

## High blood pressure

### Definition

Blood pressure is a measurement of the force exerted against the walls of your arteries as your heart pumps blood to your body. Hypertension is the term used to describe high blood pressure.

Blood pressure readings are given as two numbers. The top number is called the systolic blood pressure. The bottom number is called the diastolic blood pressure. For example, 120 over 80 (written as 120/80 mm Hg).

One or both of these numbers can be too high. (Note: These numbers apply to people who are not taking medicines for blood pressure and are not ill.)

- Normal blood pressure is when your blood pressure is lower than 120/80 mm Hg most of the time.
- High blood pressure (hypertension) is when your blood pressure is 140/90 mm Hg or above most of the time.
- If your blood pressure numbers are 120/80 or higher, but below 140/90, it is called pre-hypertension.

If you have heart or kidney problems, or you had a stroke, your doctor may want your blood pressure to be even lower than that of people who do not have these conditions.

### Causes

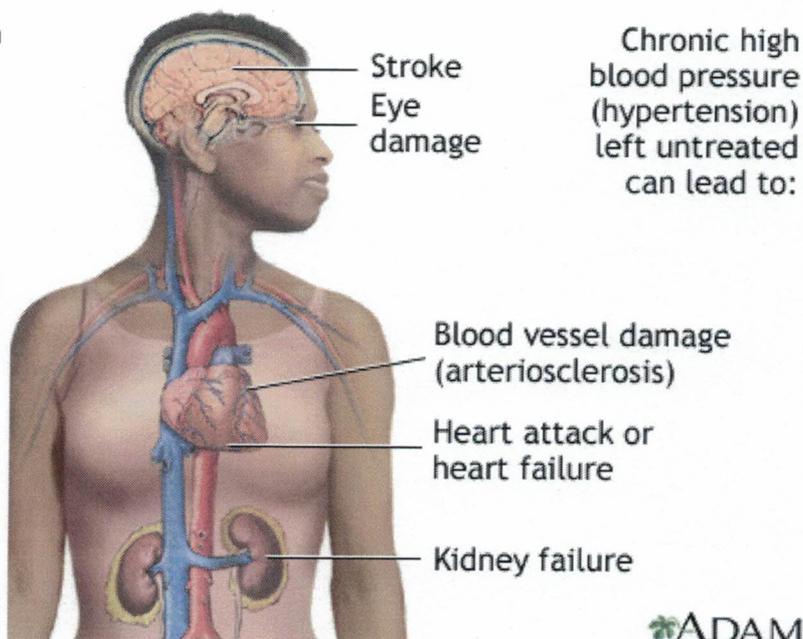
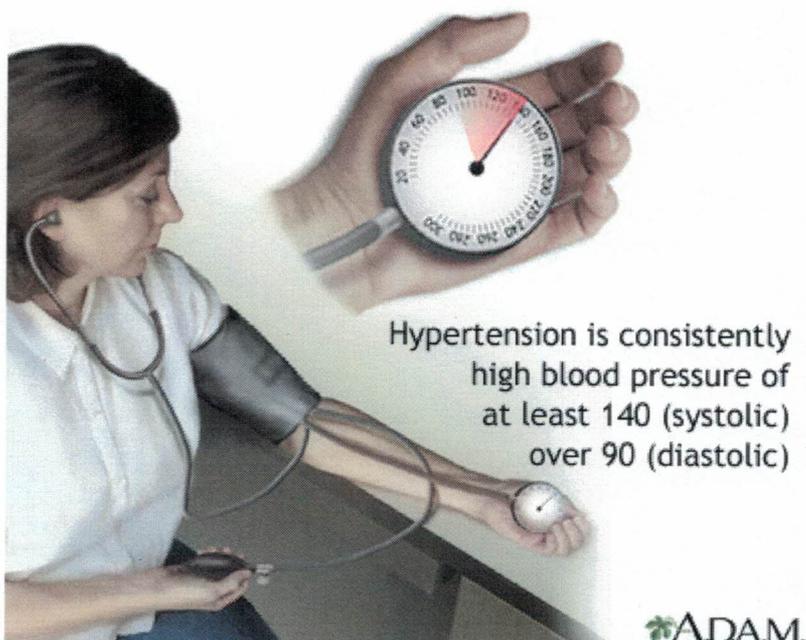
Many factors can affect blood pressure, including:

- The amount of water and salt you have in your body
- The condition of your kidneys, nervous system, or blood vessels
- Your hormone levels

You are more likely to be told your blood pressure is too high as you get older. This is because your blood vessels become stiffer as you age. When that happens, your blood pressure goes up. High blood pressure increases your chance of having a stroke, heart attack, heart failure, kidney disease, or early death.

