



Hypertension (High Blood Pressure)

What is hypertension (high blood pressure), aka “the silent killer”?

Hypertension is the tightening of arterioles (very small arteries) that regulate blood flow throughout your body. Once the arterioles tighten, your heart has to work on overdrive to pump blood through a tiny space, which, in turn, increases the pressure inside the vessels. Unfortunately, over 80 million Americans have high blood pressure, and 16 million of them don't even know they have it. Untreated, hypertension can lead to a heart attack or stroke.

Causes of high blood pressure

Most people with high blood pressure (90-95%) have primary or essential hypertension. The root cause of the problem is unknown, but the following are contributing factors.

- Family members with high blood pressure
- African American (hypertension is usually more severe and frequently occurs at a younger age)
- Male (women become more susceptible after 55)
- Over 60 years old (blood vessels are less fluid and more brittle)
- High-stress levels (anger, hostility, and other aggressive traits may contribute to high blood pressure)
- Obesity
- Smoking (tobacco use damages blood vessels)
- Oral contraceptive use (especially when paired with smoking)
- High saturated fat diet
- High sodium (salt) intake
- Excessive alcohol intake (More than 1-2 drinks/day for men and 1 drink/ day for women. One drink is defined as 1½ fluid ounces of 80-proof spirits, 1 fluid ounce of 100-proof spirits, 4 fluid ounces of wine, or 12 fluid ounces of beer).
- Sedentary lifestyle (little physical activity)
- Diabetes
- Possible link to a gene that may result in higher blood pressure



A few patients will present with secondary hypertension which is caused by other conditions or illnesses. Conditions that can lead to secondary hypertension are

- Kidney disorders—the most common cause.
- Parathyroid gland issues.
- Acromegaly (the pituitary gland produces excess growth hormone).
- Adrenal or pituitary gland tumors.
- Adverse reactions to medicine.
- Pregnancy.

How does high blood pressure affect me?

Artery hardening – This higher level of pressure can lead to a thickening and narrowing of the arteries, which impedes blood flow and can ultimately cause a heart attack or stroke.

Enlarged heart – The harder your heart has to work, the more it expands to handle the load, which then increases the need for oxygen-rich blood. Consequently, you feel exhausted and become more sedentary.

Kidney damage – Sustained high blood pressure can harm the kidneys if blood flow to them is reduced.

Eye damage – Coupled with diabetes, high blood pressure can cause retinopathy (bleeding of the tiny capillaries in your retina, which can cause blindness.)

Symptoms of high blood pressure

The biggest issue in high blood pressure is the lack of symptoms, so many people live with this dangerous condition for years without knowing it. A few patients may have a pounding in their head or chest, lightheadedness or dizziness, or other signs.

Methods of blood pressure diagnosis

Your doctor will do a physical exam with a stethoscope to hear your heart and blood flow and will take your medical history. Your doctor may use a sphygmomanometer to take your blood pressure and use an ophthalmoscope to look at the blood vessels in your eyes. If these vessels have thickened, narrowed, or burst, it may be a good



indicator of high blood pressure. Depending on the results, a chest x-ray and electrocardiogram may be ordered for further diagnosis.

How do you read blood pressure and when is it high?

There are two numbers to consider when measuring blood pressure: systolic and diastolic pressures.

Systolic pressure – The force of blood flow through an artery when the heart beats (the top number).

Diastolic pressure – The force of blood flow within blood vessels when the heart rests between beats (the bottom number).

The systolic number is always reported first—it is a measure of the pressure in your arteries to move a column of mercury.

What constitutes high blood pressure?

The American Heart Association (AHA) and the American College of Cardiology (ACC) have recommended the following guidelines:

Below 120/80 mm Hg	Normal blood pressure
120/80 to 129/80	Elevated blood pressure
130/80 or higher	Hypertension or high blood pressure

(These numbers are for adults [18 years and older] who are not on high blood pressure medicines and not acutely ill.)

A determination of hypertension is made from several blood pressure readings (at least 2 readings on 3 different days). Some doctors will have patients wear a portable device to track their blood pressure over a few days to make sure they are not seeing “white-coat hypertension,” which occurs when a patient’s blood pressure spikes during a doctor visit due to stress and anxiety.



How many times do I need my blood pressure checked?

Adults should check their blood pressure once per year. If the readings are high, they should visit their doctor for evaluation.

How do you treat high blood pressure?

As always, the ideal course of action is lifestyle changes.

- Eat a low-fat, low-salt diet
- Lose weight, if needed
- Exercise regularly
- Reduce stress
- Quit smoking
- Limit alcohol consumption
- Control obstructive sleep apnea, if you have it. This may improve your heart health.

Depending on the physician's strategy to lower your blood pressure, you could receive lifestyle modifications alone or accompanied by medications. Many times lifestyle changes are suggested for few months if blood pressure doesn't improve, specific medications will be added to the treatment.