



What is High Blood Pressure?

Blood pressure is the force of blood pushing against blood vessel walls. It is measured in millimeters of mercury (mm Hg).

High blood pressure (HBP) means the pressure in your arteries is higher than it should be. Another name for high blood pressure is hypertension.

Blood pressure is written as two numbers, such as 112/78 mm Hg. The top (systolic) number is the pressure when the heart beats. The bottom (diastolic) number is the pressure when the heart rests between beats.

Normal blood pressure is below 120/80 mm Hg. If you're an adult and your systolic pressure is 120 to 129, and your diastolic pressure is less than 80, you have **elevated blood pressure**.

High blood pressure is a systolic pressure of 130 or higher, or a diastolic pressure of 80 or higher, that stays high over time.

High blood pressure usually has no signs or symptoms. That's why it is so dangerous. But it can be managed.

Nearly half of the American population over age 20, has HBP, and many don't even know it. Not treating high blood pressure is dangerous. High blood pressure increases the risk of heart attack and stroke.

Make sure you get your blood pressure checked regularly and treat it the way your health care provider advises.

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120-129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130-139	or	80-89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Am I at higher risk of developing HBP?

There are risk factors that increase your chances of developing HBP. Some you can control, and some you can't.

Those that can be controlled are:

- Cigarette smoking and exposure to secondhand smoke
- Diabetes
- Being obese or overweight
- High cholesterol
- Unhealthy diet (high in sodium, low in potassium, and drinking too much alcohol)
- Physical inactivity

Factors that can't be modified or are difficult to control are:

- Family history of high blood pressure
- Race/ethnicity
- Increasing age
- Gender (males)
- Chronic kidney disease
- Obstructive sleep apnea

Socioeconomic status and psychosocial stress are also risk factors for HBP. These can affect access to basic living needs, medication, health care providers, and the ability to adopt lifestyle changes.

(continued)



What is High Blood Pressure?

How can I tell I have it?

The only way to know if you have high blood pressure is to get it checked regularly by your health care provider.

For proper diagnosis of HBP, your health care provider will use an average based on two or more readings obtained on two or more visits.



What can I do about HBP?

- Don't smoke and avoid secondhand smoke.
- Reach and maintain a healthy weight.
- Eat a healthy diet that is low in saturated and trans fats and rich in fruits, vegetables, whole grains and low-fat dairy products. Aim to consume less than 1,500 mg/day of sodium (salt). Even reducing your daily intake by 1,000 mg can help.
- Eat foods rich in potassium. Aim for 3,500 – 5,000 mg of dietary potassium per day.
- Limit alcohol to no more than one drink per day if you're a woman or two drinks a day if you're a man.
- Be more physically active. Aim for 150 minutes of moderate-intensity physical activity or at least 75 minutes of vigorous physical activity per week, or a combination of both, spread throughout the week. Add muscle-strengthening activity at least two days per week for more health benefits.
- Take medicine the way your health care provider tells you.
- Know what your blood pressure should be and work to keep it at that level.

HOW CAN I LEARN MORE?

- 1 Call 1-800-AHA-USA1 (1-800-242-8721), or visit heart.org to learn more about heart disease and stroke.
- 2 Sign up to get *Heart Insight*, a free e-newsletter for heart patients and their families, at HeartInsight.org.
- 3 Connect with others sharing similar journeys with heart disease and stroke by joining our Support Network at heart.org/SupportNetwork.

Do you have questions for your doctor or nurse?

Take a few minutes to write down your questions for the next time you see your health care provider.

For example:

Will I always have to take medicine?

What should my blood pressure be?

MY QUESTIONS:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit heart.org/AnswersByHeart to learn more.



American Heart Association.

Check. Change. Control.®

Consequences of High Blood Pressure

High blood pressure is often the first domino in a chain or “domino effect” leading to devastating consequences, like:



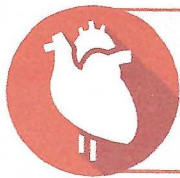
STROKE

HBP can cause blood vessels in the brain to burst or clog more easily.



VISION LOSS

HBP can strain the vessels in the eyes.



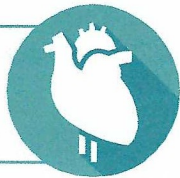
HEART FAILURE

HBP can cause the heart to enlarge and fail to supply blood to the body.



HEART ATTACK

HBP damages arteries that can become blocked.



SEXUAL DYSFUNCTION

This can be erectile dysfunction in men or lower libido in women.



KIDNEY DISEASE/ FAILURE

HBP can damage the arteries around the kidneys and interfere with their ability to effectively filter blood.

