



High Blood Pressure



What Is It?

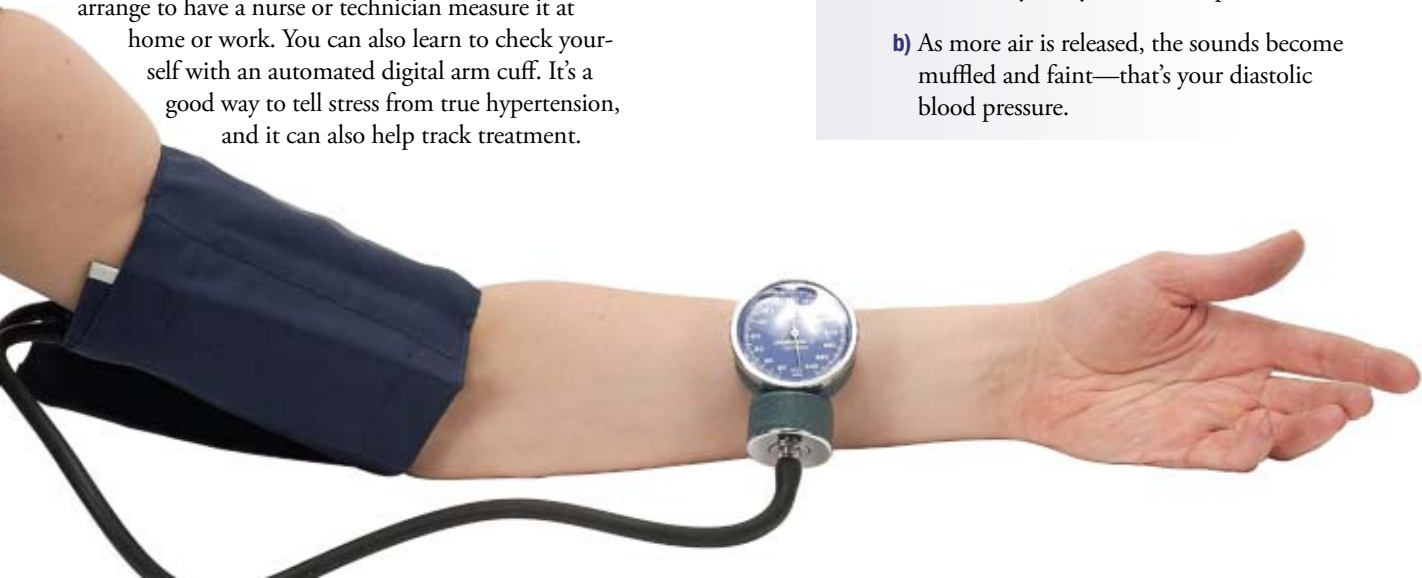
Blood pressure is the force that propels your blood through your arteries. Since blood pressure can swing up and down, any one reading is just a snapshot of your usual pressure. When it comes to predicting complications, your average pressure is more important than your peaks and valleys.

Measuring Blood Pressure

Your doctor will measure 2 pressures each time you're tested. The higher number is your **systolic blood pressure**, the pressure in your arteries while your heart is actually pumping blood. But after each beat, your heart relaxes and fills with blood to prime the pump for the next beat. Your **diastolic blood pressure** is the pressure in your arteries between heartbeats.

If your systolic blood pressure is 120 and your diastolic is 80, your doctor will tell you your reading is “120 over 80” and will write it as 120/80. To get an accurate reading, avoid caffeine, nicotine, and exercise before your pressure is checked. Stress can also boost blood pressure, so try and be relaxed.

Your doctor should always repeat your reading if it's high. If your pressure is still high, your doctor may arrange to have a nurse or technician measure it at home or work. You can also learn to check yourself with an automated digital arm cuff. It's a good way to tell stress from true hypertension, and it can also help track treatment.



What's Your Pressure?

You should have your blood pressure taken with every annual check-up. If it's borderline or high, you may need it checked more often. When you are taking medications to control your high blood pressure, you also should closely monitor your pressure. It's also good to ask for a blood pressure check whenever you go to a doctor, even if the problem is a sore throat or rash.



Measuring Blood Pressure

Step 1: A cuff is wrapped around your arm.

Step 2: The cuff is inflated, temporarily blocking blood flow in your artery.

Step 3: Air is released from the cuff, while a stethoscope is used to listen to your artery.

- a) When blood begins to flow again, your pulse becomes audible—the number on the dial is your systolic blood pressure.
- b) As more air is released, the sounds become muffled and faint—that's your diastolic blood pressure.

