

What Is Chronic Kidney Disease?

In this section:

- [How common is CKD?](#)
- [Who is more likely to develop CKD?](#)
- [What are the symptoms of CKD?](#)
- [Does CKD cause other health problems?](#)
- [How can CKD affect my day-to-day life?](#)
- [Will my kidneys get better?](#)
- [What happens if my kidneys fail?](#)

Chronic kidney disease (CKD) means your kidneys are damaged and can't filter blood the way they should. The disease is called "chronic" because the damage to your kidneys happens slowly over a long period of time. This damage can cause wastes to build up in your body. CKD can also cause other health problems.

Your kidneys are located in the middle of your back, just below your ribcage.

The kidneys' main job is to filter extra water and wastes out of your blood to make urine. To keep your body working properly, the kidneys balance the salts and minerals—such as calcium, phosphorus, sodium, and potassium—that circulate in the blood. Your kidneys also

make [hormones](#) that help control [blood pressure](#), make red blood cells, and keep your bones strong.

Kidney disease often can get worse over time and may lead to kidney failure. If your kidneys fail, you will need [dialysis](#) or a kidney transplant to maintain your health.

The sooner you know you have kidney disease, the sooner you can make changes to protect your kidneys.

More information is provided in the NIDDK health topic, [The Kidneys and How They Work](#).

[Watch a video about what the kidneys do.](#) 

How common is CKD?

CKD is common among adults in the United States. More than 30 million American adults may have CKD.¹

Who is more likely to develop CKD?

You are at risk for kidney disease if you have

- **Diabetes.** Diabetes is the leading cause of CKD. High blood glucose, also called blood sugar, from diabetes can damage the blood vessels in your kidneys. Almost 1 in 3 people with diabetes has CKD.¹
- **High blood pressure.** High blood pressure is the second leading cause of CKD. Like high blood glucose, high blood pressure also can damage the blood vessels in your kidneys. Almost 1 in 5 adults with high blood pressure has CKD.¹
- **Heart disease.** Research shows a link between [kidney disease and heart disease](#). People with heart disease are at higher risk for kidney disease, and people with kidney disease are at higher risk for heart disease. Researchers are working to better understand the relationship between kidney disease and heart disease.
- **Family history of kidney failure.** If your mother, father, sister, or brother has kidney failure, you are at risk for CKD. Kidney disease tends to run in families. If you have kidney disease, encourage family members to get tested. Use tips from the [family health reunion guide](#) and speak with your family during special gatherings.

Your chances of having kidney disease increase with age.¹ The longer you have had diabetes, high blood pressure, or heart disease, the more likely that you will have kidney disease.

African Americans, Hispanics, and American Indians tend to have a greater risk for CKD.² The greater risk is due mostly to higher rates of diabetes and high blood pressure among these groups. Scientists are studying other possible reasons for this increased risk.

Source: National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); Use of this document does not constitute endorsement or recommendation by the U.S. Government, HHS, NIH, or NIDDK.

If you are at risk for kidney disease, [learn ways to prevent kidney disease](#).

What are the symptoms of CKD?

Early CKD may not have any symptoms

You may wonder how you can have CKD and feel fine. Our kidneys have a greater capacity to do their job than is needed to keep us healthy. For example, you can donate one kidney and remain healthy. You can also have kidney damage without any symptoms because, despite the damage, your kidneys are still doing enough work to keep you feeling well. For many people, the only way to know if you have kidney disease is to [get your kidneys checked](#) with blood and urine tests.

As kidney disease gets worse, a person may have swelling, called edema. Edema happens when the kidneys can't get rid of extra fluid and salt. Edema can occur in the legs, feet, or ankles, and less often in the hands or face.

Symptoms of advanced CKD

- chest pain
- dry skin
- itching or numbness
- feeling tired
- headaches
- increased or decreased urination
- loss of appetite
- muscle cramps
- nausea
- shortness of breath
- sleep problems
- trouble concentrating
- vomiting
- weight loss

People with CKD can also develop [anemia](#), [bone disease](#), and [malnutrition](#).

Does CKD cause other health problems?

Kidney disease can lead to other health problems, such as [heart disease](#). If you have kidney disease, it increases your chances of having a [stroke](#) or [heart attack](#).

[High blood pressure](#) can be both a cause and a result of kidney disease. High blood pressure damages your kidneys, and damaged kidneys don't work as well to help control your blood pressure.

If you have CKD, you also have a higher chance of having a sudden change in kidney function caused by illness, injury, or certain medicines. This is called [acute kidney injury \(AKI\)](#).

How can CKD affect my day-to-day life?

Many people are afraid to learn that they have kidney disease because they think that all kidney disease leads to dialysis. However, most people with kidney disease will not need dialysis. If you have kidney disease, you can continue to live a productive life, work, spend time with friends and family, stay physically active, and do other things you enjoy. You may need to [change what you eat](#) and add healthy habits to your daily routine to help you protect your kidneys.

People with kidney disease
can continue to work, be
active, and enjoy life.

Will my kidneys get better?



Kidney disease is often “progressive”, which means it gets worse over time. The damage to your kidneys causes scars and is permanent.

You can take [steps to protect your kidneys](#), such as managing your blood pressure and your blood glucose, if you have diabetes.

What happens if my kidneys fail?

Kidney failure means that your kidneys have lost most of their ability to function—less than 15 percent of normal kidney function. If you have kidney failure, you will need treatment to maintain your health. [Learn more about what happens if your kidneys fail.](#)

References

[1] Centers for Disease Control and Prevention. National Chronic Kidney Disease Fact Sheet, 2017. [National Chronic Kidney Disease Fact Sheet, 2017](#)  (PDF, 1.32 MB) . Accessed June 7, 2017.

[2] Race, ethnicity, and kidney disease. NIDDK website. www.niddk.nih.gov. Published June 13, 2017. Accessed June 13, 2017.

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