You have a higher risk of high blood pressure if you:

- Are African American



- Are obese
- Are often stressed or anxious
- Drink too much alcohol (more than 1 drink per day for women and more than 2 drinks per day for men)
- Eat too much salt
- Have a family history of high blood pressure
- Have diabetes
- Smoke



Exercise and maintenance of a healthy weight

Lifestyle changes and/or medication may reduce high blood pressure to healthy levels:

Medications such as diuretics, beta-blockers, potassium replacements, calcium channel blockers and ACE inhibitors

A healthy, low sodium (salt) diet rich in natural sources of potassium, calcium, and fiber



ADAM.

Most of the time, no cause of high blood pressure is found. This is called essential hypertension.

High blood pressure that is caused by another medical condition or medicine you are taking is called secondary hypertension. Secondary hypertension may be due to:

- Chronic kidney disease
- Disorders of the adrenal gland (such as pheochromocytoma or Cushing syndrome)
- Hyperparathyroidism
- Pregnancy or preeclampsia
- Medicines such as birth control pills, diet pills, some cold medicines, and migraine medicines
- Narrowed artery that supplies blood to the kidney (renal artery stenosis)

Follow the DASH diet to potentially lower your blood pressure



ADAM.

## Symptoms

Most of the time, there are no symptoms. For most people, high blood pressure is found when they visit their health care provider or have it checked elsewhere.

Because there are no symptoms, people can develop heart disease and kidney problems without knowing they have high blood pressure.

Malignant hypertension is a dangerous form of very high blood pressure. Symptoms may include:

- Severe headache
- Nausea and vomiting
- Confusion
- Vision changes
- Nosebleeds

## Exams and Tests

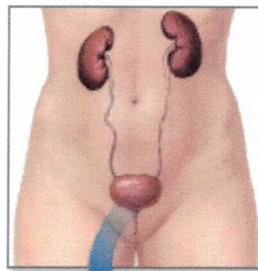
Diagnosing high blood pressure early can help prevent heart disease, stroke, eye problems, and chronic kidney

disease.

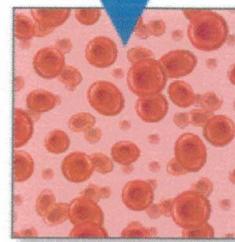
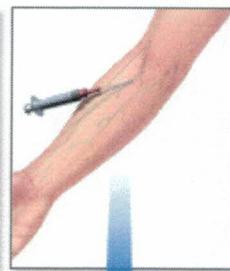
Your provider will measure your blood pressure many times before diagnosing you with high blood pressure. It is normal for your blood pressure to be different based on the time of day.

Adults aged 18 to 39 years should have their blood pressure checked:

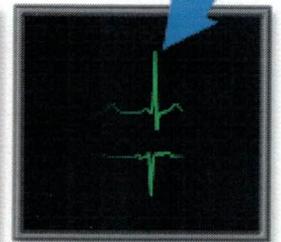
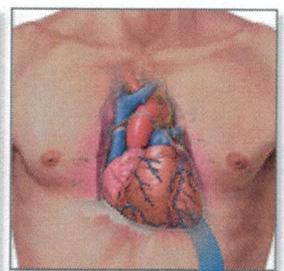
- Every 3 to 5 years, if their blood pressure was less than 120/80 mm Hg at their most recent reading.
- Every year if you have high blood pressure, diabetes, heart disease, kidney problems, or certain other conditions, have your blood pressure checked more often.



Urine test



Blood test



ECG reading

ADAM.

Adults aged 40 and over should have their blood pressure checked at least once every year.

Blood pressure readings taken at home may be a better measure of your current blood pressure than those taken at your provider's office.

Every health care visit should include a blood pressure reading

- Make sure you get a good quality, well-fitting home blood pressure monitor. It should have the proper sized cuff and a digital readout.
- Practice with your provider to make sure you are taking your blood pressure correctly.
- You should be relaxed and seated for several minutes prior to taking a reading.
- Bring your home monitor to your appointments so your provider can make sure it is working correctly.



ADAM.

Your provider will do a physical exam to look for signs of heart disease, damage to the eyes, and other changes in your body.

Tests may also be done to look for:

- High cholesterol level
- Heart disease, using tests such as an echocardiogram or electrocardiogram
- Kidney disease, using tests such as a basic metabolic panel and urinalysis or ultrasound of the kidneys

## Treatment

The goal of treatment is to reduce your blood pressure so that you have a lower risk of complications. You and your provider should set a blood pressure goal for you.

