

# Ask *the* Expert

## What does a Nephrologist do?

### What is a Nephrologist?

A nephrologist is a medical doctor who specializes in the care of various kidney diseases. Most notably nephrologists treat patients with End Stage Renal Disease (ESRD) in the form of dialysis or transplantation. A nephrologist also treats Acute Renal Failure (ARF) and Chronic Kidney Disease (CKD) in hopes that a patient will never reach ESRD. A nephrologist also specializes in electrolyte disorders, such as potassium and magnesium, and is well trained in treating high blood pressure.

### What can a nephrologist do?

Whether you have CKD, ARF, proteinuria, hematuria or all four, a nephrologist can help determine the cause and hopefully slow, stop, or reverse progression of your disease. If your disease is very advanced or not responding to treatment, then a nephrologist can help prepare you for transplant or dialysis. If you have an electrolyte disorder then a nephrologist can help determine the cause and treat that. If you have resistant hypertension then a nephrologist can help you get on the right combination of medicines and, if necessary, work up unusual causes of hypertension.

### What can I expect when I see a nephrologist?

This may vary depending on

who you see, but generally a nephrologist will always check labs and a urine test. Labs are usually done at every visit. You do not have to be fasting unless you are scheduled to get your cholesterol checked. In my clinic you will always see me and my nurse and you will usually leave with a copy of your labs and a written plan.

### Do I need a High Blood Pressure Specialist?

While most primary care doctors are very good at treating high blood pressure, a nephrologist is specially trained to diagnose and treat resistant forms of hypertension. This is because the kidneys have a critical role in your body's blood pressure regulation. You may benefit from a high blood pressure specialist if you are taking 3 different blood pressure medicines and are still not at your goal pressure. Most people have a goal of less than 140 on top and less than 90 on the bottom.

### What is Acute Renal Failure (ARF)?

Actually, I do not like the word "failure" as it implies that the kidneys are not working at all. In ARF the kidneys are working but their function is reduced and this decline in renal function has happened over a short period of time.

### What is Chronic Kidney Disease (CKD)?

CKD means that one's kidney function is reduced or there is a structural problem with the

kidneys allowing for leakage of blood or protein into the urine. Kidney function is measured by creatinine which is used to calculate glomerular filtration rate or GFR. A GFR greater than 90 is normal. Dialysis is required when GFR is 6-8. A nephrologist should be consulted when GFR around 45 or less.

### What is Creatinine?

Creatinine is a waste product of muscle metabolism that is released into the blood at a rather steady rate. Normal kidneys work well enough to effectively filter creatinine out of the blood and keep the level around 0.5-1.0 mg/dl. If the kidneys are not working as well they cannot filter out the creatinine and the blood level of creatinine rises. Therefore, a higher creatinine level suggests a worse kidney function.

### What is Proteinuria?

Proteinuria means that there is an inappropriate amount of protein in the urine that is filtered out of the blood while the kidneys clean the blood. This usually indicates that the filter part of the kidney is damaged. This most often happens after years of diabetes but there are several other conditions that can cause proteinuria. This is usually measured by a single urine test in the office, but may need to be verified by a twenty-four hour urine collection.

### What is hematuria?

Hematuria means that there is blood in the urine. Hematuria is measured by a urine

analysis test and often times cannot be seen by the naked eye. Hematuria often means that there is damage to the filter in the kidney allowing blood cells to pass into the urine. This can happen in lupus and other vascular diseases. However, many times bleeding is coming from the urinary tract or bladder instead of the kidney. A nephrologist can often tell the difference by examining the urine under a microscope.

### Should I get a transplant?

This depends on your current health, life expectancy, and your current kidney function. Most people end up getting a transplant after they start dialysis but a few are able to complete the workup and get a transplant even before they start dialysis. If your kidney function is less than 20% then one could consider starting workup for transplantation.

### What is dialysis?

Dialysis is a treatment that essentially replaces the work of the kidneys to support life. Dialysis does not make the kidneys better but instead cleans the blood and removes excess water from the body. Dialysis can be done at home through peritoneal dialysis or home hemodialysis or in a center with hemodialysis. Hemodialysis cleans the blood by directly filtering it and is usually done in a center 3 times a week for 4 hours each time. Peritoneal dialysis cleans the blood by infusing fluid in the abdomen and then draining it. This can be done at home or at night while you sleep and is generally painless.



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