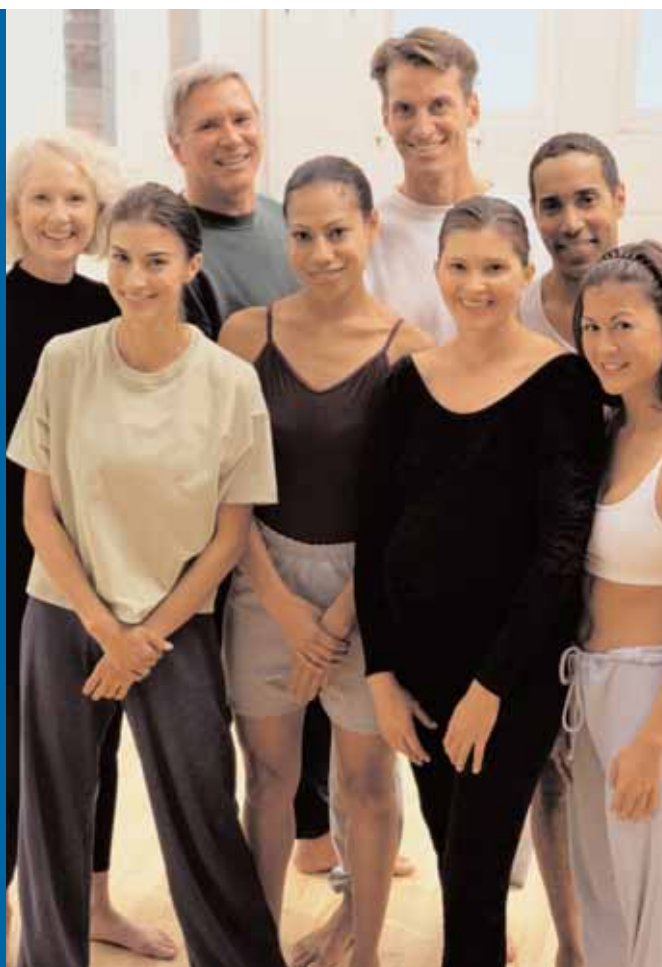


American
Kidney Fund

reaching out
giving hope
improving lives

High Blood Pressure and Your Kidneys



American Kidney Fund



reaching out
giving hope
improving lives

High Blood Pressure: The #2 Cause of Kidney Failure

Your doctor told you that you have high blood pressure. You may have a lot of questions. This guide will help.

You will learn:

- What high blood pressure is
- How high blood pressure hurts your kidneys
- What your blood pressure numbers mean
- How to stay healthy
- Where to find more information

While reading this guide, you may see a word that you don't know in **bold**. If so, turn to page 16 and look for the word in the glossary.

We know we can't answer all of your questions. Write down any questions that you have and talk about them with your healthcare team.



What is Blood Pressure?

When blood flows through your body, it presses on the walls of your **blood vessels**. This force is called blood pressure.

Blood pressure that is too high makes the heart work harder and can damage the arteries and veins in your body.

If not treated, high blood pressure (also called **hypertension**) can lead to health problems, including:

- **Kidney failure**
- Stroke
- Heart attack
- Heart failure

Even worse, high blood pressure has NO symptoms. It is often called the “silent killer.” The only way to know if you have high blood pressure is to be checked.

Who is at risk for high blood pressure?

You are more at risk for high blood pressure if you:

