

High Blood Pressure (talkaluntit)

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One in three of us are walking around with it-and many of us probably don't even know it. ${ }^{1}$ We're talking about high blood pressure or, as the medical professionals call it, hypertension.

It is common and can seem harmless, but it isn't. High blood pressure can kill you when it's left undiagnosed or untreated. We understand hypertension better now than ever, and we now have many effective medications to treat it. Still, the death rate from high blood pressure rose nearly 27 percent between 1994 and 2004, while the actual number of deaths jumped more than 56 percent. ${ }^{1}$

This is not a health problem to ignore or just "hope" away. It's one we need to talk more about.

## High Blood Pressure Defined

Put simply, blood pressure is the amount of force the heart exerts against the walls of arteries as it pumps blood throughout the body. Think about water gushing through a hose. If the hose is clean and flexible, the water flows through easily. But if the hose becomes clogged with gunk (as arteries can with cholesterol), or stiff from being left outside all winter (as arteries do with age), it becomes more difficult for the water to get through the hose. The slower it flows, the more the pressure builds.

In a hose, such increased pressure could knock loose a piece of the dirt and clog the hose. In your arteries, such high pressure could knock loose a blood clot or a piece of plaque, sending either to your brain, where it can lodge in a smaller vessel and cause a stroke. It could also slow or stop blood flow elsewhere in your body, starving vital organs-like your kidneys-of oxygen and other nutrients. At the same time, greater pressure means your

## Risk Defined

Every 20 mm Hg systolic (top number) or 10 mm Hg diastolic (bottom number) increase in blood pressure doubles your risk of dying from a stroke or heart disease. ${ }^{2}$ A blood pressure between 130-139/85-89 equates to a risk of cardiovascular disease more than twice as high as someone with optimal numbers. ${ }^{3}$ heart has to work overtime to pump all that blood through miles of vessels, increasing the risk that, like an overheated engine, it will fail.

Yet nearly a third of Americans with high blood pressure don't even know they have it. Of those who have been diagnosed with hypertension, just 35 percent have it under control, and only 61 percent are even being treated for it.

The end result? Thousands of unnecessary strokes and diagnoses of congestive heart failure, coronary artery disease, peripheral vascular disease and kidney disease-the most common medical repercussions of high blood pressure.

Isn't it time you knew your blood pressure numbers?
Hypertension is the single greatest risk factor for stroke.
-American Heart Association

## Know Your Numbers

Two numbers make up blood pressure: the systolic, or top number, and the diastolic, or bottom number. The systolic stands for the pressure when your heart beats to push blood out; the diastolic measures the pressure in the arteries between heartbeats. Blood pressure numbers are written like a fraction: 120/80.

Experts now know that the systolic number is the most important when it comes to tracking blood pressure after age 50. Although both numbers increase with age, the diastolic number tends to level off or even fall after age 50. Unfortunately, most primary care physicians have been taught just the oppositethat the diastolic number is more important. ${ }^{4}$

Here's what to know about what's normal and what's not where your blood pressure is concerned. ${ }^{4}$

- Normal: Systolic 119 or below and/or diastolic 79 or below.
- Prehypertension: Systolic 120 to 139 and/or diastolic 80 to 89.
- Stage 1 hypertension: Systolic 140 to 159 and/or diastolic between 90 and 99.
- Stage 2 hypertension: Systolic pressure 160 or above and/or diastolic of 100 or more.

Today, only half of all Americans have normal blood pressure. ${ }^{5}$

## Risk Factors for High Blood Pressure

You'd think that with so many people walking around with high blood pressure we'd know more about what causes it. And yes, we do know some causesgenetics, chronic kidney disease, certain endocrine conditions, some medications, drugs, sleep apnea-but the majority of hypertension diagnoses have no obvious underlying cause.

However, even if the experts don't always know what causes high blood pressure, they do know what contributes to the risk of getting it. Some of these factors you can't control, like your age, family history (when's the last time you asked your mother about her blood pressure?) and race. African Americans, for example, are more likely to have high blood pressure than whites and to have it earlier and in a more severe form. ${ }^{1}$

But most high blood pressure risk factors you can control, such as your weight, physical activity levels, diet and alcohol intake. A major study of postmenopausal women found the following significantly increased a woman's risk of high blood pressure:

- Being overweight (having a body mass index [BMI] greater than 27. BMI is a formula used by health care providers to evaluate weight; see Resources, p. 8, for more information)


## - Smoking

- Drinking seven or more alcoholic beverages a week
- Getting little to no physical exercise
- Having heart disease risks, including a family history of a heart attack, high cholesterol and diabetes, and/or having had a previous heart attack, heart failure or stroke. ${ }^{6}$

The table below shows how making changes in the risk factors under your control can lead to big rewards when it comes to your blood pressure numbers.

