

Lower your blood pressure

High blood pressure is the single most important cause of heart attacks, but many people don't take the steps proven to help

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High blood pressure triggers more heart attacks and strokes in the U.S. than any other cause, and kills more people worldwide than smoking, diabetes, obesity, excessive drinking, or unsafe sex.

Yet one in five Americans with the problem don't know they have it. That's partly because high blood pressure typically causes no obvious symptoms, but also because doctors don't always test those they should. Even when they do, roughly half of the people with high blood pressure don't get it under control.

That's unfortunate—and unnecessary. Simple lifestyle changes often lower blood pressure significantly. When they don't, drugs usually can. But even in those instances, you should be vigilant because some doctors start with newer, heavily advertised drugs when a much less expensive class of medication—diuretics—are at least as safe and effective.

Get screened

Your heart is a powerful muscle that pumps blood through your arteries. To withstand that pressure, healthy arteries should be flexible. Anything that makes them less supple—advancing age, a genetic predisposition, certain medication, and risk factors such as inactivity, obesity, and smoking, for example—can make blood pressure rise.

Over time, that excessive pressure can damage blood vessels throughout the body, increasing the risk not only of heart attacks but also strokes, kidney damage, vision loss, arterial blockages in the legs, and sexual impotency. And the extra pressure forces the heart to work harder, which can weaken the heart muscle and increase the risk of heart failure.

To help prevent those problems, it's important to detect high blood pressure early, before too much damage is done. That's why you should have it checked at least once every two years, and more often if you're 50 or older or have other risk factors. In fact, it's a good idea to have it done during every visit to a health-care provider.

If your initial reading is high, don't panic. A number of factors, including pain and emotional stress, can temporarily boost blood pressure. To improve accuracy:

- Don't smoke, exercise, or consume anything caffeinated for at least half an hour before your appointment.
- Go to the bathroom first, since a full bladder can affect the reading.
- Sit with your feet flat on the floor for 5 minutes before the reading. Rest your arm on a table so it's at heart level. Remain quiet during the test.

If your systolic (upper) level is 140 millimeters of mercury or higher, or your diastolic (lower level) is 90 mmHg or higher, your doctor should retest at least twice over the next several weeks to confirm the results. For more on what your blood pressure levels mean, see the box below.

What your numbers mean

Blood pressure consists of two numbers, as in 120 millimeters of mercury (mmHg) over 80 mmHg. The systolic (upper) number is the pressure in the arteries when the heart contracts. The diastolic (lower) is the pressure when the heart rests between contractions. High blood pressure isn't diagnosed until your systolic pressure reaches 140 mmHg or your diastolic pressure reaches 90 mmHg. But even below those levels, the risk of a heart attack or stroke increases as pressure rises.

	Systolic measure (mmHg)	Diastolic measure (mmHg)	What to do
Normal	Below 120	Below 80	Maintain a healthy lifestyle to avoid increases in levels, which are common as people age.
High-normal (prehypertension)	120 to 139	80 to 89	Make lifestyle changes: stop smoking, cut back on sodium, lose excess weight, exercise regularly, and drink moderately, if at all. Drugs generally needed only if you also have diabetes, coronary heart disease, or kidney disease.
Stage 1 high blood pressure	140 to 159	90 to 99	Consider drugs, usually a low-dose diuretic, if a few months of lifestyle changes (above) don't adequately lower levels.
Stage 2 high blood pressure	160 or higher	100 or higher	Drug treatment should usually start at the same time as lifestyle changes (above). A diuretic plus one other medication are often required.

Source: Adapted from "The seventh report of the Joint National Committee on prevention, detection, evaluation and treatment of high blood pressure," the National Heart, Lung, and Blood Institute.

Make lifestyle changes

Even if you don't have high blood pressure, it's important to take steps to keep it under control since it tends to get higher with age.

That's especially important if you're African-American or have a family history of the condition, since both sharply increase the risk of developing it. And they're essential if you already have even high-normal readings—anything over 130 mmHg systolic or 90 mmHg diastolic.

For people with high blood pressure, those measures can sometimes reduce or even eliminate the need for drugs. For example, research has found that the DASH diet (Dietary Approaches to Stop Hypertension) can be as effective as medication for some people with mild hypertension. That relatively low-sodium diet is packed with fruit, vegetables, and low-fat dairy products. The potassium in those foods, and possibly the calcium, too, appear to help control blood pressure.

People who also slash their sodium intake further—to around 1,500 milligrams daily, less than half the typical amount consumed by U.S. adults—often see an even more significant drop in pressure. Because most sodium comes from processed, packaged, and restaurant foods and not just from the salt shaker, it's hard to cut back to that level without cooking from scratch most of the time and eating more fresh foods at home.