What's Normal?

Table 1 shows the standards for blood pressure. Having either prehypertension or either stage of hypertension increases your risk of heart attacks and strokes. The higher your pressure, the greater your risk goes up. If your systolic and diastolic pressures place you in different categories, use the number that puts you in the higher classification. For example, if your reading is 114/84, you have prehypertension. If your two arms give different readings, use the higher one.

Table 1 | Classification of blood pressure for people 18 years and older

Classification	Systolic BP		Diastolic BP
Normal	Below 120	and	Below 80
Prehypertension	120–139	or	80–89
Stage 1 hypertension	140–159	or	90–99
Stage 2 hypertension	160+	or	100+

The Burden of Hypertension

About 73 million Americans have hypertension. Another 69 million have prehypertension. That means that at least 2 of every 3 American adults have unhealthy blood pressures. High blood pressure shaves 5 years off an average person's life.

The American Heart Association calls hypertension “the silent killer” because it often doesn't cause any symptoms until it damages your circulation. But even though you may feel OK, high blood pressure silently makes your heart work too hard, and it harms your arteries and blood vessels, making them stiffer and narrower. It can also damage your brain, eyes, and kidneys.

Lowering Blood Pressure: Goals and Results

Lowering your blood pressure even a little protects you a lot. Lowering your systolic pressure by 10 points or your diastolic pressure by 5 points reduces your risk of stroke by 30% to 40% and your risk of heart attack by 15% to 25%. Other conditions add to the risks of high blood pressure and call for special treatment goals (Table 2).

Table 2 | Goals of Therapy

Patient	Goal
Average patient	140/90 or lower
Diabetes, chronic kidney disease, heart disease	130/80 or lower



Lifestyle Therapy

Diet. The DASH program is best. It cuts the amount of sodium in your diet to 2,300 mg a day or less. And new guidelines set a target of 1,500 mg a day or less for people with high blood pressure and for everyone who is middle-aged or older. DASH also calls for cutting down on animal fat and processed foods, and eating lots of fruits, vegetables, whole grains, and low- or nonfat dairy products.

Exercise. Regular exercise is important for your blood pressure and your overall health. You don't have to spend long hours in a gym. As little as 30 minutes



of moderate exercise, such as brisk walking, will help, as long as you do it nearly every day. Regular exercise greatly protects your health even if it doesn't cause you to lose weight.



Moderate Alcohol Use. Small amounts of alcohol won't raise your blood pressure. Heavier drinking will. If you choose to drink, limit yourself to 1 to 2 drinks per day.



Weight Control. It's one of the best ways to reduce blood pressure, but it's also one of the hardest. Stick to a low-calorie diet and regular exercise.



Stress Control. Mental tension and hypertension are not the same, and plenty of laid-back folks have high blood pressure. But if you're under stress, it could be raising your blood pressure.

Home Monitoring

It is often important to have your blood pressure checked regularly. It is inconvenient and unnecessary to go to the doctor frequently since today there are machines that can automatically take your blood pressure at home. The best machines put the blood pressure cuff on your upper arm, like the doctor does. The automatic machines are the easiest: you just slip the cuff on your arm, push a button, and the machine does the rest. If your doctor asks you to take your home blood pressures, please do it: it's important to your health.



Adopt the healthful lifestyle that will keep your blood pressure as low as possible.

Medication

Today's medicines really work. In each individual, some medicines work better than others, and doctors may have to try several types to find the one that works for you. If you have hypertension and other diseases, such as diabetes, heart disease, or kidney disease, the doctor may prefer one type of blood pressure medicine over another. Therapy must always fit the individual. The goal is to control blood pressure and protect the circulation with the fewest side effects.

There are several different classes of drugs for high blood pressure:

- Diuretics, particularly thiazide diuretics.
- Angiotensin-converting enzyme inhibitors (ACEIs).
- Angiotensin receptor blockers (ARBs).
- Calcium-channel blockers (CCBs).
- Beta-blockers
- Alpha-blockers.
- Vasodilators.
- Other adrenaline-fighting drugs.

Since most blood pressure medications take time to work, doctors will generally adjust therapy about once a month, then spread out your visits when you've reached your goal.

Ask your doctor about the side effects to look for, and remember to tell the doctor if you think you may be having them. Other blood pressure drugs may work just as well, but not cause the side effects.



To learn more about high blood pressure, visit the Pri-Med Patient Education Center at www.patientedu.org/hypertension.

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