## Lifestyle Changes to Prevent and Manage High Blood Pressure ${ }^{4}$

| Lifestyle <br> Change | How | How Changes Can <br> Affect Blood Pressure |
| :--- | :--- | :--- |
| Lose <br> weight | Maintain a normal body weight <br> with a body mass index between 18.5 <br> and 24.9. | Every 22 pounds lost <br> lowers blood pressure <br> by 5-20 mm Hg* |
| Change <br> how you <br> eat | Eat for your health: choose as many <br> fruits and vegetables as possible, plus <br> whole grains, low-fat dairy and foods <br> low in saturated and total fat. This is <br> called the DASH eating plan: Dietary | Healthy food choices <br> can lower blood <br> pressure by 8-14 mm Hg |
| Approaches to Stop Hypertension <br> (See Resources, p. 8, for more <br> information.) | Limit sodium to no more than 2.4 <br> grams a day-that's only 1 teaspoon a <br> day. An easy way to do it? Nix prepared <br> and fast foods, which are often | Reducing sodium can <br> lower blood pressure <br> by 2-8 mm Hg |
| loaded with extra sodium. | salt |  |
| Get off <br> the couch | Add at least 30 minutes a day of <br> aerobic activity such as brisk walking <br> most days of the week. | Getting physically <br> active can lower blood <br> pressure by 4-9 mm Hg |
| Limit <br> alcohol | Stop at two drinks or less (for men) or <br> one drink or less (for women). A drink <br> is defined as 12 ounces of beer, 5 <br> ounces of wine, or 1.5 ounces of liquor. | Reducing alcohol <br> intake can lower <br> blood pressure by <br> $2-4$ mm Hg |

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## Time to Talk about Your Blood Pressure

Even though you probably have your blood pressure measured around your upper arm at most health care appointments, how often does your health care professional take the time to explain (or even tell you) the results? How well is your health care professional doing at helping you manage your high blood pressure?
According to the studies, not too well. Studies find that health care professionals significantly overestimate how well their patients manage their high blood pressure; wait too long to recommend medication (and even then often don't prescribe it according to national guidelines); and

## Women and High Blood Pressure ${ }^{7}$

- Before menopause, women have a lower risk of developing high blood pressure than men. Between age 50 and 60, women's risk is higher; after age 60 their risk is the same as men's.
- Women are more aware of having high blood pressure than men, possibly because they are more likely to visit a health care professional.
- Women may experience some differences in side effects of blood pressure lowering drugs than men. For instance, women are more likely to develop low potassium levels when taking a diuretic than men and twice as likely to develop a cough when taking an ACE inhibitor. They are also more likely to have swelling of the legs and ankles and excess hair growth when taking a calcium channel blocker.
- Menopausal hormone therapy has little effect on blood pressure. ${ }^{6}$
suggest lifestyle changes to fewer than half their patients with high blood pressure. Doctors are also slow to switch their patients' medications when blood pressure levels remain high. ${ }^{7}$
But, physicians aren't the only reason so many people have uncontrolled hypertension. Patients also play an important role. They may not make the required lifestyle changes or take their medications. In fact, studies find that 30 percent or more of those with hypertension don't take their medications as they should. ${ }^{8,9}$ One reason is that it's hard to take medicine when you don't feel sick-and, remember, high blood pressure usually causes no symptoms. Another is that the medication may have side effects and people stop taking it. Unfortunately, many patients just aren't comfortable talking to their doctor about medication concerns. ${ }^{9}$

What's important here is not only that you make the recommended lifestyle changes and take your medicine as directed, but that you continue to talk about managing your blood pressure with your health care professional. In fact, studies find that sharing in decision making about your disease with your health care professional can improve how well you stick to the recommended treatment plan. ${ }^{10}$

## Questions to

 Ask about High Blood Pressure Ask your health care professional about your blood pressure. Use these suggested questions to help start a discussion.1. Can you explain my blood pressure reading?
2. Am I at risk for developing high blood pressure?
3. Is it possible to lower my blood pressure by losing weight, exercising and changing my diet?
4. Could I eventually lower it enough to not need medication?
5. Why did you choose this medication to treat my high blood pressure?
6. What are its benefits and side effects?
7. Will it interact with other medications I'm taking?
8. What if I don't like or can't tolerate the side effects of my medication?
9. How often should I have my blood pressure checked?

## Treating High Blood Pressure

The good news about hypertension is that it's very treatable-if you and your health care professional work together to find the best mix of lifestyle changes and medication. The even better news is that treating hypertension can reduce your risk of stroke 35 to 40 percent; of heart attack 20 to 25 percent; and of heart failure more than 50 percent. ${ }^{4}$

## Know Your Goal

The goal of hypertension treatment is a systolic blood pressure of less than 140 mm Hg . If you achieve this level, your diastolic number will likely meet the goal of less than 90 mm Hg . If you have diabetes or kidney disease in addition to hypertension, your goal should be a blood pressure of less than $130 / 80 \mathrm{~mm} \mathrm{Hg} .{ }^{4}$

In addition to the lifestyle changes described on p. 4, you may need medication to bring your blood pressure under control. There are currently seven primary classes of blood pressure lowering medications, as shown on p. 7.