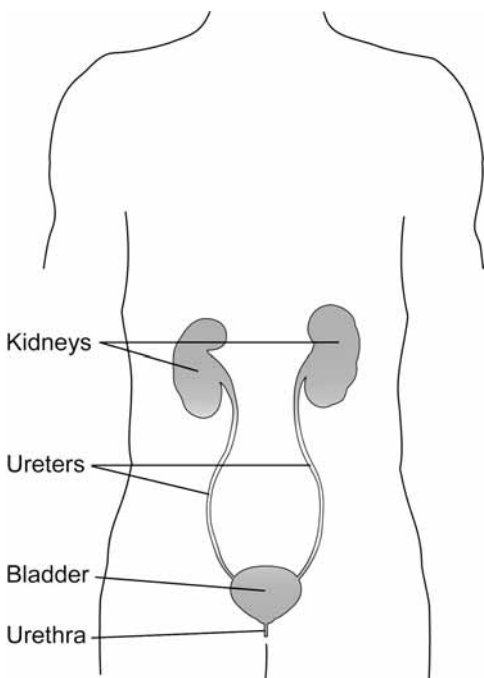
- Are African American
- Are over 55 years old
- Have a close family member with high blood pressure
- Are overweight or obese
- Eat a diet high in salt
- Smoke or use tobacco products
- Drink too much alcohol (more than 1 drink a day for women or more than 2 drinks a day for men)



How can high blood pressure hurt my kidneys?

Your kidneys are like a filter for your body. They keep some things in your body that you need, and they get rid of the wastes you don't need.

The filters in your kidneys are full of tiny blood vessels (called **glomeruli**). High blood pressure can hurt these tiny blood vessels.



Your Urinary System

Once the kidneys are hurt like this, they can't be fixed. If high blood pressure is not treated early, it can lead to kidney failure. Kidney failure means that the kidneys don't work well enough to clean your blood. There is no cure for kidney failure. If you have kidney failure, you will need **dialysis** or a kidney **transplant** to live.

The good news is that high blood pressure takes a while to damage your kidneys. Sometimes it takes many years. This means you have time to help protect your kidneys.

To learn more about kidney failure, dialysis or kidney transplant, call the American Kidney Fund's HelpLine at 866.300.2900 or visit <http://www.kidneyfund.org>

You will not be able to feel if high blood pressure has hurt your kidneys. The only way to know is to be tested. Your doctor can do a few simple tests to check how well your kidneys are working. Keep reading to learn more.

How can my kidneys affect my blood pressure?

High blood pressure can damage your kidneys, but your kidneys can cause high blood pressure, too.

Your kidneys help control your blood pressure. If your kidneys are damaged, they cannot do this as well as they should. This can cause your blood pressure to rise. The higher blood pressure can hurt your kidneys even more.



How will I know if I have high blood pressure?

High blood pressure has NO signs or symptoms. The only way to know if you have high blood pressure is to have it checked.

Having your blood pressure checked is quick and easy. You can get your blood pressure checked at:

- Your doctor's office
- Health fairs in the community
- Home (using a blood pressure cuff that you buy)
- Your grocery store or local mall (most have machines that are free and easy to use)

Use the chart on the next page to see what your blood pressure results mean.



When you check your blood pressure, you will get two numbers. The first (top) number is the pressure when your heart beats. This is called **systolic pressure**. The second (bottom) number is the pressure between heart beats. This is called **diastolic pressure**.

Use this chart to see what your blood pressure results may mean:

	First (Top) Number	Second (Bottom) Number
Healthy	Less than 120	Less than 80
A Little High	120-139	80-89
Very High	140 or More	90 or More

If either number is high, your blood pressure is high.

The best time to check your blood pressure is when you have been resting for a few minutes.

Blood pressure changes during the day and it may go up when you move around, eat certain foods, or feel excited.

Talk to your doctor if your resting blood pressure is high at more than one check.



What if I have high blood pressure?

If you have high blood pressure, you can control it. This will help to protect your kidneys and prevent kidney disease. Talk to your doctor about how to keep your blood pressure in a healthy range. Some things to think about are:

Diet

- Try to eat low-fat and low-salt foods
- Limit how much alcohol you drink (no more than 1 drink a day for women or 2 drinks a day for men)
- Avoid tobacco products

Exercise

Exercise regularly. Try to work up to 30 minutes of aerobic exercise (walking, running, dancing, biking, swimming, etc.) most days of the week. This can help keep your blood pressure in a healthy range.

Also, losing even a few pounds if you are overweight can help you control your blood pressure.

Important! Talk to your doctor before starting any kind of exercise.

