

Dr. N. Rao Boorgu

# **Diabetic Kidney Disease**

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Diabetes is a major risk factor for kidney disease. People with diabetes should be tested for kidney disease every year. Diabetic kidney disease is a decrease in kidney function that occurs in some people who have diabetes. Steps to control blood sugar and blood pressure will help those who already have diabetic kidney disease to avoid complications. The causes of diabetic kidney disease are complex and most likely related to many factors. About 30% of the people with Type I diabetes and about 10-40% of people with Type II diabetes will eventually develop end-stage kidney failure, requiring treatment to maintain life.

#### What is diabetes?

Diabetes happens when your body does not make enough insulin or cannot use insulin properly. Insulin controls how much sugar is in your blood. A high level can cause problems in many parts of the body: heart, kidneys, eyes and brain.

### What is Chronic Kidney Disease (CKD)?

When you have kidney disease, it means that the kidneys have been damaged. Kidneys can get damaged from a disease like diabetes. Once your kidneys are damaged, they cannot filter your blood nor do other jobs as well such as balancing the body's fluids, keeping blood pressure under control, help making red blood cells and removing waste products from the body. Over time, loss of kidney function can become life-threatening and can lead to kidney failure.

#### How does diabetes affect the kidneys?

Over time, having high blood sugar from diabetes can cause damage inside your kidneys. Your kidneys contain filters that are filled with tiny blood vessels. High sugar levels in the blood can cause these blood vessels to become narrow and clogged. When the blood vessels in the kidneys are injured, your kidneys cannot clean your blood properly. As more damage happens, the kidneys will have less function causing waste to build up and your body will retain more water and salt than it should.

Diabetes can also cause damage to the nerves in your body, making it hard to empty your bladder. The pressure of the full bladder can back up and injure the kidneys.

#### How likely am I to get kidney disease?

About one-third of people with diabetes will get kidney disease. Diabetes is the leading cause of kidney disease and kidney failure. Some groups of people such as African Americans, Hispanics, and Native Americans have a higher risk of developing kidney disease and kidney failure from diabetes. However, there are steps you can take to lessen your risk.

- Keeping your blood sugar in control can help keep you from getting kidney disease. Having high blood sugar is a major risk factor for diabetes. The best way to prevent or slow kidney damage is to keep your blood sugar well controlled. This is usually done with diet, exercise, and if needed, insulin or hypoglycemic pills to lower your blood sugar level.
- Controlling high blood pressure High blood pressure is one of the major factors that puts people with diabetes at risk for kidney disease. Keeping your blood pressure at the level your doctor suggests can help stop you from getting kidney disease.
- Keeping cholesterol and lipids levels under control. Control of blood lipids is important because it may slow down the progression of atherosclerosis within the kidneys and also in other blood vessels. In people with CKD, heart disease is very common.

## How do I know if I have kidney damage?

Most people with early kidney damage do not have symptoms. Not everyone with kidney disease get kidney failure. With the right treatment, you can prevent kidney disease from getting worse.

- The best way to find early kidney damage is to have a urine test once a year. This test checks for very small amounts of protein in the urine called albuminuria. It helps show kidney damage at an early stage in people with diabetes.
- A simple blood test to estimate GFR (Glomerular Filtration Rate). Your GFR number tells you how well your kidneys are working. Your GFR is estimated from a simple blood test for a waste product called creatinine.

New Treatments: Some studies suggest that a group of high blood pressure medicines called ACE inhibitors may help to prevent or delay the progression of diabetic kidney disease. These drugs reduce blood pressure in your body, and they may lower the pressure within the kidney's filtering apparatus (the glomerulus). They also seem to have beneficial effects that are unrelated to changes in blood pressure. Patients who take these medicines may have less protein in their urine.

Source: National Kidney Foundation - www.kidney.org



National Kidney Foundation®



**422 East Dr Hicks Blvd. Suite A, Florence** 256-766-1401 shoalskidney@comcast.net **ShoalsKidneyCenter.com** 