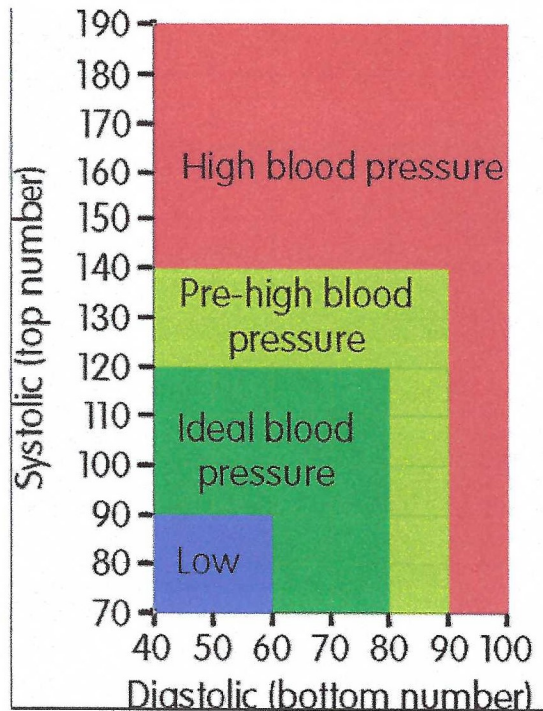


A simple **blood pressure check** is the first step to preventing the “domino effect.”

Learn more at heart.org/hbp.

Know your BP

When BP is too low or high, it is generally an indication something else is going on in the body.



SOME Signs of LOW BP: Confusion, especially in older people, Cold, clammy, pale skin, Rapid, shallow breathing. Weak and rapid pulse, dizziness, feeling they are going to pass out, fatigue, nausea.

What could happen if BP gets too LOW:

If your blood pressure gets too low, your **body may not get enough oxygen to carry out normal functions**. Low oxygen can make it hard for your heart and brain to work. You might have trouble breathing. You could lose consciousness or go into shock if your organs (brain, kidney, and liver) shut down and possibly causing: Heart attack/ Heart failure/Stroke/Kidney Failure/Bowel Ischemia(decreased blood supply to small and large intestine).

SOME Signs of HIGH BP: Severe Headache, Vision problems, pounding in chest, neck or ears, trouble breathing, chest pain, fatigue or confusion, face looking flush, nose bleeds and blood in urine.

What could happen if BP gets too HIGH: It can seriously hurt important organs like your heart, brain, kidneys, and eyes. It can cause the arteries that supply blood and oxygen to the brain to burst or be blocked, causing a stroke. Brain cells die during a stroke because they do not get enough oxygen. Cause heart attack or heart failure, or even kidney disease (over time).

TAKING YOUR BLOOD PRESSURE

To measure blood pressure correctly, there are things you should, and should not do. Follow these guidelines to help make sure that you measure your blood pressure accurately every time. If you are sharing your machine with another family member or friend, remember to follow the manufacturer's instructions for changing the user.

Before you take your blood pressure:

- Do not exercise, eat a large meal, use caffeine, drink alcohol or take decongestants for 30 minutes before you take your blood pressure.
- Use the bathroom if you need to before taking your blood pressure.
- Sit quietly in a comfortable position for five minutes without crossing your legs or your ankles.
- Sit with your back supported keeping your feet flat on the floor.

When you are ready to take your blood pressure:

- Continue to sit with your back supported, your legs uncrossed and your feet flat on the floor. Use a step stool if needed to make sure your feet are flat on a surface.
- Following the instructions for your device, put the cuff on by wrapping it around your bare arm above your elbow. Face the palm of your hand up to relax your arm muscles.
- Rest your arm on a table or another flat surface at the level of your heart. Keep it stretched out and relaxed and sit still.
- Do not talk, read, text or watch television while taking your blood pressure.
- Following the directions of the monitor you are using, press the button to start the machine. The cuff will inflate and slowly deflate by itself.

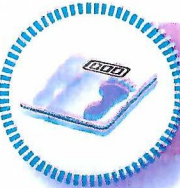
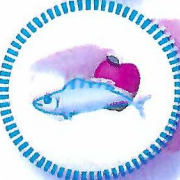
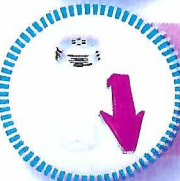


When the machine has stopped taking your blood pressure:

- The machine will display two numbers. The top number is the systolic blood pressure, and the bottom number is the diastolic blood pressure. Write down the date, time and result of your blood pressure if your machine does not store that information automatically. If there is a pulse recorded on the display, write that down as well.
- Remove the cuff from your arm and place the device in a safe and dry place.
- Remember to follow the instructions that your doctor or care team gave you for reporting your blood pressures. Take your written blood pressure log or the blood pressure machine with you to your next doctor's office visit or mail it into the office as instructed.

