

Kidney Disease

The kidneys are best known for their ability to filter wastes and excess fluids from blood, which are then excreted in urine, but they also help regulate blood pressure, maintain electrolyte and mineral balance, produce a form of vitamin D, and even help the body produce red blood cells. A diagnosis of kidney disease (often called renal disease or renal failure) means that a person's kidneys are damaged, resulting in their inability to filter blood effectively. Chronic kidney disease or chronic renal failure (often referred to by the initials CKD or CRF) develops over many years and can lead to end-stage kidney disease, resulting in the need for dialysis or a kidney transplant. Chronic kidney disease affects approximately one of every seven Americans, with higher rates found among African Americans and Hispanic/Latino Americans. The rates of chronic kidney disease are also higher among women than among men.

Kidney function is usually first assessed by blood work. During this assessment, a physician will evaluate two blood products that the kidney filters from the blood: blood urea nitrogen and creatinine. These markers provide important information about the function of the kidneys. If they are abnormally high, a workup will begin that will attempt to answer why kidney function has changed, and to see if this change can be treated. Additional tests for kidney disease include collection of a urine sample to check for loss of proteins and also may include imaging of the kidneys (for example, by ultrasound).

The two most common causes of chronic kidney disease are diabetes and high blood pressure. Having a family member with kidney disease can also raise a person's chances of developing it. The encouraging news is that with proper control of one's blood sugar and blood pressure, kidney disease can often be prevented or the impact of kidney disease can be minimized. Other causes of kidney damage include

overuse of certain medications, conditions such as lupus and HIV, and even an enlarged prostate, which can block normal urine flow in men. If your physician determines that you have kidney disease, a thorough investigation for possible reversible causes will begin.

Chronic kidney disease is staged from 1 through 5. Sometimes in the earlier stages (1 – 3), action can be taken to prevent kidney disease from getting worse. Unfortunately, less than 10 percent of those who have early stage chronic kidney disease are aware of their condition. This is because of the fact that the early stages of kidney disease often have few, if any, symptoms. Thus, without proper screening at routine check-ins with one's health care provider (with blood and urine tests), kidney disease in its early stages may be missed. At the advanced stages (stages 4 and 5), patients must begin considering initiating dialysis or being assessed for a kidney transplant, as there is often no therapy to reverse the damage.

The Risks of Ignoring Information on Kidney Disease

As mentioned, one of the risks of ignoring kidney disease is missing the opportunity to reverse it and/or stop its progression. Without stopping kidney disease's progression, you may end up needing a kidney transplant and/or dialysis. Close to 500,000 Americans are on dialysis, and 200,000 Americans are living with a functioning kidney transplant. Chronic kidney disease also increases the chance of a stroke or heart attack. Further, kidney disease can lead to death, as kidney disease now kills more people in the United States than either prostate cancer or breast cancer. Therefore, ignoring information about the prevention, diagnosis, and treatment of kidney disease can result in significant mortality and morbidity.

What Can Be Done to Prevent Kidney Disease and Its Complications?

Knowing your risk of kidney disease is important. The two main risk factors are diabetes and high blood pressure (also known as hypertension); however, two additional risk factors are family history of kidney disease and cardiovascular disease (such as a prior heart attack or stroke). These four risk factors increase one's chances of developing kidney disease. Other risk factors for developing kidney disease include race and ethnicity (African Americans, Hispanics/Latinos, and Native Americans are at an increased risk of kidney disease), age (people over the age of 60 are at increased risk), obesity, and certain diseases, such as lupus and sickle cell anemia. Therefore, knowing your risk can help you assess what the appropriate action for screening and lifestyle changes will include.

Being aware of the subtle symptoms of early kidney disease is also important. Although most people with chronic kidney disease do not have any severe symptoms until their disease has reached an advanced stage, there are a number of signs and symptoms of kidney disease that may be noticed and that should prompt a discussion with your health care provider. It should be noted that the symptoms of kidney disease are non-specific, meaning they could be caused by other diseases. The National Kidney Foundation lists the following possible signs and symptoms:

- Feel more tired and have less energy
- Have trouble concentrating
- Have a poor appetite
- Have trouble sleeping
- Have muscle cramping at night

- Have swollen feet and ankles
- Have puffiness around your eyes, especially in the morning
- Have dry, itchy skin
- Need to urinate more often, especially at night

It should be noted that these symptoms are nonspecific to kidney disease, meaning they could be caused by other diseases. Nevertheless, if you have some of these symptoms, discussing them with your health care provider is important in order to determine if they are being caused by kidney disease or other diseases.

There are certain risk factors, such as age and family history, that a person cannot control. However, there are several steps people can take to prevent or better manage their kidney disease and preserve their kidney function. These include monitoring blood pressure and blood sugar levels, avoiding or limiting medications that are known to injure kidneys (e.g., some over-the-counter painkillers), and preventing infections when possible (such as through annual flu vaccinations), as infections can result in kidney damage. Other healthy actions include exercising, maintaining a healthy weight, eating a diet rich in fruits and vegetables, following up regularly with a health care clinician, monitoring and controlling cholesterol levels, and quitting smoking.



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