

HIDDEN HEALTH RISKS

***Kidney Disease, Diabetes,
and High Blood Pressure***



National
Kidney
Foundation®

www.kidney.org

About the Information in this Booklet

Did you know that the National Kidney Foundation (NKF) offers guidelines and commentaries that help your healthcare provider make decisions about your medical treatment? The information in this booklet is based on those recommended guidelines.

Stages of Kidney Disease

There are five stages of kidney disease. They are shown in the table below. Your healthcare provider determines your stage of kidney disease based on the presence of kidney damage and your glomerular filtration rate (GFR), which is a measure of your kidney function. Your treatment is based on your stage of kidney disease. Speak to your healthcare provider if you have any questions about your stage of kidney disease or your treatment.

STAGES OF KIDNEY DISEASE		
Stage	Description	Glomerular Filtration Rate (GFR)*
1	Kidney damage (e.g., protein in the urine) with normal GFR	90 or above
2	Kidney damage with mild decrease in GFR	60 to 89
3	Moderate decrease in GFR	30 to 59
4	Severe reduction in GFR	15 to 29
5	Kidney failure	Less than 15

*Your GFR number tells your healthcare provider how much kidney function you have. As chronic kidney disease progresses, your GFR number decreases.

Did you know?

Did you know that some groups of people have a higher risk for kidney disease than others? It is not fully understood why. However, diabetes and high blood pressure play major roles. This brochure will help you understand why — and what you can do about it.

Can anyone get kidney disease?

Anyone can get kidney disease at any age, but your risk is greater if you are:

- Black
- Asian
- Hispanic
- Pacific Islander
- American Indian
- Alaska Native

Having diabetes, high blood pressure, a family history of kidney disease or kidney failure, and being 60 years or older also increase(s) your risk for kidney disease.

The more risk factors you have, the more likely you are to get kidney disease.

What is kidney disease?

Healthy kidneys do many important jobs. They remove waste products and extra water from your body, help make red blood cells, and help control blood pressure. When you have kidney disease, it means your kidneys are damaged and they cannot do these jobs well. Kidneys can become damaged from a physical injury or a disease like diabetes, high blood pressure, or other disorders.

Finding and treating kidney disease early can help keep it from getting worse. If kidney disease gets worse, it can lead to kidney failure. Once kidneys fail, treatment with dialysis or a kidney transplant is needed to stay alive.

What happens if I have kidney disease?

If you have kidney disease, you will need to follow a treatment plan that may include taking medicines, limiting salt and certain foods, getting exercise, controlling diabetes and high blood pressure, and more.

How do I know if I have kidney disease?

Most people with kidney disease do not have any symptoms (signs of it). The only way to find it is to be tested. There are two simple tests for kidney disease:

- A simple **urine test** to see if you have protein in your urine. Your body needs protein, but it should be in the blood, not the urine. Having a small amount of protein in your urine may mean that your kidneys are not filtering your blood well. Protein in your urine is called “albuminuria.” This can be a sign of early kidney disease.
- A simple **blood test** for 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. Creatinine comes from muscle activity. Your creatinine number is used in a math formula along with your age, race, and gender to find your GFR number.



Why is kidney disease related to diabetes and high blood pressure?

Having diabetes or high blood pressure can lead to kidney disease and kidney failure. In fact, they are the two leading causes of kidney disease and kidney failure.

Diabetes and high blood pressure are often called “silent killers.” That’s because many people who have diabetes or high blood pressure do not know they have them. Often times, there are no symptoms. Or symptoms may not happen until too much damage to the body has already taken place.

It’s important to be tested regularly for diabetes and high blood pressure. Finding and treating them early can help lessen your risk for getting kidney disease.

What is diabetes?

Diabetes happens when your body does not make enough insulin or cannot use insulin properly. Insulin is a hormone. It controls how much sugar is in your blood. A high level of sugar in your blood can cause problems in many parts of your body, including your heart, kidneys, eyes, and brain. Over time, this can lead to kidney disease and kidney failure.

There are two main types of diabetes. Type 1 diabetes generally begins when people are young. In this case, the body does not make enough insulin. Type 2 diabetes is usually found in adults over 40, but is becoming more common in younger people. It is usually associated with being overweight and tends to run in families. In type 2 diabetes, the body makes enough insulin, but cannot use it properly.

How do I know if I have diabetes?

Not everyone who has diabetes will have symptoms. However, you may:

- Feel thirstier than usual
- Need to pass urine much more often
- Feel hungrier than normal
- Feel tired
- Lose weight, even if you are eating more than usual

Diabetes is found with blood tests. Remember, you may have diabetes even if you don't have any symptoms. Ask your healthcare provider about your risk for diabetes—and get tested for it!

What should I do if I have diabetes?

Keep your blood sugar under control, and check it as often as your healthcare provider tells you. You may need to take insulin or special pills to control your blood sugar. Get regular exercise, eat right, and be sure to follow your diabetes treatment plan.



What is high blood pressure?

Blood pressure is the force of your blood against the walls of your blood vessels as your heart pumps blood around your body. If this pressure becomes too high, you are said to have high blood pressure.

High blood pressure is a leading cause of kidney disease, heart attacks, and strokes. Most people with high blood pressure do not have any symptoms. For this reason, it is often called a “silent killer.”

How do I know if I have high blood pressure?

You must have your blood pressure measured. Blood pressure is measured by using a blood pressure cuff around your arm. A single high reading may not mean you have high blood pressure. It should be confirmed on follow-up visits to your healthcare provider.

