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What is CHRONIC KIDNEY DISEASE?

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What do the **KIDNEYS DO?**

The kidneys help remove excess water and waste from the body, which is important to keep the body healthy and balanced. Through a process called "glomerular filtration," the kidneys remove toxins, excess water, and extra electrolytes like sodium, potassium, and calcium.

THE KIDNEYS ALSO:

- Help control blood pressure
- Make sure the blood stays at the right acid-base level
- Keep our bones healthy (by keeping vitamin D, calcium, and phosphorus levels balanced)
- Play a role in making healthy red blood cells

How is **KIDNEY FUNCTION MEASURED?**

1) Kidney function can be measured by the glomerular filtration rate (GFR), which is the way the body cleans the blood and removes waste in the urine. Lower amounts of glomerular filtration mean that the kidneys are not working as well. Your doctor checks this with blood tests.
2) Your doctor may also check your kidney function by looking for protein in the urine. People with healthy kidneys will have little to no protein in their urine. If there is protein in a person's urine, called proteinuria or albuminuria, this can be an early sign of kidney disease.

What is **CHRONIC KIDNEY DISEASE** or **"CKD"?**

If the GFR declines but then goes back to its original function, this is called acute kidney injury. This can happen when people are sick with diarrhea or vomiting, or after taking medications that are harmful to the kidneys. When the GFR stays low for more than 90 days, this is called chronic kidney disease (CKD). CKD has five stages based on the level of glomerular filtration loss. The stages are shown below.

CKD Stage	Glomerular Filtration Rate (GFR)	Meaning
Stage 1	≥ 90	Normal kidney function
Stage 2	60 – 89	Mild kidney damage
Stage 3a	45 – 59	Mild to moderate kidney damage
Stage 3b	30 – 44	Moderate to severe kidney damage
Stage 4	15 – 29	Severe kidney damage
Stage 5	< 15	Very severe kidney damage, nearing kidney failure
Kidney Failure	< 15 *and* kidneys are no longer able to remove excess toxins/fluid	Need for dialysis or transplant

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What are the **SYMPTOMS OF CKD?**

Most people with CKD don't have any symptoms! CKD is a "silent" disease, and many people with CKD don't know they have it. Some people may notice a few mild symptoms such as:

- **Feeling more tired than usual**
- **Swollen face, hands, or feet**
- **Foamy or bubbly urine**
- **Waking up in the night to urinate**
- **Feeling short of breath with minimal movement**

WHAT CAUSES CKD?

The two most common causes of CKD are diabetes and hypertension. There are other causes as well, including genetic conditions, kidney-specific diseases, and other conditions that can affect the system that makes urine in the body.

Kidney function naturally declines with age. This is common in people over 70 years old. For older people, it can be hard to know if their loss of kidney function is caused by aging or diseases that affect the kidneys. Talking with your doctor is important to help find out the cause of your kidney function loss.

WHAT HAPPENS NOW that I have CKD? CAN CKD BE CURED?

CKD cannot be cured. In people with CKD, kidney function will decline over time, but how quickly this happens will vary for each person. If a person has many risk factors for progressive kidney disease (like uncontrolled blood pressure, diabetes, or certain lifestyle habits such as unhealthy eating), their kidney function can decline faster. On the other hand, if a person has fewer risk factors, they can have stable kidney function over many years. Talking with your doctor will help you learn about your risk factors.

Are there **COMPLICATIONS OF CKD?**

As kidney function declines, some problems can arise. All people with CKD have a higher risk of heart disease. This means a higher risk of certain medical conditions like heart attacks, heart failure, and stroke.

With more advanced CKD, usually Stages 4 and 5, other problems can arise. Advanced CKD can cause bone disease, anemia or low blood counts, and certain electrolyte abnormalities. It can also cause symptoms such as swelling, fatigue, or shortness of breath.

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Can progression of **CKD BE SLOWED?**

Yes, it can. See below for some steps you and your doctor can take to help:

What can you do to slow CKD progression?

- If you are overweight, talk to your doctor about healthy ways to focus on weight loss.
- If you have high blood pressure, keep your blood pressure in a target range *(set by your doctor)*.
- If you have diabetes, keep your blood sugar in a target range *(set by your doctor)*.
- Get regular exercise.
- Eat a healthy diet. While there is no standard diet for CKD, nutrition is important and should be discussed with your doctor.
- To start, eat a low-salt and heart-healthy diet.
- Avoid drinking sodas and eating junk food or fast foods.
- Avoid over-the-counter medications called "non-steroidal anti-inflammatory drugs" (NSAIDs) like ibuprofen, naproxen, Advil®, Aleve®, and many others as these can cause kidney damage.

What can your doctor do to **SLOW CKD PROGRESSION?**

- Talk to your doctor about medications to help slow CKD progression.
- If you're over the age of 50, talk to your doctor about starting a cholesterol medication (even if you don't have high cholesterol levels). This may lower your risk of having a heart attack or stroke.

What is the **GOAL OF TREATING CKD?**

The main goal of treatment is to slow CKD progression and prevent kidney failure so that you can live a happy, healthy life. Healthmap Solutions knows that many of the above changes are not easy, but they are possible! Please speak with your doctor or call the Healthmap Solutions Care Navigation team at **1-800-481-0474** for help with these goals. Patients must meet program eligibility requirements to access Healthmap services.

For more information on managing chronic kidney disease, visit **www.healthmapsolutions.com/patient-resources.**

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