For people with normal blood pressure and no risk factors, a more modest goal of 2,400 mg daily, achievable by adopting the DASH diet alone, might help ward off the upward creep of blood pressure that tends to occur with age. Other steps include losing excess weight, exercising regularly, and drinking moderately, if at all, as shown in the table below.

The power of lifestyle changes

The table below shows how much you can lower your systolic (upper) blood pressure level by making these recommended changes. People who make multiple changes can expect even greater reductions.

Lifestyle change	Estimated reduction in systolic blood pressure level
Adopt the DASH diet Consume a diet rich in fruits, grains, vegetables, and low-fat dairy products and low in saturated and total fat.	8 to 14 mmHg
Be active Engage in regular aerobic physical activity, such as brisk walking (at least 30 minutes a day, most days of the week).	4 to 9 mmHg
Cut back on salt Reduce dietary sodium intake to no more than 2,400 milligrams a day, the amount in a teaspoon of salt.	2 to 8 mmHg
Drink moderately, if at all Limit consumption to no more than two drinks (e.g., 24 oz of regular beer, 10 oz. wine, or 3 oz of 80-proof whiskey) a day for most men, and no more than one drink a day for women and lighter-weight men.	2 to 4 mmHg
Lose excess weight Aim for a body mass index under 25.	2.5 to 10 mmHg for about every 11 pounds

Source: Adapted "The seventh report of the Joint National Committee on prevention, detection, evaluation and treatment of high blood pressure," the National Heart, Lung, and Blood Institute.

Get the right drugs

If healthy lifestyle changes alone don't adequately lower your blood pressure, or if your levels are very high, you should also consider medication. The first choice for many people is usually a diuretic, particularly thiazide diuretics. They're effective, safe, and available as low-cost generics.

Still, many doctors routinely prescribe other drugs, including newer and much more expensive ones. That can make sense for people who have health problems that can be worsened by diuretics, such as gout or kidney disease. For example, [beta-blockers](#) can make sense for people who have had a heart attack, and [ACE inhibitors](#) often work for those with diabetes. And other drugs are sometimes necessary if a diuretic alone doesn't adequately lower blood pressure.

But if you're otherwise healthy and your doctor recommends a drug other than a diuretic, ask why. And consult the table below, which describes some circumstances when those other classes of drugs can make sense.

Whether you take a diuretic alone or with other drugs, several steps can minimize the chance of side effects and increase the likelihood that you'll stick with the therapy:

- Get your blood levels of magnesium and potassium checked periodically, since diuretics can deplete those minerals. Call your doctor if you have cramps, begin vomiting, or your heart rate or pulse increases, which can indicate low potassium levels.
- Watch for signs of gout (for example, an acutely inflamed big toe or knee).
- If you also have diabetes, monitor your insulin level extra carefully because drugs for high blood pressure can cause it to fluctuate.
- Follow dosing instructions carefully and read the product label for possible side effects.

For details see [our Best Buy Drugs Reports on high blood pressure drugs](#).

Drug	Good Candidates	Common side effects
Thiazide diuretics Chlorthalidone, hydrochlorothiazide, and others	First choice, alone or with other drugs, for most otherwise healthy people.	Frequent urination, low potassium levels, and erectile dysfunction.
Beta-blockers Metoprolol (Toprol-XL and generic), nadolol (Corgard and generic), propranolol (Inderal and generic), and others	People who also have angina (chest pain); certain heart-rhythm and heart-muscle abnormalities; or a history of heart attack or heart failure.	Drowsiness, fatigue, erectile dysfunction, and slowed pulse rate.
ACE inhibitors Benazepril , enalapril (Vasotec and generic), lisinopril (Prinivil, Zestril, and generic), and others	People who also have diabetes, heart failure, kidney disease, or a history of heart attack or stroke.	Persistent dry cough, high potassium levels, reduced kidney function, and an uncommon but potentially fatal allergic reaction, angioedema, especially in African-Americans.
Angiotensin II receptor blockers (ARBs) Losartan (Cozaar and generic), candesartan (Atacand), and others	People who would otherwise be candidates for ACE inhibitors but can't take them because of excessive coughing. (ARBs are relatively expensive compared with other blood pressure drugs.)	Similar to ACE inhibitors but less likely to cause coughing.
Calcium-channel blockers Amlodipine (Norvasc and generic), diltiazem (Cardizem and generic), and others	People who also have angina (chest pain), certain heart-rhythm abnormalities, and possibly migraines.	Dizziness, fast or slow heartbeat, flushing, headaches, swollen gums, and, less often, breathing problems.

For Heart Attack Calculator and Regulating Heart Tests go to:

<http://www.consumerreports.org/cro/2013/02/lower-your-blood-pressure/index.htm>