Learn More: Visit www.HealthyWomen.org/heart-health

| Class of <br> Medication | Common Drugs within <br> Class (generic/brand) | How They Work |
| :--- | :--- | :--- |
| Diuretics | Chlorthalidone (Hygroton), <br> hydrochlorothiazide <br> (Microzide, Esidrix, <br> Hydrodiuril) and indapamide <br> (Lozol) | Help your body get rid of <br> excess sodium, which <br> contributes to fluid retention <br> and increases blood <br> pressure |
| Beta <br> blockers | Atenolol (Tenormin), pindolol <br> (Visken) and metoprolol <br> (Lopressor, Toprol-XL) | Slow the heart rate, thus <br> reducing overall blood flow |
| Calcium <br> channel <br> blockers | Verapamil (Isoptin, Verelan, <br> Calan), diltiazem (Cardizem <br> and others), nifedipine <br> (Adalat, Procardia and others), <br> nicardipine (Cardene), isradipine <br> (DynaCirc), amlodipine <br> (Norvasc), felodipine (Plendil) <br> and nisoldipine (Sular) | Prevent calcium from <br> getting into muscle cells in <br> the arteries, relaxing <br> arteries |
| Angiotensin- <br> converting <br> enzyme (ACE) <br> inhibitors | Captopril, enalapril, lisinopril, <br> benazepril (Lotensin), <br> fosinopril (Monopril) and <br> ramipril (Altace) | Interfere with the body's <br> uptake of angiotensin II, a <br> hormone that causes arteries <br> to constrict |
| Angiotensin II <br> receptor <br> blockers <br> (ARBs) | Candesartan (Atacand), <br> losartan (Cozaar), valsartan <br> (Diovan) and telmisartan <br> (Micardis) | Interfere with body's <br> production of angiotensin II, <br> but with fewer side effects <br> than ACE inhibitors |
| Alpha <br> blockers | Doxazosin (Cardura), <br> prazosin (Minipress) and <br> terazosin (Hytrin) | Prevent the hormone <br> norepinephrine from <br>  <br> anstricting small arteries <br> and veins |
| Direct renin <br> inhibitors | Aliskiren (Tekturna) | Prevent production of the <br> kidney enzyme renin, which <br> triggers production of <br> angiotensin II |

## What Medication Will I Need?

Current national guidelines call for starting otherwise healthy people with Stage 1 hypertension on a thiazide-type diuretic, although your health care provider can also consider an ACE inhibitor, ARB, beta blocker or calcium channel blocker alone or in combination. ${ }^{4}$

If you have Stage 2 hypertension, you will likely need two medications, usually a thiazide-type diuretic and an ACE inhibitor, or a diuretic and either an ARB, beta blocker, calcium channel blocker or direct renin inhibitor. If you

## Who Will Treat Me?

High blood pressure is the most common reason for seeing a health care professional. Which health care professional you see depends on your overall health. Most often, you will be treated by a primary care provider: a family physician, internist or nurse practitioner. Other medical professionals who could be involved in your treatment include:

- A nephrologist if you have kidney disease
- An endocrinologist if you have diabetes
- A cardiologist if you have cardiovascular disease
- A neurologist if you have had a stroke or have other neurological diseases have other health conditions, you may need additional medications. ${ }^{4}$

Expect to take more than one drug: Studies find that most people with hypertension will need at least two medications to bring their blood pressure into line. ${ }^{11}$

If the idea of taking two more medications every day upsets you, no worries. Many antihypertensives come in combination pills: a diuretic combined with an ACE inhibitor or ARB, for instance. Studies find such single-pill combinations can significantly improve patients' willingness to continue taking their medication. ${ }^{13}$

## Resources

American College of Cardiology<br>202-375-6000<br>www.acc.org

American Heart Association
800-242-8721 www.americanheart.org

## American Society of Hypertension

212-696-9099 www.ash-us.org

## DASH Diet

www.nhlbi.nih.gov/health/public/heart/hbp/dash

## International Society on

 Hypertension in Blacks404-880-0343 www.ishib.org

## National Heart, Lung, and Blood Institute

301-592-8573 www.nhlbi.nih.gov

## Partnership for Healthy Weight Management

www.consumer.gov/weightloss/index.htm

## WomenHeart <br> The National Coalition for Women with Heart Disease

202-728-7199 www.womenheart.org

Bottom line? You can bring it down! Taking charge of your blood pressure will help you take charge of your health. It's not so hard: Just learn your blood pressure numbers, see your health care provider and make your lifestyle heart-friendly. The benefit? You'll lower your blood pressure and your risk of stroke and heart attack. And you'll feel better, too. Track your numbers below, after every visit.

Date
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Blood Pressure Reading

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[^0]:    *mm Hg is the abbreviation for millimeters of mercury-the standard of measure for blood pressure.

