

Blood Pressure: Keep Your Body Healthy

What is blood pressure?

Blood pressure causes blood to flow from your heart to all parts of your body, then back to your heart. It's the force of blood, created by the heart, pushing against the walls of your arteries. When the arteries become clogged by fats and cholesterol, narrowed from smoking, or filled with excess fluid because of excess sodium consumption, the pressure begins to rise. When pressure rises above normal levels, the condition is known as hypertension, or high blood pressure. A blood pressure below 120/80 is considered optimal for adults; a reading equal to or greater than 140/90 is considered high.

What do the two blood pressure numbers mean?

The top number represents systolic blood pressure; it measures the heart at work, or the maximum pressure in the arteries when the ventricles contract during a heart beat. The bottom number represents diastolic blood pressure; it measures the heart at rest between beats, or the minimum pressure in the arteries when the ventricles relax. Both numbers are equally important. When systolic and diastolic fall into different categories, the higher category should be used to classify blood pressure level.¹

Classification of Blood Pressure Levels in Adults ²	Blood Pressure Level (mmHg)		
CATEGORY	SYSTOLIC		DIASTOLIC
Normal	< 120	and	< 80
Prehypertension	120-139	or	80-89
High Blood Pressure	Blood Pressure Level (mmHg)		
CATEGORY	SYSTOLIC		DIASTOLIC
Hypertension, Stage 1	140-159	or	90-99
Hypertension, Stage 2	≥160	or	100

How often should I check my blood pressure?

Experts say you should begin to track your blood pressure at age 18, then at least every two years after that. Your physician may recommend more frequent readings depending on your blood pressure, personal disease history, and risk factors. Blood pressure can fluctuate greatly during the course of a day or even several days. You will need to measure and record your blood pressure over the course of several weeks to determine an average blood pressure reading.



What can high blood pressure do to the body?

Healthy arteries are flexible, strong, and elastic. Their inner lining is smooth so that blood can flow freely, supplying vital organs and tissues with nutrients and oxygen.

Over time, many things can damage arteries. Persistent elevated blood pressure is one, as the increased pressure against artery walls damages the once-smooth inner lining. High blood pressure turns them thick and stiff, which decreases blood flow to the heart, kidneys, brain and extremities. High blood pressure also places an increased workload on the heart, making it pump much harder than it should for a long period of time to supply nutrients and oxygen to all parts of the body.

Uncontrolled high blood pressure is dangerous! Chronic, uncontrolled high blood pressure can seriously damage your eyes, your brain, your kidneys, your arteries, and your heart!³

The National Heart, Lung, and Blood Institute (NHLBI) estimates one in three adults - about 65 million people - in the United States have hypertension. The evidence is clear and consistent: The higher the blood pressure, the greater the chance of heart attack, heart failure, stroke, and kidney disease.

Recent research indicates high blood pressure could increase the risk for memory-related diseases such as dementia or Alzheimer's disease.⁴ In addition, Mayo Clinic points to evidence linking high blood pressure to problems such as sexual dysfunction and bone loss.

High blood pressure is often referred to as "the silent killer" because it usually presents no symptoms.

Are you at risk?

According to the NHLBI, you are more likely to develop high blood pressure if you:

- Are African American
- Are overweight (BMI > 25) or obese (BMI > 30), and especially if excess weight is concentrated in the abdominal area
- Are a man older than 45 or a woman older than 55
- Have a family history of high blood pressure
- Have prehypertension (systolic blood pressure of 120-139 or diastolic blood pressure of 80-89)



Other factors that can raise blood pressure include:

- Eating too much sodium
- Drinking too much alcohol
- Not eating enough potassium-rich foods
- A sedentary lifestyle/inactivity
- Taking certain medicines
- Chronic stress

If you have prehypertension, you are at twice the risk for progression to hypertension as those with lower values. Prehypertension signals the need for you to take action and make lifestyle changes that will result in a lowering of your blood pressure to the normal range. Keeping your blood pressure in check

