Explain what nephrotic syndrome is

- Nephrotic syndrome can happen when tiny filtering units (glomeruli) within the kidney are damaged. This damage within the kidney allows protein normally kept in your body to leak into the urine, which lowers the amount of protein in your blood.

- Signs and symptoms can include:
  - High urine protein (proteinuria)
  - Swelling (edema)
  - Weight gain (from fluid retention)
  - Foamy urine
  - Poor appetite
  - High cholesterol

- The swelling (edema), can be most noticeable on the face, around the eyes, around the feet and ankles, and in the belly area (or the abdomen).

- Sometimes this is caused by diseases that affect the entire body such as diabetes or lupus.

- Sometimes the immune system gets triggered by an infection or some inflammation and starts to act on the kidney causing certain types of damage to the kidneys. Minimal change disease (MCD), focal segmental glomerulosclerosis (FSGS), and membranous glomerulonephritis are some of these diseases that affect the kidney and are triggered by the immune system.

Explain how it is tested

- A physical exam will look for swelling and other visible signs and symptoms.

- Urine and blood tests can check for signs of kidney damage and other diseases that may be affecting the kidneys.

- Genetic tests can check for certain inherited diseases that are linked with kidney disease.

- Imaging tests are used to assess the kidney size.

- Many times, a kidney biopsy is needed for diagnosis and to help guide treatment. It involves taking one or more tiny pieces (samples) of your kidney to look at with special microscopes. The microscopes make it possible to see the samples in greater detail.

Explain how it is treated

- Depending on the disease and a person's overall health, dietary changes and medicines are used to:
  - Lower excess salt and fluids in the body
  - Lower loss of protein in the urine
  - Lower cholesterol in the blood

- Certain medicines that suppress, or “calm” the immune system can be used.

- Some patients can be effectively treated with medicine and dietary changes.

- Sometimes, the dose of a certain medicine might be changed, or a different medicine might need to be used.

- If the disease progresses it can eventually lead to kidney failure, meaning the kidneys are no longer able to work. There are two treatments for kidney failure — dialysis and a kidney transplant.
Explain how patients can reduce risk

• Follow a healthy low-salt diet.
• You might need to limit water and fluid intake if you have swelling (edema) or weight gain from fluid retention. Weigh yourself regularly to check for water weight gain.
• You might need a lower-protein diet if you are diagnosed with kidney damage.
• Control blood pressure and blood sugar. High blood pressure and high blood sugar (diabetes) can harm the kidneys.
• Lose weight if you are overweight. Obesity can cause high blood pressure and diabetes, which can harm the kidneys.
• You can speak with a registered dietitian about how much fluid and water you or your child should have each day, and what is the best diet for you or your child.
• Before taking any over-the-counter drug, vitamin, mineral, weight loss or sports supplement, ask your healthcare provider which is safe.
• Avoid non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen and naproxen. Overuse of these pain medicines can harm the kidneys.
• Do not smoke; exercise often; avoid alcohol.
• If you need a test such as an MRI with contrast dye, make sure your healthcare provider measures your kidney function first.
• Discuss birth control or pregnancy with your healthcare provider. Certain precautions or adjustments to treatment might be needed.
• Keep vaccines up to date. However, talk to your healthcare provider before getting a vaccine. There are special rules for getting vaccines for people taking medicines that suppress, or “calm” the immune system.
• Take all medicines as instructed by your healthcare provider.
• Understand the risks and benefits of a treatment. Your healthcare provider may need to change the amount of certain drugs you take in order to keep the right levels in your blood at all times.
• Do not miss any medical appointments. As soon as you have any problems, let your healthcare provider know.
• Talk with your healthcare provider about any new drugs, treatments, and research that can help with your disease.