



High blood pressure

When blood pressure rises and stays high for a long time, a person has a condition called high blood pressure (HBP). The medical name for high blood pressure is hypertension.



Blood pressure is measured with 2 numbers. The first (top) number measures systolic pressure. This is the maximum pressure against the artery walls while the heart is pumping blood. The second (bottom) number measures diastolic pressure. This is the pressure between heartbeats when the heart refills. The results are given as systolic over diastolic pressure, such as 120/80 millimeters of mercury (mm Hg).

Blood Pressure Levels for Adults

Normal blood pressure:
Less than 120 systolic AND
Less than 80 diastolic

Elevated blood pressure:
120-129 systolic AND
Less than 80 diastolic

High blood pressure:
130 or higher systolic OR
80 or higher diastolic

These are general guidelines. Your doctor may recommend lower blood pressure targets if you have additional risk factors. Discuss your personal blood pressure goals with your doctor.



BLOOD PRESSURE MEASURING TIPS

- Don't drink coffee or caffeinated drinks, exercise, eat a meal, or smoke 30 minutes before having your BP read.
- Go to the bathroom before you get it checked.
- Before the test, sit for 5 minutes.
- Wear short sleeves so your arm is exposed.
- When you get tested: Sit; keep your back and arm supported; keep your arm at heart level; and keep your feet uncrossed and flat on the floor.
- An average of 2 readings from BP tests taken at least 5 minutes apart should be done.

Blood Pressure Record	
Date	Blood Pressure
	/
	/
	/
	/
	/
	/
	/
	/
	/



SIGNS & SYMPTOMS

High blood pressure (HBP) is a “silent disease.” Often there are no signs or symptoms. Adults over 40 or those with increased risk should get their blood pressure checked every year or as often as your doctor advises. When the top number is 180 or higher or the bottom number is 120 or higher, signs of a **hypertensive crisis** may occur:

- Severe pain in chest, back, or abdomen
- Severe headache with confusion and blurred vision
- Severe anxiety
- Shortness of breath

HEALTH PROBLEMS

High blood pressure plays a major role in these health problems:

- Stroke. Dementia.
- Brain damage
- Heart disease. A person with HBP is at a higher risk to have a heart attack. It can also cause the heart to enlarge. This could cause heart failure.
- Aneurysm (bulges in artery walls)
- Chronic kidney disease
- Vision loss or blindness

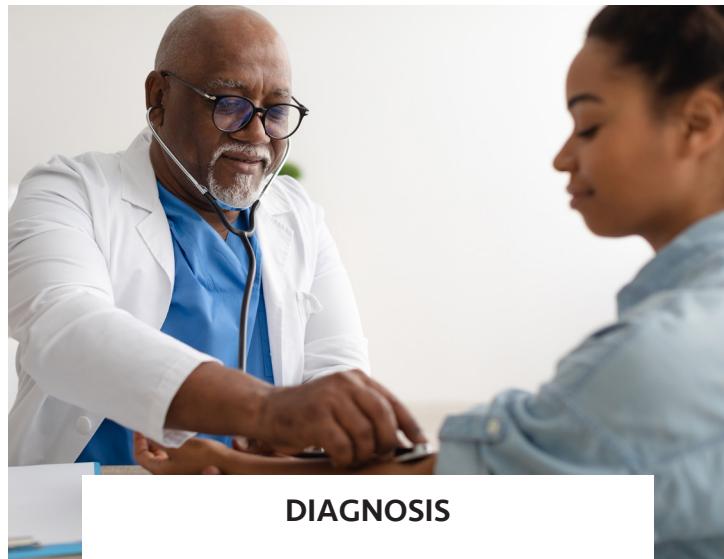
CAUSES & RISK FACTORS

The exact cause is not known.

Risk factors include:

- Family history of HBP
- Aging. Also increasing in children and teens.
- Smoking cigarettes and using tobacco
- Race. African American and Hispanic adults are at greater risk.
- Gender. Men are more likely to have HBP than women (until women reach menopause).
- Being inactive
- Obesity
- Lack of quality sleep
- Drinking too much alcohol or caffeine. Unhealthy diet and too much sodium intake.
- Too much stress

High blood pressure could be caused by another health problem or be a side effect of some medicines. This is called **secondary hypertension**, and can usually be reversed when the problem is treated.



DIAGNOSIS

A health care professional measures blood pressure during an office visit with a manual or automated device called a sphygmomanometer. The numbers on the gauge measure blood pressure in millimeters of mercury (mm Hg).

- You should get 2 or more readings and at different times.
- To confirm a diagnosis, your doctor may have you wear a device that records your blood pressure every 20-30 minutes over a period of 24 to 48 hours. This is called ambulatory blood pressure monitoring (ABPM).

During an office visit, a short-term rise in blood pressure can occur. Getting blood pressure readings over 1-2 days during normal activity and sleep may give a more accurate measurement of your blood pressure.



Stethoscope: Is used to hear the sound of blood rushing back through the artery. The first thumping sound is the systolic blood pressure. When the thumping sound is no longer heard, that's the diastolic pressure.

Cuff: This wraps around your upper arm.

Dial: A numbered dial or column of mercury can be used to record the blood pressure reading.



Valve: Lets air out of the cuff, which allows the blood flow to start again.

Pump: Inflates the cuff to stop the blood flow in your artery for a few seconds.

