protein, cholesterol, and wastes

■ **Glomerular filtration rate (GFR)**, a blood test to know how well the kidneys are filtering

■ **Kidney biopsy** to look at a tiny piece of the kidney under a microscope in order to diagnose your glomerular disease. A biopsy may also show if your disease is still active or not, if it is getting better or worse, or if your kidneys are being hurt by the drugs you take.

■ **Blood test for antibodies** that may form in some types of glomerular disease. Antibodies are made by your body’s defense system in response to your disease. They can be tracked to monitor your disease.

■ **Genetic testing** to show what genes you were born with that may or may not make certain treatments possible.

---

■ Lose weight if you are overweight. Obesity may cause glomerular disease. It also causes high blood pressure and diabetes, both of which hurt the kidneys.

■ Avoid non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin, ibuprofen, and naproxen.

■ Before taking any over-the-counter drug, vitamin, mineral, weight loss or sports supplement, ask your doctor which is safe. Do not take herbal supplements. Many herbal products are toxic to the kidneys or have harmful substances not listed on bottle labels.

■ Do not smoke; exercise often; avoid alcohol.

■ Follow a healthy low-salt diet. Meet with a registered dietitian to find the best diet for you or your child.

■ Control blood pressure and blood sugar.

■ Keep vaccines up to date. But before getting a vaccine, discuss glomerular disease with your healthcare provider. There are special rules for getting vaccines when you are taking drugs like prednisone. It is especially important to follow these rules for children’s vaccines.

■ Take all medicines as instructed by your doctor, and do not miss any appointments. As soon as you have any problems, let your doctor know.

■ If you need a test such as an MRI with contrast dye, make sure your doctor measures your kidney function first.

■ Understand the risks and benefits of a treatment. Sometimes the risks of a treatment may be too great for it to really be helpful. Some drugs are very strong and you may need to limit how often you take them during your lifetime. Your doctor may need to change the amount of certain drugs you take in order to keep the right levels in your blood at all times.

■ Discuss birth control and pregnancy with your doctor. Plan pregnancy around remission status, symptoms, and your treatment plan. When pregnant, the drugs you take may need to be changed so you will not hurt the fetus. Whether you are a man or a woman, the drugs you take may be changed so you will not harm your chances of having children. This is especially true for cyclophosphamide and chlorambucil.

■ Talk with your doctor about any new drugs, treatments, and research that can help with your disease.