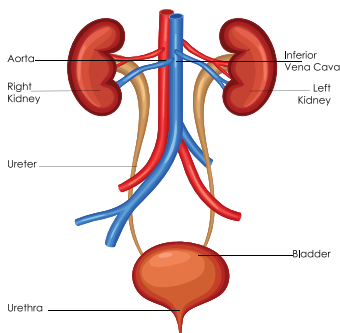




Your kidneys perform important functions that affect every part of your body. Many other organs depend on the kidneys to function normally. The kidneys perform complicated jobs that keep the rest of the body in balance. When the kidneys become damaged, your body's other organs are affected as well.

Your kidneys can be affected by a number of problems, including urinary tract infections, kidney stones, and chronic kidney disease. Medical advances have improved our ability to diagnose and treat these problems. Even when the kidneys no longer function, treatments such as dialysis and transplantation have brought new life to hundreds of thousands of people.

Why are the kidneys so important?



The major job of the kidneys is to remove waste products and extra fluids from the body in the form of urine. The production of urine is a complicated process that maintains a chemical balance in your body.

Although they are small, your kidneys perform many complex and vital functions that keep the rest of the body in balance. For example, kidneys:

- Help remove waste and excess fluid
- Filter the blood, using some compounds while removing others
- Control the production of red blood cells
- Make vitamins that control growth
- Release hormones that help regulate blood pressure
- Help regulate blood pressure, red blood cells, and the amount of certain nutrients in the body, such as calcium and potassium

Where are the kidneys and how do they function?

Most people are born with two kidneys, each about the size of a fist, located on either side of your spine at the bottom of your rib cage. Blood enters the kidneys through an artery from the heart.

1. Blood is cleaned by passing through millions of tiny blood filters
2. Waste material passes through the ureter and is stored in the bladder as urine
3. Newly cleaned blood returns to the bloodstream by way of veins
4. Bladder becomes full and urine passes out of the body through the urethra

The kidneys perform their life-sustaining job of filtering and returning to the bloodstream about 200 quarts of fluid every 24 hours. Approximately two quarts are eliminated from the body in the form of urine, while the remainder, about 198 quarts, is retained in the body. The urine we excrete has been stored in the bladder for approximately one to eight hours.

What is chronic kidney disease?

Chronic kidney disease, or (CKD) is a condition in which the kidneys are damaged and cannot filter blood as well as they should. Because of this, excess fluid and waste from blood remain in the body and may cause other health problems, such as heart disease and stroke.

Some other health problems that can be caused by CKD include:

- Anemia or low number of red blood cells
- Increased infections
- Low calcium levels, high potassium levels, and high phosphorus levels in the blood
- Loss of appetite or eating less
- Depression or lower quality of life

Symptoms

People with CKD may not feel ill or notice any symptoms. The only way to find out for sure if you have CKD is through blood and urine tests. These tests include measurements of both creatinine levels in the blood and proteins in the urine.

Kidney-Friendly Tips

- Keep your blood pressure below 140/90 mm Hg (or the target your doctor recommends).
- If you have diabetes, stay in your target blood sugar range as much as possible.
- Get active—physical activity helps control blood pressure and blood sugar levels.
- Lose weight if you're overweight.
- Get tested for CKD regularly if you're at risk.
- If you have CKD, meet with a kidney dietician to create a kidney-healthy eating plan. The plan may need to change as you get older or if your health status changes.
- Take medications as instructed, and ask your doctor about blood pressure medicines called angiotensin-converting enzyme (ACE) inhibitors and angiotensin II receptor blockers, (ARBs) which may protect your kidneys in addition to lowering blood pressure.
- If you smoke, quit. Smoking can worsen kidney disease and interfere with medication that lowers blood pressure.
- Include a kidney doctor (nephrologist) on your health care team.

Quick Facts: CKD Snapshot

- Kidney diseases are the ninth leading cause of death in the United States.
- Early CKD has no signs or symptoms.
- Specific blood and urine tests are needed to check for CKD.
- CKD tends to get worse over time.
- CKD can be treated (the earlier treatment starts the better).
- CKD can progress to kidney failure.

CKD By the Numbers

- About **37 million** US adults are estimated to have CKD and most are undiagnosed.
- Kidney diseases are the **ninth leading cause of death** in the United States.
- **48%** of people with severely reduced kidney function and not on dialysis are not aware that they have CKD.
- Every 24 hours, **about 340** people begin dialysis treatment for kidney failure.
- In the United States, diabetes and high blood pressure are the leading causes of kidney failure, representing about **3 out of 4 new cases**.
- In 2017, treating Medicare beneficiaries with CKD cost over **\$84 billion**, and treating people with ESRD costs an additional **\$36 billion**.

For more information, contact the National Kidney Foundation

Toll-free help line: **855.NKF.CARES** or email: **nkfcare@kidney.org**