

## What is Chronic Kidney Disease?

Chronic kidney disease (CKD) is a condition in which your kidneys are damaged and can't do their job. Excess fluid and waste begin to build up in the body. To understand CKD, we must first understand what kidneys do and why they are important.

### What Do My Kidneys Do?

Your kidneys work to keep you healthy. The main job of your kidneys is to filter your blood. All of the blood in your body goes through the kidneys several times a day. The kidneys remove waste from the blood and adjust salts, fluid, and minerals. This waste is turned into urine, which then travels to the bladder and is eliminated.

### Why Are My Kidneys Important?

Normal healthy kidneys...

#### 1 Remove excess fluid and waste

Your kidneys filter about 200 quarts of blood each day to make about 1 to 2 quarts of urine. The urine contains excess fluid and waste. This process keeps excess fluid and waste from building up in your body.

#### 2 Control blood pressure

Kidneys need a certain level of pressure to work properly. They use hormones and fluid levels to control this pressure. For example, if the pressure inside the kidneys is too low, the kidneys make a hormone that causes blood vessels to constrict. This has the effect of increasing blood pressure. The kidneys maintain normal blood pressure to keep your heart, brain, and other organs healthy.

#### 3 Help make red blood cells

Your kidneys make a hormone called erythropoietin. Erythropoietin tells bone marrow to make red blood cells. Red blood cells carry oxygen from your lungs to your brain and vital organs. Red blood cells provide the energy you need for daily activities. If you don't have enough red blood cells, you develop anemia. Anemia can make you feel weak and tired.

#### 4 Help keep bones healthy

The kidneys make an active form of vitamin D. You need vitamin D to absorb calcium and phosphorus. Calcium and phosphorus are important minerals for bone health. The kidneys also balance calcium and phosphorus, so your body has the right amount. For example, your heart needs potassium to function properly.

#### 5 Control pH levels

Your body functions best with a healthy balance of acids and bases in your blood. As cells break down, they make acids. The foods you eat can either increase or lower the amount of acid in your body. pH level is a measure of acids and bases. Your kidneys balance your pH level by either removing or adjusting the amount of acid and buffering agents.

### What Happens When Kidneys Slow Down or Stop Working?

When your kidneys slow down and can't do their job effectively, toxins build up and make you feel sick. CKD develops over time. In the early stages of CKD, your kidneys are still able to filter out waste from your blood. Early detection and treatment often can keep CKD from getting worse. In the final stage of kidney disease, you need dialysis or a transplant to live.