- Exercise: Moderate-intensity physical activity at least 30 minutes daily has been shown to lower blood pressure in those who have high blood pressure and help keep it at bay for those who don't. Walking is among the most beneficial exercises. Other moderate-level physical activities include: bicycling, raking leaves, gardening, and hand-washing the car. It's also worth noting that for most people, greater health benefits can be obtained by engaging in physical activity of more vigorous intensity or longer duration. For more information about diet and exercise, refer to the U.S. Department of Agriculture's (USDA) "Dietary Guidelines for Americans 2005."
- Lose excess weight: Blood pressure tends to increase when body weight increases and decrease when body weight goes down. Reaching and maintaining your ideal weight can cut your risk of heart disease and numerous other diseases that can seriously impair your quality of life.
 - Aim to lose half a pound to two pounds a week by creating a 500 calorie deficit below your maintenance calorie level smarter eating/fewer calories and exercising regularly. (Refer to your Health Risk Analysis Report for your personal calorie maintenance level).
- Reduce sodium: Years of research have proven high sodium intake directly contributes to high blood pressure. Seventy-seven percent of the sodium you eat comes from foods to which salt has been added during processing.
 - To cut your sodium intake, choose fresh, plain frozen, or canned vegetables with no salt added. Learn to use spices and herbs rather than salt to enhance flavor, and limit your use of condiments such as ketchup, soy sauce, and mustard. Read and compare food labels. Choose products with the lowest %DV (percent daily value) for sodium.
- The USDA recommends consuming less than 2,300 mg (approximately 1 tsp of salt) of sodium per day from all sources salt that is already in food, added during cooking, and/or at the table. Choose and prepare foods with little salt. At the same time, consume potassium rich foods, such as fruits and vegetables.



- Follow the DASH (Dietary Approaches to Stop Hypertension) eating plan: This plan emphasizes four to five servings of fruits, four to five servings of vegetables, and two to three servings of low-fat dairy products daily. It is also low in saturated and trans fats, total fat, and cholesterol, and includes whole grains (at least three servings), poultry, fish and nuts. Choose a variety of fruits and vegetables each day. This eating plan is designed to highlight foods that are higher in calcium, magnesium, and potassium. Diets rich in calcium, magnesium, and potassium help lower blood pressure. For greater blood pressure benefits, consume these minerals from whole foods and not from pills or supplements. 6
- Stop smoking. Smoking has a direct impact on blood pressure: When you smoke, your blood pressure rises. Smoking injures blood vessel walls and speeds the process of hardening of the arteries.
- Drink alcohol in moderation. Women should consume no more than one drink a day, and men should consume no more than two drinks a day. (If you do not currently drink alcohol, this is not a recommendation to begin drinking.)
- Drink at least 64 ounces of water daily (unless your doctor says otherwise).
- Reduce stress. Find ways to relax that work for you, such as deep breathing or yoga, to lower the tension in your life.
- If all else fails, try medication. If the adoption of healthy lifestyle habits does not bring your blood pressure down to normal levels, consult with your physician about high blood pressure medicine. If you begin taking medication or have taken it for a long time, it is extremely important to apply all of the above healthy lifestyle changes in addition to taking your medication. Medication is not a ticket to indulge in unhealthy habits.

You can help prevent high blood pressure by choosing a healthy way of life.

- 1. "What is High Blood Pressure?" National Heart, Lung, and Blood Institute (NHLBI). National Institutes of Health. Updated August 2004.
- "Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure." National Heart, Lung, and Blood Institute (NHLBI). National Institutes of Health. NIH publication No. 03-5233. May 2003.
- 3. <u>"The Dangers of High Blood Pressure: What Hypertension Can Do to You."</u> Mayo Foundation for Medical Education and Research. MayoClinic.com. January 2005.
- 4. "Uncontrolled High Blood Pressure Means More Cognitive Problems in Old Age" American Psychological Association. December 4, 2005.
- 5. "<u>Dietary Guidelines for Americans 2005."</u> U.S. Department of Agriculture and U.S. Department of Health and Human Services. January 12, 2005.
- 6. <u>"Your Guide to Lowering Blood Pressure with DASH."</u> National Heart, Lung, and Blood Institute (NHLBI). National Institutes of Health. Revised April 2006. NIH Publication No. 06-4082