

High Blood Pressure: What You Need to Know¹

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High blood pressure, also called **hypertension**, increases your health risks. If you have high blood pressure, you have a higher chance of getting heart disease or kidney disease or of having a stroke.

Why worry about high blood pressure?

Heart disease is the number one killer of both men and women in the United States. Stroke is the third most common cause of death in this country.

About one in three American adults has high blood pressure. Having high blood pressure is especially dangerous because it often has no symptoms. If you don't know you have high blood pressure, you won't get medical help to lower it.

The good news is that you can easily find out if you have high blood pressure by having your blood pressure checked. If your blood pressure is high, you can take steps to lower it. Just as important, if your blood pressure is normal, you can learn how to keep it from getting high. This fact sheet will help you make choices to achieve or maintain a healthy blood pressure.

What is blood pressure?

Blood is carried in your arteries from the heart to your body's organs. Each time your heart beats (about 60-70 times a minute at rest), it pumps blood into the arteries.

Blood pressure is the force of the blood pushing against the walls of those arteries.

Blood pressure is highest when the heart contracts and pumps the blood. This is the **systolic** pressure. When your heart is at rest, between beats, the blood pressure falls. This is the **diastolic** pressure. Your blood pressure normally varies depending on what you are doing. For example, if you run for a bus, your blood pressure goes up. When you sleep at night, your blood pressure goes down.

What happens when blood pressure is high?

Some people have blood pressure that stays high all or most of the time. Their blood pushes against the walls of their arteries with higher-than-normal force. If left untreated, high blood pressure can lead to serious medical problems such as the following:

1. Coronary Heart Disease (Coronary Artery Disease)

Coronary heart (or artery) disease is caused by a buildup of a waxy substance called plaque in the arteries within the heart. High blood pressure speeds the buildup of plaque. When plaque hardens, it can narrow the arteries and block the flow of blood to a part of the heart. This causes chest pain called angina. If blood flow to the heart is completely blocked, it causes a heart attack.

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2. Adapted from the NHLBI/NIH fact sheet "Facts About How to Prevent High Blood Pressure" by Linda B. Bobroff, PhD, RD, LD/N, and professor, Department of Family, Youth, and Community Sciences; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

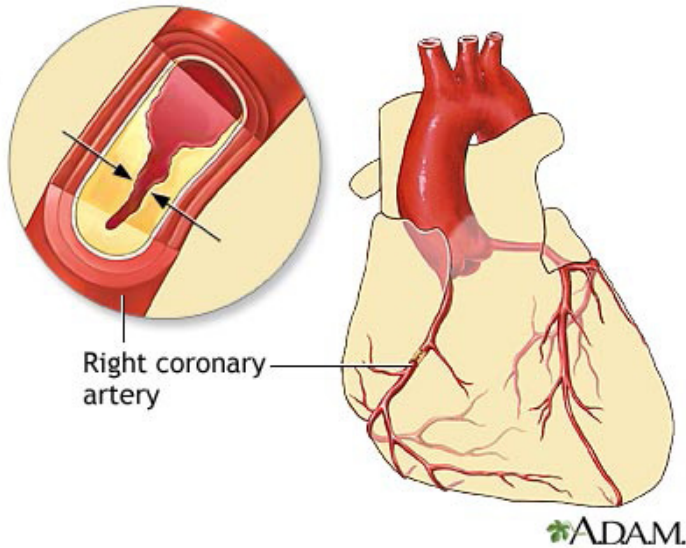


Figure 1. High blood pressure contributes to plaque buildup in the coronary arteries, which can cause chest pain (angina) and a heart attack. Credits: Used with permission, visit <http://shands.org/health>.

2. Heart Failure

When coronary heart disease greatly weakens the heart muscle, it results in heart failure. With heart failure, either the heart can't fill with enough blood or it is unable to pump enough blood to reach all parts of the body. Nearly 6 million people in the United States have heart failure. Several treatments can help people live active lives, but prevention is best.

3. Kidney Failure

The kidney acts as a filter to rid the body of wastes. High blood pressure damages blood vessels in the kidneys. The damaged arteries filter less fluid causing wastes to build up in the blood. Over time uncontrolled high blood pressure can lead to kidney failure, which requires dialysis or a kidney transplant.

4. Stroke

High blood pressure can cause arteries to narrow. If a blood clot blocks a narrowed artery that goes to the brain, a stroke can occur. A stroke also can occur if high blood pressure causes a break in a weak blood vessel in the brain.

Who's likely to develop high blood pressure?

Anyone can develop high blood pressure, but some people are more likely to have it than others. Your age, gender, ethnic background, and family history all affect your risk.

The number of men and women with high blood pressure increases rapidly as we age. More than half of Americans over age 65 have high blood pressure. In early middle age, men are more likely than women to have high blood pressure. As men and women age, the reverse is true. After menopause, more women have high blood pressure than men of the same age.

High blood pressure is more common in African Americans than in whites. Finally, heredity can affect your risk. If your parents or grandparents had high blood pressure, your risk is higher than if you have no family history.

