

What You Should Know About **Diabetes And Chronic Kidney Disease**

What Is Diabetes?

Diabetes is a condition in which the body has difficulty processing a simple sugar called glucose and difficulty controlling the production of insulin. Insulin is a hormone that regulates the amount of sugar in your blood.

Diabetes is the most common cause of chronic kidney disease (CKD).

How Does High Blood Sugar From Diabetes Damage Kidneys?

High blood sugar levels from poorly controlled diabetes damage the blood vessels and nephrons (filtering units) of the kidneys. When your kidneys are functioning properly, the glomeruli (small groups of blood vessels in the kidneys) keep normal substances, like protein, in the bloodstream. Your body needs these substances to stay healthy. High blood sugar can damage the kidneys' glomeruli. When the kidneys are damaged, important substances in the blood may be lost in the urine.

Damaged kidneys also do not do a good job of cleaning out waste and extra fluids, so not enough waste and fluids go out of the body as urine. Instead, they build up in your blood, which can cause even further damage to your kidneys and other parts of the body.

Poorly controlled diabetes (high levels of sugar in your blood) can also lead to other health problems, including damage to your:

- **Blood Vessels**
- **Eyes**
- **Nerves**



Why Is Normal Kidney Function So Important?

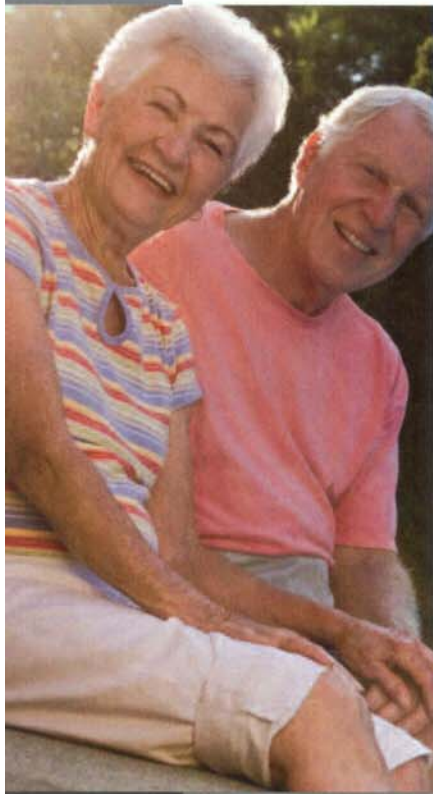
In addition to filtering waste in your body, kidneys perform a variety of other important functions to help keep the body healthy. Some other important functions that the kidneys perform include:

- Balance the body's fluids
- Help control blood pressure
- Help make red blood cells
- Produce the active form of vitamin D that promotes healthy bones

Chronic kidney disease usually develops slowly and many people have no symptoms until their kidney function has decreased to less than 25 percent of normal. Regular visits to a healthcare professional can help detect early kidney damage that might otherwise go unnoticed.

It's Important To Control Your Blood Sugar

If you are diabetic, you probably are aware that your condition may have caused damage to your kidneys. Blood sugar control can help minimize kidney damage and slow the progression of CKD. It also can help prevent other health problems, such as heart disease, stroke, and blindness. This is why it is important to keep your blood sugar levels controlled. Talk to your healthcare provider about the target blood sugar range that is right for you.



Common Causes Of High Blood Sugar In Diabetic Patients:

- Eating the wrong foods or too much food
- Lack of physical activity
- Infection or illness
- Stress
- Improper medication dose

Source: American Diabetes Association, 2004

Work With Your Healthcare Professional To Manage Diabetes And Kidney Disease

- **Bring your diabetes under control.** If your blood sugar is poorly controlled, work with your healthcare provider to determine the cause and treatment. He or she will advise you of the target blood sugar range that's right for you.
- **Check your blood sugar level regularly.** Home blood sugar (glucose) tests, as well as those performed in your doctor's office or lab, can give you vital information very quickly. **Record your blood sugar levels regularly and share your results with your healthcare provider.**
- **Manage your diet.** A well-balanced nutritional plan is important for good diabetes control. Talk to your doctor about a diet plan that is right for you or consult with a dietitian specializing in diabetes and kidney disease.

Where Can I Learn More About Diabetes And Chronic Kidney Disease?

AMERICAN DIABETES ASSOCIATION

The nation's leading nonprofit health organization providing diabetes research, information, and advocacy.

1701 North Beauregard Street
Alexandria, VA 22311

1-800-DIABETES
(1-800-342-2383)
www.diabetes.org

AMERICAN ASSOCIATION OF DIABETES EDUCATORS

An organization of healthcare professionals who provide diabetes education and care.

200 West Madison Street
Suite 800, Chicago, IL 60606

1-800-338-3633
www.diabeteseducator.org

NATIONAL KIDNEY FOUNDATION

Provides information, support, education, and resources for patients with kidney disease.

30 East 33rd Street
New York, NY 10016

1-800-622-9010
www.kidney.org

This guide does not replace advice from your doctor. Talk to your doctor about your symptoms and any health or treatment questions that you may have.

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