Medicines

Ask your doctor if a blood pressure medicine is right for you. There are many different types of blood pressure medicines. **ACE Inhibitors** and **ARBs** are two types of blood pressure medicines that can help prevent damage to your heart and kidneys. Work with your doctor to find a medicine that works best for you.

You might also want to ask about a **diuretic** (“water pill”). This is a type of medicine that helps your body get rid of extra fluid. Having too much fluid in your body can raise your blood pressure.



What other tests should I have?

An **eGFR (estimated Glomerular Filtration Rate)** test can tell how your kidneys are working. Your doctor can check your eGFR by doing a simple blood test.

The doctor checks your blood for a chemical called **creatinine**. Then, your doctor uses the result from that test to find your eGFR. Your doctor will also use your age, sex and race to figure out your eGFR.



The eGFR number that your doctor gives you can tell you how well your kidneys are working. Use the chart below to see what your eGFR may mean.

eGFR Result	What It May Mean
60 or More	Normal or Little Kidney Damage
30 to 59	Moderate Kidney Damage
15 to 29	Severe Kidney Damage
Less than 15	Kidney Failure (Dialysis or transplant may be needed soon.)

Based on the National Kidney Disease Education Program's Suggestions for Laboratories, available at www.nkdep.nih.gov/resources/laboratory_reporting.htm.

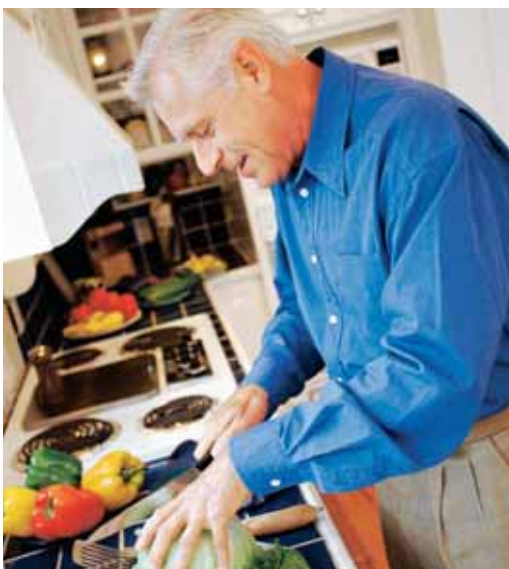
For more information about eGFR and kidney disease, order the American Kidney Fund's brochure *Living Well with Chronic Kidney Disease*. Call our HelpLine at 866.300.2900 or visit <http://www.kidneyfund.org>

What if I already have kidney disease?

If you already have kidney disease, it is still very important to control high blood pressure.

Talk to your doctor about what is a healthy blood pressure for you. Since you have kidney disease, your healthy blood pressure may be a little higher than normal. Most doctors suggest a blood pressure less than 130/90 (130 over 90).

Also talk to your doctor about how to help control your blood pressure. You may need to change your diet, exercise or medicines a little to help stay healthy. See pages 10 and 11 for tips.



What if I am on dialysis?

If you are on dialysis, you still need to control your blood pressure. This will help to protect your heart and blood vessels and prevent other problems.

Talk to your doctor about how to keep your blood pressure in a healthy range. A **renal dietitian** can also help you learn more about how to limit the salt and fluids in your diet.

You can also order the American Kidney Fund's brochure *Health Eating for Hemodialysis* or *Diet Guide for the CAPD Patient*. Call our toll-free HelpLine at 866.300.2900 or visit <http://www.kidneyfund.org>



Glossary

ACE Inhibitor: Angiotensin-Converting Enzyme Inhibitor. A medicine used to treat high blood pressure. ACE Inhibitors can also help slow kidney damage.

ARB: Angiotensin II Receptor Blocker/Inhibitor. A medicine used to treat high blood pressure. ARBs can also help slow kidney damage.

Blood Pressure: The force that blood puts on blood vessels as it flows through them.

Blood Vessels: Flexible tubes that carry blood through the body. Blood vessels include arteries and veins.

Creatinine: A kind of waste in the blood that comes from everyday muscle use. Healthy kidneys filter creatinine out of the blood. When the kidneys are not working like they should, creatinine builds up in the blood.