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SELF-CARE & PREVENTION

- Get your blood pressure checked as often as your doctor advises, based on your age and other risk factors.
- Aim for a healthy weight. Even losing 5-10% of weight if you are overweight or obese can improve blood pressure.
- Don't use tobacco products.
- Limit alcohol to 2 drinks or less a day if you are male and 1 drink or less a day if you are female or age 65 or older.
- Limit caffeine to 400 mg/day.
- Exercise. Try to do at least 150 minutes a week.
- Limit sodium to 2,300 milligrams (mg) per day; 1,500 mg if you have HBP, or are African American.
- Manage stress. Learn relaxation techniques. Talk to a counselor or find a support group, if needed.
- Get enough quality sleep.
- Take medicine as prescribed. Tell your doctor if you have any side effects, such as dizziness, faintness, or a dry cough without having a cold. Don't stop taking your prescribed medicine or change the dose(s) unless your doctor tells you.
- Before taking antihistamines and decongestants, discuss all prescribed and over-the-counter medicines with your doctor and pharmacist to avoid harmful drug interactions.
- If advised by your doctor, keep track of your blood pressure using a home testing device.



The DASH Eating Plan for 2,000 and 1,600 Calories/Day

Follow the "DASH" (Dietary Approaches to Stop Hypertension) Eating Plan. Doing this and lowering the amount of salt you eat have been shown to lower blood pressure and may help prevent high blood pressure.

Food Group	Daily Servings 2,000 1,600	Serving Sizes	Examples & Notes	Benefits	
Grains and grain products	7-8	6	1 slice bread 1 ounce dry cereal 1/2 cup cooked rice or pasta	Whole-grain breads and cereals. English muffins. Pita breads. Bagels. Grits. Crackers. Unsalted pretzels and popcorn.	Major source of energy and fiber
Vegetables	4-5	3-4	1 cup raw leafy vegetable 1/2 cup cooked vegetable 6 ounces vegetable juice	Tomatoes. Potatoes. Carrots. Green peas. Squash. Broccoli. Turnip greens. Collards. Kale. Spinach. Green beans. Lima beans.	Rich in fiber, potassium & magnesium
Fruits	4-5	4	1 medium fruit 1/4 cup dried fruit 1/2 cup fresh or frozen fruit 6 ounces fruit juice	Apricots. Bananas. Dates. Oranges & grapefruits (and their juices). Mangoes. Melons. Peaches. Pineapples. Prunes. Raisins. Strawberries. Tangerines.	Rich in fiber, potassium & magnesium
Low-fat or fat-free dairy foods	2-3	2-3	8 ounces milk 1 cup yogurt 1-1/2 oz. cheese	Fat-free (skim) and low-fat (1%) milks. Low-fat buttermilk. Fat-free or low-fat regular or frozen yogurt. Low-fat and fat-free cheeses.	Major sources of calcium and protein
Meats, poultry, and fish	2 or less	1-2	3 ounces cooked meat, poultry, or fish	Choose lean meats. Trim visible fats. Broil, roast, or boil, instead of frying. Remove skin from poultry.	Rich sources of protein & magnesium
Nuts, seeds, and dry beans	4-5 per week	3 per week	1/3 cup or 1-1/2 ounces nuts 2 Tbsp. or 1/2 ounce seeds 1/2 cup cooked dry beans	Almonds. Filberts. Mixed nuts. Peanuts. Walnuts. Sunflower seeds. Kidney beans. Lentils.	Rich in fiber, magnesium, potassium & protein
Fats and oils	2-3	2	1 tsp. vegetable oil 1 tsp. soft margarine 1 Tbsp. low-fat mayonnaise 2 Tbsp. light salad dressing	Soft margarine. Low-fat mayonnaise. Light salad dressing. Vegetable oil (e.g., olive, corn, canola, and safflower).	DASH has 27% of calories as fat.
Sweets and added sugars	5 per week	3	1 Tbsp. sugar 1 Tbsp. jelly or jam 1/2 ounce jelly beans 8 ounces lemonade	Maple syrup. Sugar. Jelly. Jam. Fruit-flavored gelatin. Jelly beans. Hard candy. Fruit punch. Sorbet. Ices.	Sweets should be low in fat.



MEDICAL TREATMENT

High blood pressure usually lasts a lifetime, but can be treated and controlled. If you are diagnosed with high blood pressure, follow your doctor's advice.

Medical treatment includes:

- A physical exam and lab tests. These check for damage to your heart, kidneys, and other organs. They also identify risk factors you have for heart, kidney, and other diseases. Your treatment plan is based on your needs.
- Follow-up blood pressure checks and other tests as needed.
- When healthy lifestyle changes alone do not control or lower high blood pressure, your doctor may prescribe blood pressure medicine.
- Medications. When prescribed, most persons need more than 1 medicine to treat high blood pressure.

Your doctor will base your medications on your blood pressure level, age, race, other conditions you have, heart disease risk factors, etc. Common medicines used to treat HBP are:

- Diuretics (water pills)
- Calcium channel blockers
- ACE inhibitors
- Angiotensin II receptor blockers
- Alpha and beta blockers
- Nervous system inhibitors
- Vasodilators

REASONS TO GET MEDICAL CARE

- You have signs or symptoms of a hypertensive crisis. Get emergency care right away.
- You have adverse side effects from taking medicine(s) to lower blood pressure. Examples are:
 - You feel lightheaded or dizzy.
 - You feel weak, sleepy, and/or drowsy.
 - Your heart races.
 - You get a skin rash.
- You need to schedule office visit appointments to get your blood pressure checked. Do this as often as your doctor advises.