Blood pressure is measured as two numbers. The top number (called systolic pressure) is the pressure when your heart is beating. The bottom number (called diastolic pressure) is the pressure when your heart is resting between beats. A blood pressure of 120/80 is read as “120 over 80.”

Normal blood pressure in adults 18 and older is less than 120/80. In general, for adults 18 and older, blood pressure that stays at 140/90 or more is thought to be high.

What should I do if I have high blood pressure?

Eat healthy meals, get regular exercise, and limit how much salt you eat. You may also need to take special pills to help control blood pressure. Keeping blood pressure under control is the best way to reduce your chance that

it will lead to kidney disease or other health problems, including heart attacks or strokes.

What else should I know about my risks for kidney disease?

Kidney disease can be treated. With treatment, it's possible to slow or even stop kidney disease from getting worse.

Not everyone who is at risk for kidney disease or kidney failure will get it. Take these important steps:

- Ask your healthcare provider about your risks for kidney disease, diabetes, and high blood pressure.
- Get tested regularly for all three.



- Be sure to follow your treatment plan if you have diabetes or high blood pressure. Controlling blood sugar and blood pressure is the best way to lessen your risk for kidney disease.
- Live a healthy lifestyle. Get regular exercise, eat healthy, lose weight if needed, stop smoking, and limit alcohol. A healthy lifestyle can keep you from getting kidney disease. It can also help slow or stop kidney disease from getting worse.
- Learn all you can about your risk for kidney disease, diabetes, and high blood pressure. Take an active role in your healthcare. It will help you to stay healthy.



Where can I get more information?

If you have questions, speak to your healthcare provider. You can also call the National Kidney Foundation Cares Patient Help Line toll-free at **855.NKF.CARES** (855.653.2273) or email **nkfcares@kidney.org**. A trained professional will listen to your concerns and help answer your questions.

If you want to read more about kidney disease, the National Kidney Foundation has a lot of information on many topics, such as:

- Diabetes and your kidneys
- High blood pressure and your kidneys
- Kidney disease
- Kidney failure

Learn more at **www.kidney.org**

Do you know these facts about your risk?

Here are some facts about diabetes, high blood pressure, and kidney disease.

Remember, you can lessen your risk for diabetes, high blood pressure, and kidney disease. Eat a healthy diet, get regular exercise, lose weight if needed, do not smoke, and limit alcohol. A healthy lifestyle will help keep you active and well.

Black Americans

- Over 3 million Black Americans have **diabetes**.
- **High blood pressure** strikes 1 out of 3 Black Americans — one of the highest rates in the world.
- **Kidney failure** is a common health concern for Black Americans. According to a recent study, many Black Americans do not even know they have kidney disease until it's in the latest stages. This means it is not found early enough, when treatment can still help slow or stop the damage from getting worse.

Researchers believe that some Black Americans may be born with a “high risk” gene for kidney disease. According to a recent study by the National Institutes of Health, Black Americans with kidney disease who have the high-risk gene are twice as likely to progress to kidney failure than people without the high-risk gene.

Hispanic Americans

- Ten percent of Hispanic Americans have **diabetes**. In older Hispanic Americans, diabetes is even more common—about 1 in 4 Hispanic Americans over 45 years old has diabetes.
- Nearly 1 in 4 Hispanic Americans has **high blood pressure**.
- Hispanic Americans are 1 ½ times more likely to have **kidney disease** and **kidney failure** than other groups of people. In 2010, 13 percent of new kidney failure patients were Hispanic. According to a recent study, many Hispanic Americans do not even know they have kidney disease until it’s in the latest stages. This means it is not found early enough, when treatment can still help slow or stop the damage from getting worse.

Asian Americans

- The risk for **diabetes** is rising among Asian Americans. This may be the result of eating an American or “Western” diet. The traditional Asian diet, which is mostly plants and fish, is low in fat. But the American diet is high in calories and fat. Heredity (family background) may also play a role. Studies show that Asian Americans get diabetes at a much lower body weight than other groups of people. In other words, the risk of diabetes rises sharply with even a small amount of body weight.
- Asian Americans are at risk for **kidney disease** and **kidney failure**. Diabetes plays a major role. In fact, the rates of kidney failure caused by diabetes have doubled in Asian Americans ages 30 to 39 since 2000.

American Indians and Alaska Natives

- American Indians and Alaska Natives have a high rate of **diabetes** and being overweight. Being overweight can lead to diabetes. The rate of kidney failure caused by diabetes has increased 30 percent in American Indians since 2000.

- American Indians and Alaska Natives are also at risk for **kidney disease** and **kidney failure**. Heredity (family background) may be involved. Research shows that the Pima Indians in Arizona may be born with one or more “high risk” genes that make them more likely to have **kidney disease caused by diabetes**.

Pacific Islanders

- There is a high rate of **diabetes** among Pacific Islanders. The risk for **kidney disease** and **kidney failure** is also high.

Sources:

National Center for Health Statistics, Centers for Disease Control and Prevention, Atlanta, GA

United States Department of Health & Human Services Office of Minority Health, Washington, D.C.

United States Renal Data System, USRDS Coordinating Center, Minneapolis, MN

The **National Kidney Foundation** is the leading organization in the U.S. dedicated to the awareness, prevention, and treatment of kidney disease for hundreds of thousands of healthcare professionals, millions of patients and their families, and tens of millions of Americans at risk.

Help fight kidney disease.

Learn more at **www.kidney.org**



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Awareness. Prevention. Treatment.