Dialysis: A way to clean wastes from the blood using a machine and special fluid. The two major types of dialysis are hemodialysis and peritoneal dialysis.

Diastolic Pressure: The force that blood puts on blood vessels when the heart is relaxing (between heartbeats). This is the bottom number of a blood pressure reading.

Diuretic: A medicine or chemical that causes a person's body to make more urine. Also called a "water pill."

eGFR: estimated Glomerular Filtration Rate. A measure of how well the kidneys are working. An eGFR is based on a person's creatinine level, age, sex and race.

Hypertension: High blood pressure. This can be caused by too much fluid in the blood vessels or by narrowing of the blood vessels. Hypertension is the second leading cause of kidney failure. It can also be caused by kidney disease.

Kidney Failure: When the kidneys are not working well enough to clean wastes and extra fluid from the blood. A person with kidney failure will need dialysis or a kidney transplant to live.

Renal Dietitian: A person who specializes in the kidney friendly diet. Renal dietitians can help you learn how to eat healthy with kidney disease.

Systolic Pressure: The force that blood puts on blood vessels when the heart contracts (beats). This is the top number of a blood pressure reading.

Transplant: When a diseased organ is replaced with a healthy one. A kidney transplant may come from a living donor or someone who has just died.

Where Can I Find More Help?

American Kidney Fund

6110 Executive Blvd.

Suite 1010

Rockville, MD 20852

HelpLine: (866) 300-2900

<http://www.kidneyfund.org>

Email: HelpLine@kidneyfund.org

American Heart Association

National Center

7272 Greenville Avenue

Dallas, TX 75231

(800) 242-8721

<http://www.americanheart.org>

National Heart, Lung, and Blood Institute

Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

(301) 592-8573

<http://www.nih.nhlbi.gov>

Email: nhlbiinfo@nhlbi.nih.gov

National Institute of Diabetes and Digestive and Kidney Diseases

3 Information Way

Bethesda, MD 20892-3580

(800) 891-5390

<http://kidney.niddk.nih.gov>

National Kidney Foundation

30 East 33rd Street

New York, NY 10016

(800) 622-9010

<http://www.kidney.org>

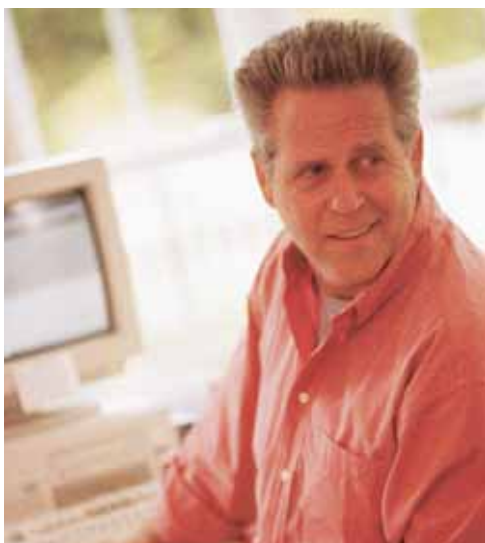
Renal Support Network

1311 N. Maryland Avenue

Glendale, CA 91207

(800) 579-1970

<http://www.rsnhope.org>



The American Kidney Fund provides direct financial assistance to kidney patients in need and education for those with and at risk for kidney disease.

Combined Federal Campaign #11404

For more information on the American Kidney Fund's programs, or to find more information on kidney disease and its treatment, contact us at:

American Kidney Fund
6110 Executive Blvd., Suite 1010
Rockville, MD 20852
Toll-Free: 866.300.2900
HelpLine@kidneyfund.org
<http://www.kidneyfund.org>

Copyright© 2008 by American Kidney Fund, Inc. All rights reserved.

American Kidney Fund
6110 Executive Boulevard, Suite 1010
Rockville, MD 20852
Toll-Free: 800.638.8299
HelpLine: 866.300.2900
HelpLine@kidneyfund.org
<http://www.kidneyfund.org>

Combined Federal Campaign #11404



American Kidney Fund

reaching out
giving hope
improving lives