While it is mainly a disease of adults, high blood pressure **can** occur in children. Even if everyone is healthy, be sure you and all of your family members get your blood pressures checked on a regular basis.

How is blood pressure checked?

Having your blood pressure checked is quick, easy, and painless. Blood pressure is measured with an instrument called a sphygmomanometer (sfig-mo-ma-nom'-e-ter). It works like this: A blood pressure cuff is wrapped around your upper arm and inflated. This stops blood flow in your artery for a few seconds. A valve is opened and air is released from the cuff. Then, using a stethoscope, a medical professional can hear the sounds of your blood rushing through an artery.



Figure 2. Because high blood pressure usually has no symptoms, you should have your blood pressure measured regularly. Blood pressure is measured with a sphygmomanometer. Credits: Thinkstock images

The first sound heard is the systolic blood pressure. It represents the maximum pressure in the artery produced as the heart contracts and blood begins to flow. The second sound heard is the diastolic blood pressure. It represents the lower pressure in the artery, when the heart is at rest.

What do the numbers mean?

Blood pressure is expressed with two numbers that represent the systolic and diastolic pressures. These numbers are measurements of millimeters (mm) of mercury (Hg). Blood pressure is written with the systolic number on the top and the diastolic number on the bottom. A blood pressure measurement of 120/80 mmHg is expressed as “120 over 80.”

120 mmHg	=	Systolic	=	Heart beating
80 mmHg		Diastolic		Heart at rest

If your blood pressure is less than 120/80 mmHg, it is considered normal. If your systolic blood pressure is 120–139 mmHg OR your diastolic is 80–89 mmHg, you have prehypertension. This means you are at risk for high blood pressure and you should take steps to lower it. High blood pressure is more serious as the numbers get higher. The following table shows categories of blood pressure levels in adults.

Classification of Blood Pressure			
Category	SBP (mmHg)		DBP (mmHg)
Normal	Less than 120	and	Less than 80
Prehypertension	120-139	or	80-89
High blood pressure			
Stage 1	140-159	or	90-99
Stage 2	160 or higher	or	100 or higher

SBP = systolic blood pressure
 DBP = diastolic blood pressure
 mmHg = millimeters of mercury
 Source: National Heart, Lung, and Blood Institute. 2012. *What Is High Blood Pressure?*,
<http://www.nhlbi.nih.gov/health/health-topics/topics/hbp/>.

What causes high blood pressure?

For most people, there is no known cause of high blood pressure. This is called **primary** or **essential** hypertension. **Essential** hypertension can't be cured, but it usually can be controlled. That is why everyone should have their blood pressure checked regularly.

In a few people, high blood pressure can be traced to a known cause, such as chronic kidney disease, use of birth control pills, or pregnancy. This type is called **secondary hypertension**. It is usually cured when the cause is corrected or ends.

How can you prevent high blood pressure?

Everyone – regardless of race, age, sex, or heredity – can help lower their chance of developing high blood pressure. To reduce your risk for high blood pressure, strive to reach these goals:

- Maintain or move toward a healthy weight.
- Be physically active each day.
- Choose and prepare foods with less salt.
- Eat at least 2 cups of fruit and 2½ cups of vegetables every day.
- If you drink alcoholic beverages, do so in moderation.

If your blood pressure is normal, all of these practices will help keep it that way. They are also recommended if your blood pressure is already high. Medicine is often part of the treatment for high blood pressure. It is better to keep your blood pressure from getting high in the first place.

Another important measure for your health is to not smoke! Although cigarette smoking does not cause high blood pressure, it increases the risk of heart attack and stroke.



Figure 3. It is easy to stay active when you choose activities that you enjoy doing. Being physically active each day can help reduce your chance of developing high blood pressure. Credits: Hemera

Reaching your lifestyle goals

You may wonder how to reach the goals outlined in this publication. Help is available! For more information on reducing your risk for high blood pressure, see the UF/IFAS Extension fact sheet, *Living Well to Keep Your Pressure Down* at <http://edis.ifas.ufl.edu/fy305>. This fact sheet will give you tips for reaching the recommended goals to reduce your risk of high blood pressure.

Research shows that the DASH (Dietary Approaches to Stop Hypertension) Eating Plan can help prevent or lower high blood pressure. To learn more about DASH visit: <http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm>.

For more information

Cooperative Extension Service

Your local county Extension agent may offer programs on blood pressure control, weight management, and other healthy living topics. In Florida, find your Extension office in the blue pages of your phone book or online at <http://solutionsforyourlife.ufl.edu/map/>.

Hospitals

Local hospitals may have lectures on topics related to blood pressure and cardiovascular health.

Reliable websites

- National Heart, Lung, and Blood Institute:
<http://www.nhlbi.nih.gov/health/index.htm>
- National Institute of Diabetes and Digestive and Kidney Diseases: <http://www2.niddk.nih.gov>
- American Heart Association:
<http://www.americanheart.org>
- American Stroke Association:
<http://www.strokeassociation.org>
- National Stroke Association:
<http://www.stroke.org>