



KIDNEY & HYPERTENSION CARE CENTER, PA

Houston Medical Center

1213 Hermann Dr., Suite 460, Houston, Texas 77004 • Tel: (713) 520-6222 • Fax: (713) 520-6223

Frequently Asked Questions

What is Chronic Kidney Disease (CKD)?

Chronic kidney disease is a condition which involves a decreased level of kidney function or the evidence of kidney damage for more than three months. People at risk for this disease are those with diabetes, high blood pressure or people with similar family history.

What are the different stages of CKD?

Once a patient is diagnosed with CKD, it is crucial to determine the level of kidney function. The National Kidney Foundation (NKF) has recognized (5) five stages of CKD. Each stage represents a level of kidney function known by a creatinine clearance.

The (5) five stages:

- Stage 1 CrCl > 90
- Stage 2 CrCl 60 – 89
- Stage 3 CrCl 30 – 59
- Stage 4 CrCl 15 – 29
- Stage 5 CrCl < 15 (may require dialysis)

Why are kidneys important to the human body?

Kidneys clean and eliminate waste from the blood. They remove extra water, and regulate levels of minerals and chemicals in the body. They also produce hormones which help control your blood pressure and create red blood cells.

How do I protect my kidneys?

There are multiple ways that you can protect your kidneys and delay the development of CKD. Good blood pressure control, diet and nutrition plans, smoking cessation, and control of diabetes. These are all ways to help your kidneys work properly. It is also helpful to be informed about your test results, consult with **Dr Mehreen Khan** about any problems or questions, and be involved in your treatment plan.

What can my nephrologist do for me?

A nephrologist is a type of doctor who treats patients with kidney problems and associated hypertension or high blood pressure, fluid and mineral imbalance, dialysis of body wastes when the kidneys do not function and consults with surgeons about kidney transplantation. Once you have been diagnosed with any type of kidney disease, an early referral to a nephrologist is crucial in preserving and protecting your kidneys and most importantly you. Being an expert in kidney diseases, **Dr Mehreen Khan** has the understanding and skills to work specifically with you to formulate an individual plan of care. You can setup an office appointment with her to discuss your treatment plan in detail. Our office contact information is listed above.



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What types of tests are done to evaluate and monitor my kidney function?

- **Blood Test**

Serum creatinine- Creatinine is a waste product of muscle tissue found in blood and urine. The amount of creatinine in your blood, aka *serum creatinine*, shows us how well your kidneys are working.

Electrolytes- Calcium, magnesium, phosphate, potassium, and sodium are all electrolytes in the human body. By measuring the level of these *electrolytes* it provides us with information about how well your kidneys are functioning.

BUN- Which stands for Blood Urea Nitrogen, measures the amount of nitrogen in the blood that comes from urea, a waste product in the body formed when protein is broken down. If the kidneys are not filtering the way they're supposed to, the *BUN* level may increase.

- **Urine Tests**

Microalbumin- This test measures the level of albumin, a type of protein, in the urine. When albumin is found in the urine, it is an early indicator of kidney damage.

24 hour urine collection for protein and creatinine- Low levels of creatinine and high levels of protein in the urine show a lessened amount of kidney function. These collections also help monitor your kidney function.

Glomerular Filtration Rate (GFR)- The GFR is an excellent method! It measures kidney function, by determining the amount of creatinine filtered by the kidney. The creatinine clearance or GFR can be calculated from your serum creatinine, age, body mass, and gender. It can also be calculated from a 24 hour urine collection (stated above).

- **Imaging Tests**

A renal ultrasound may also be suggested to evaluate the size, shape and anatomy of your kidney. A CT scan, MRI or MRA may also be suggested by **Dr Mehreen Khan** to determine possible reasons for your kidney disease.

- **Kidney Biopsy**

This is a test where a small piece of your kidney tissue is removed by a needle. The tissue is then examined under a microscope to find the cause of the kidney disease.



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How is diabetes related to how well my kidneys work?

In the United States of America diabetes is the most common source of chronic kidney disease. High blood sugar can harm blood vessels and influence the filtering ability of the kidneys. This is why maintaining a healthy blood sugar can help slow the progress of your kidney disease drastically.

How is high blood pressure related to how well my kidneys work?

High blood pressure also harms the blood vessels and reduces the amount of blood supply flowing to the kidney. It can cause kidney problems and kidney problems can also cause high blood pressure. Unrestrained high blood pressure can cause a decrease in how well your kidneys work, a process that can lead to irreversible severe kidney damage.

Why do I have to take multiple blood pressure medications?

High blood pressure may be maintained with a combination of changes in diet, exercising regularly, weight loss, reducing stress and to stop smoking. However, sometimes this doesn't work. This is where medication (often several) comes in. Each type of blood pressure medication you take presents a different benefit for maintaining your blood pressure and slowing the development of kidney disease.

How can diet affect how well my kidneys function?

One way to help your kidney function is to change your diet. Healthy nutrition can decrease the workload of the kidneys and slow further progression of your kidney disease. A renal dietitian is a helpful resource that you should consider using as they can help you make good choices with the foods you normally eat and make suggestions on foods you should add to your diet plan and foods you should eat moderately.

Are there any medications to avoid with CKD?

Common medications to avoid are anti-inflammatory medications, enemas and laxatives. However, some of these medications can be used in a controlled manner, if prescribed by your primary physician. It is a smart idea to check with **Dr Mehreen Khan** before starting any new over-the-counter or prescription medications in case of a health risk or an adverse reaction.

Why do I have Anemia?

Decrease in red blood cells in your body causes anemia. Red blood cells carry much needed oxygen throughout the body. So a decrease in red blood cells is not good. It causes fatigue, shortness of breath, depression, poor appetite and heart disease.

Kidneys make an important hormone, erythropoietin, which helps create red blood cells. When CKD occurs there is a fall in the production of this hormone which reduces the amount of red blood cells. The treatment for anemia in relation to CKD is injections with a man-made form of erythropoietin and with iron pills/infusions.



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If my kidneys fail, do I have any other treatment options?

If that does happen, hemodialysis, peritoneal dialysis and kidney transplant are all available treatment options. In kidney transplantation, a surgeon surgically places a healthy kidney from another person into your body. The donated kidney functions the way that your failed kidneys used to do. For many people dialysis and transplantation extends and improves quality of life. However these treatment options need to be discussed with a physician in order to formulate a plan that is appropriate for you. You do have the right to refuse or withdraw from dialysis, if you feel like it is not right for you.

What exactly is Dialysis?

Dialysis is a process which cleans and filters your blood. There are two types of dialysis, hemodialysis and peritoneal dialysis.

- **Hemodialysis**

Hemodialysis cleans your blood using a machine with a special filter or a dialyzer. During hemodialysis, blood travels from your body through tubes which are attached to the dialyzer. This filters out wastes and extra water. The cleaned blood flows back through another set of tubes into your body. In short, the dialyzer acts as kidneys for you.

- **Peritoneal Dialysis**

Peritoneal dialysis eliminates wastes and extra water from your body using the lining of your abdomen and peritoneum to clean your blood. A special solution travels through a soft tube into your abdomen. The solution suctions wastes and extra water from tiny blood vessels in your peritoneum back into the solution which is then drained from your abdomen through the soft tube.

What is a Vascular Access?

For hemodialysis to work, it is necessary to create a vascular access or pathway to your blood. During a quick surgery the access is created in your arm. There are two types of accesses, a fistula or a graft. Sometimes an external catheter may be inserted into a vein in your chest or neck. A catheter is usually temporary and then replaced by a fistula or a graft.