

# About Chronic Kidney Disease

(National Kidney Foundation)

Chronic kidney disease (CKD) is a condition characterized by a gradual loss of kidney function over time.

## What is chronic kidney disease (CKD)?

CKD includes conditions that damage your kidneys and decrease their ability to keep you healthy by doing the jobs listed. If kidney disease gets worse, wastes can build to high levels in your blood and make you feel sick. You may develop complications like high blood pressure, anemia (low blood count), weak bones, poor nutritional health and nerve damage. Also, kidney disease increases your risk of having heart and blood vessel disease. These problems may happen slowly over a long period of time. CKD may be caused by diabetes, high blood pressure and other disorders. Early detection and treatment can often keep chronic kidney disease from getting worse. When kidney disease progresses, it may eventually lead to kidney failure, which requires dialysis or a kidney transplant to maintain life.

## The Facts About Chronic Kidney Disease (CKD)

- 26 million American adults have CKD and millions of others are at increased risk.
- Early detection can help prevent the progression of kidney disease to kidney failure.
- Heart disease is the major cause of death for all people with CKD.
- Glomerular filtration rate (GFR) is the best estimate of kidney function.
- Hypertension causes CKD and CKD causes hypertension.
- Persistent proteinuria (protein in the urine) means CKD is present.
- High risk groups include those with diabetes, hypertension and family history of kidney failure.
- African Americans, Hispanics, Pacific Islanders, American Indians and Seniors are at increased risk.
- Three simple tests can detect CKD: blood pressure, urine albumin and serum creatinine.

## What causes CKD?

The two main causes of chronic kidney disease are diabetes and high blood pressure, which are responsible for up to two-thirds of the cases. Diabetes happens when your blood sugar is too high, causing damage to many organs in your body, including the kidneys and heart, as well as blood vessels, nerves and eyes. High blood pressure, or hypertension, occurs when the pressure of your blood against the walls of your blood vessels increases. If uncontrolled, or poorly controlled, high blood pressure can be a leading cause of heart attacks, strokes and chronic kidney disease. Also, chronic kidney disease can cause high blood pressure.

Other conditions that affect the kidneys are:

- Glomerulonephritis, a group of diseases that cause inflammation and damage to the kidney's filtering units. These disorders are the third most common type of kidney disease.
- Inherited diseases, such as polycystic kidney disease, which causes large cysts to form in the kidneys and damage the surrounding tissue.
- Malformations that occur as a baby develops in its mother's womb. For example, a narrowing may occur that prevents normal outflow of urine and causes urine to flow back up to the kidney. This causes infections and may damage the kidneys.
- Lupus and other diseases that affect the body's immune system.
- Obstructions caused by problems like kidney stones, tumors or an enlarged prostate gland in men.
- Repeated urinary infections.

## **What are the symptoms of CKD?**

Most people may not have any severe symptoms until their kidney disease is advanced. However, you may notice that you: 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.

## **Learn more About Glomerular Filtration Rate (GFR)**

GFR—glomerular filtration rate is the best test to measure your level of kidney function and determine your stage of kidney disease. Your doctor can calculate it from the results of your blood creatinine test, your age, race, gender and other factors. The earlier kidney disease is detected, the better the chance of slowing or stopping its progression.

## **What happens if my test results show I may have chronic kidney disease?**

Your doctor will want to pinpoint your diagnosis and check your kidney function to help plan your treatment. The doctor may do the following:

- Calculate your Glomerular Filtration Rate (GFR), which is the best way to tell how much kidney function you have. You do not need to have another test to know your GFR. Your doctor can calculate it from your blood creatinine, your age, race, gender and other factors. Your GFR tells your doctor your stage of kidney disease and helps the doctor plan your treatment.
- Perform an ultrasound or CT scan to get a picture of your kidneys and urinary tract. This tells your doctor whether your kidneys are too large or too small, whether you have a problem like a kidney stone or tumor and whether there are any problems in the structure of your kidneys and urinary tract.
- Perform a kidney biopsy, which is done in some cases to check for a specific type of kidney disease, see how much kidney damage has occurred and help plan treatment. To do a biopsy, the doctor removes small pieces of kidney tissue and looks at them under a microscope.