***** A READING OF 180/120 IS CONSIDERED A CRISIS. WAIT A FEW MINUTES AND RECHECK YOUR BLOOD PRESSURE. IF IT IS STILL HIGH REPORT TO ER IMMEDIATELY. *****



What Can I Do To Improve My Blood Pressure?

Modification	Recommendation	Approximate SBP Reduction Range
 Weight reduction	Maintain normal body weight (BMI=18.5-24.9 kg/m ²)	5 mm Hg
 DASH eating plan	Diet rich in fruits, vegetables, low fat dairy and reduced in fat	11 mm Hg
 Restrict sodium intake	<1500 mg of sodium per day	5-6 mm Hg
 Physical activity	Be more physically active. Aim for at least 90 to 150 minutes of aerobic exercise per week.	5-8 mm Hg
 Moderation of alcohol consumption	No more than 2 drinks/day for men and 1 drink/day for women	4 mm Hg

BP = Blood pressure, BMI = Body mass index, SBP = Systolic blood pressure, DASH = Dietary Approaches to Stop Hypertension

Ranges According to 2017 Hypertension Clinical Practice Guidelines
Recommendations for Treatment and Management of Hypertension



Following the DASH Eating Plan

Use this chart to help you plan your menus—or take it with you when you go to the store.

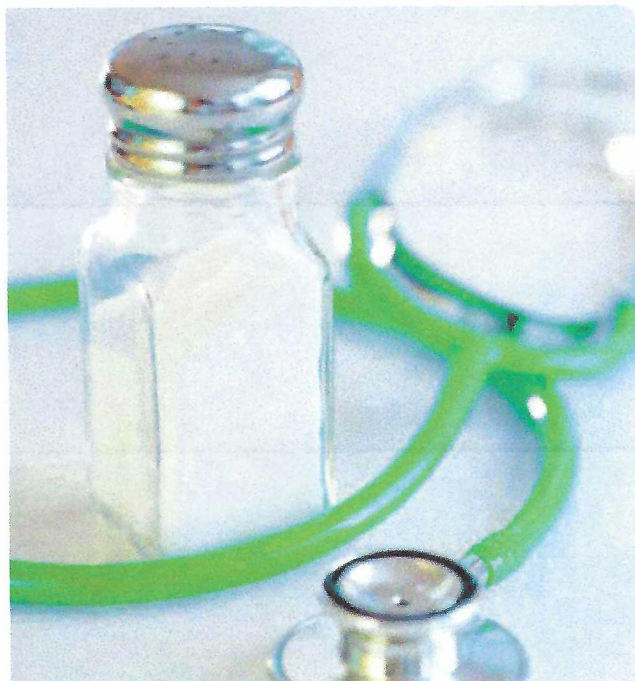
Food Group	Servings Per Day			Serving Sizes	Examples and Notes	Significance of Each Food Group to the DASH Eating Plan
	1,600 Calories	2,000 Calories	2,600 Calories			
Grains*	6	6–8	10–11	1 slice bread 1 oz dry cereal† 1/2 cup cooked rice, pasta, or cereal	Whole wheat bread and rolls, whole wheat pasta, English muffin, pita bread, bagel, cereals, grits, oatmeal, brown rice, unsalted pretzels and popcorn	Major sources of energy and fiber
Vegetables	3–4	4–5	5–6	1 cup raw leafy vegetable 1/2 cup cut-up raw or cooked vegetable 1/2 cup vegetable juice	Broccoli, carrots, collards, green beans, green peas, kale, lima beans, potatoes, spinach, squash, sweet potatoes, tomatoes	Rich sources of potassium, magnesium, and fiber
Fruits	4	4–5	5–6	1 medium fruit 1/4 cup dried fruit 1/2 cup fresh, frozen, or canned fruit 1/2 cup fruit juice	Apples, apricots, bananas, dates, grapes, oranges, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, raisins, strawberries, tangerines	Important sources of potassium, magnesium, and fiber
Fat-free or low-fat milk and milk products	2–3	2–3	3	1 cup milk or yogurt 1 1/2 oz cheese	Fat-free (skim) or low-fat (1%) milk or buttermilk; fat-free, low-fat, or reduced-fat cheese; fat-free or low-fat regular or frozen yogurt	Major sources of calcium and protein
Lean meats, poultry, and fish	3–6	6 or less	6	1 oz cooked meats, poultry, or fish 1 egg‡	Select only lean; trim away visible fats; broil, roast, or poach; remove skin from poultry	Rich sources of protein and magnesium
Nuts, seeds, and legumes	3 per week	4–5 per week	1	1/3 cup or 1 1/2 oz nuts 2 Tbsp peanut butter 2 Tbsp or 1/2 oz seeds	Almonds, hazelnuts, mixed nuts, peanuts, walnuts, sunflower seeds, peanut butter, kidney beans, lentils, split peas	Rich sources of energy, magnesium, protein, and fiber



Why Should I Limit Sodium?