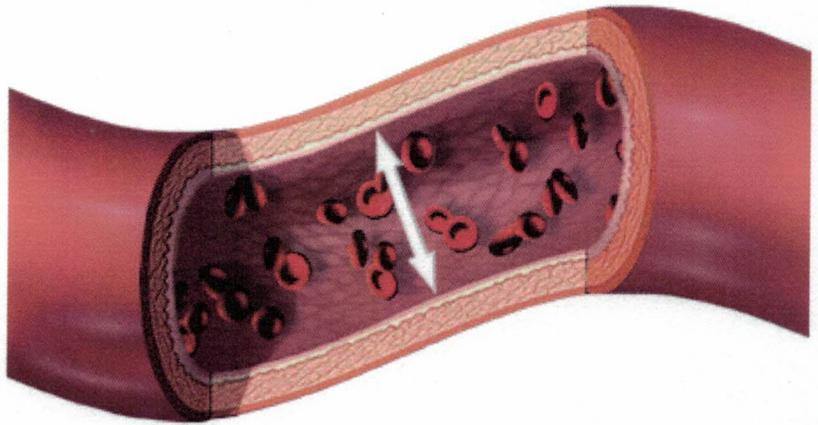
If you have pre-hypertension, your provider will recommend lifestyle changes to bring your blood pressure down to a normal range. Medicines are rarely used for pre-hypertension.

## LIFESTYLE CHANGES

You can do many things to help control your blood pressure at home, including:

- Eat a heart-healthy diet, including potassium and fiber.
- Drink plenty of water.
- Exercise regularly for at least 30 minutes of aerobic exercise a day.
- If you smoke, quit.
- Limit how much alcohol you drink to 1 drink a day for women, and 2 a day for men.
- Limit the amount of sodium (salt) you eat. Aim for less than 1,500 mg per day.
- Reduce stress. Try to avoid things that cause you stress, and try meditation or yoga to de-stress.
- Stay at a healthy body weight.

Blood pressure is the measurement of force applied to artery walls



ADAM.

Your provider can help you find programs for losing weight, stopping smoking, and exercising.

You can also get a referral to a dietitian, who can help you plan a diet that is healthy for you.

How low your blood pressure should be and at what level you need to start treatment is individualized, based on your age and any medical problems you have.

#### MEDICINES FOR HYPERTENSION

Most of the time, your provider will try lifestyle changes first and check your BP 2 or more times. Medicines will likely be started if your BP readings remain at or above these levels:

- Top number (systolic pressure) of 140 or more in people younger than 60 years
- Top number of 150 or more in people 60 years and older
- Bottom number (diastolic pressure) of 90 or more

If you have diabetes, heart problems, or a history of a stroke, medicines may be started at lower blood pressure reading. The most commonly used blood pressure targets for people with these medical problems are below 130 to 140/80 mm Hg.

There are many different medicines to treat high blood pressure.

- Often, a single blood pressure drug may not be enough to control your blood pressure, and you may need to take 2 or more drugs.
- It is very important that you take the medicines prescribed to you.
- If you have side effects, your doctor can substitute a different medicine.

#### Outlook (Prognosis)

Most of the time, high blood pressure can be controlled with medicine and lifestyle changes.

When blood pressure is not well-controlled, you are at risk for:

- Bleeding from the aorta, the large blood vessel that supplies blood to the abdomen, pelvis, and legs
- Chronic kidney disease

- Heart attack and heart failure
- Poor blood supply to the legs
- Problems with your vision
- Stroke

## When to Contact a Medical Professional

If you have high blood pressure, you will have regular checkups with your provider.

Even if you have not been diagnosed with high blood pressure, it is important to have your blood pressure checked during your regular check-up, especially if someone in your family has or had high blood pressure.

Call your provider right away if home monitoring shows that your blood pressure is still high.

## Prevention

Most people can prevent high blood pressure from occurring by following lifestyle changes designed to bring blood pressure down.

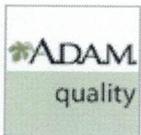
## Alternative Names

Hypertension; HBP

---

Review Date: April 20, 2015.

Reviewed By: Michael A. Chen, MD, PhD, Associate Professor of Medicine, Division of Cardiology, Harborview Medical Center, University of Washington Medical School, Seattle, WA. Internal review and update on 07/24/2016 by David Zieve, MD, MHA, Isla Ogilvie, PhD, and the A.D.A.M. Editorial team.



A.D.A.M., Inc. is accredited by URAC, also known as the American Accreditation HealthCare Commission ([www.uran.org](http://www.uran.org)). URAC's accreditation program is an independent audit to verify that A.D.A.M. follows rigorous standards of quality and accountability. A.D.A.M. is among the first to achieve this important distinction for online health information and services. Learn more about A.D.A.M.'s editorial policy, editorial process and privacy policy. A.D.A.M. is also a founding member of Hi-Ethics and subscribes to the principles of the Health on the Net Foundation ([www.hon.ch](http://www.hon.ch)).

The information provided herein should not be used during any medical emergency or for the diagnosis or treatment of any medical condition. A licensed medical professional should be consulted for diagnosis and treatment of any and all medical conditions. Call 911 for all medical emergencies. Links to other sites are provided for information only -- they do not constitute endorsements of those other sites. © 1997- 2017 A.D.A.M., Inc. Any duplication or distribution of the information contained herein is strictly prohibited.