You may have been told by your healthcare provider to reduce the salt in your diet. Table salt is sodium chloride. One teaspoon of salt contains about 2,300 mg of sodium.

Sodium is a mineral that's essential for life. It's regulated in the body by your kidneys, and it helps control your body's fluid balance. It also helps send nerve impulses and affects muscle function.



How does sodium affect my heart health?

When there's extra sodium in your bloodstream, it pulls water into your blood vessels, increasing the total amount (volume) of blood inside your blood vessels. With more blood flowing through your blood vessels, blood pressure increases. This puts an extra burden on your heart and blood vessels. In some people, this may lead to or raise high blood pressure.

Having less sodium in your diet may help you lower or avoid high blood pressure. People with high blood pressure are more likely to develop heart disease or have a stroke.

How much sodium do I need?

Most people eat too much sodium, often without knowing it. The average American eats about 3,400 mg of sodium a day.

- The American Heart Association recommends no more than 2,300 milligrams (mgs) a day and an ideal limit of less than 1,500 mg per day for most adults, especially for those with high blood pressure.
- Even cutting back by 1,000 mg a day can improve blood pressure and heart health.

What are sources of sodium?

Most of the sodium in our diets comes from adding it when food is being prepared. Pay attention to food labels, because they tell how much sodium is in food products. For example: foods with 140 mg or less sodium per serving are considered low in sodium.

Here's a list of sodium-containing compounds to limit in your diet:

- Salt (sodium chloride or NaCl)
- Monosodium glutamate (MSG)
- Baking soda and baking powder
- Disodium phosphate
- Any compound that has "sodium" or "Na" in its name

Some over-the-counter and prescription medicines also contain lots of sodium. Talk to your health care provider and make it a habit of reading the labels of all over-the-counter drugs, too.

What foods should I limit?

The best way to reduce sodium is to avoid prepackaged, processed and prepared foods, which tend to be high

(continued)



in sodium. Watch out for the “Salty 6” — the top six common foods that add the most salt to your diet. Read food labels and chose the lowest level of sodium you can find for these items:

- Breads and rolls
- Pizza
- Soup
- Cold cuts and cured meats
- Poultry
- Sandwiches

These are some other foods can also be sources of “hidden” sodium:

- Cheeses and buttermilk
- Salted snacks, nuts and seeds
- Frozen dinners and snack foods
- Condiments (ketchup, mustard, mayonnaise)
- Pickles and olives
- Seasoned salts, such as onion, garlic and celery salts
- Sauces, such as barbeque, soy, steak, and Worcestershire

How can I cook with less salt and more flavor?

- Avoid adding table salt to foods.
- Flavor foods with herbs, spices, lemon, lime, vinegar, or salt-free seasoning blends.

- Use fresh poultry, fish, and lean meat, rather than canned, smoked, or processed types.
- Choose unsalted nuts and low-sodium canned foods. Cook dried peas and beans.
- Use products made without added salt. Try low-sodium bouillon and soups and unsalted broth.
- Rinse canned vegetables and beans to reduce sodium.

What about eating out?

Controlling your sodium intake doesn’t mean spoiling the pleasure of eating out. But order carefully. Consider these tips for meals away from home:

- Select fresh greens and fruits when available. Ask for oil and vinegar to top your salad or ask for the dressing on the side.
- Be specific about what you want and how you want your food prepared. Request that your dish be prepared without added salt.
- Remember portion control. You can always bring home a to-go box!

HOW CAN I LEARN MORE?

- 1 Call **1-800-AHA-USA1** (1-800-242-8721), or visit **heart.org** to learn more about heart disease and stroke.
- 2 Sign up to get *Heart Insight*, a free magazine for heart patients and their families, at **heartinsight.org**.
- 3 Connect with others sharing similar journeys with heart disease and stroke by joining our Support Network at **heart.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What’s my daily sodium limit?

Is there sodium in the medicine I take?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **heart.org/answersbyheart** to learn more.



American
Heart
Association®

life is why®