

# Hypertension

**H**ypertension, also known as high blood pressure, affects hundreds of millions of persons worldwide. In the United States alone, more than 65 million individuals have hypertension. High blood pressure, if left untreated, can cause severe damage to the body's organs, including the brain, heart, blood vessels, and kidneys. Having high blood pressure may not cause symptoms until organs have been damaged. For this reason, hypertension is often called the "silent killer." The May 26, 2010, issue of *JAMA* contains an article about hypertension and its treatment in the United States during a recent 20-year period.

## DIAGNOSIS

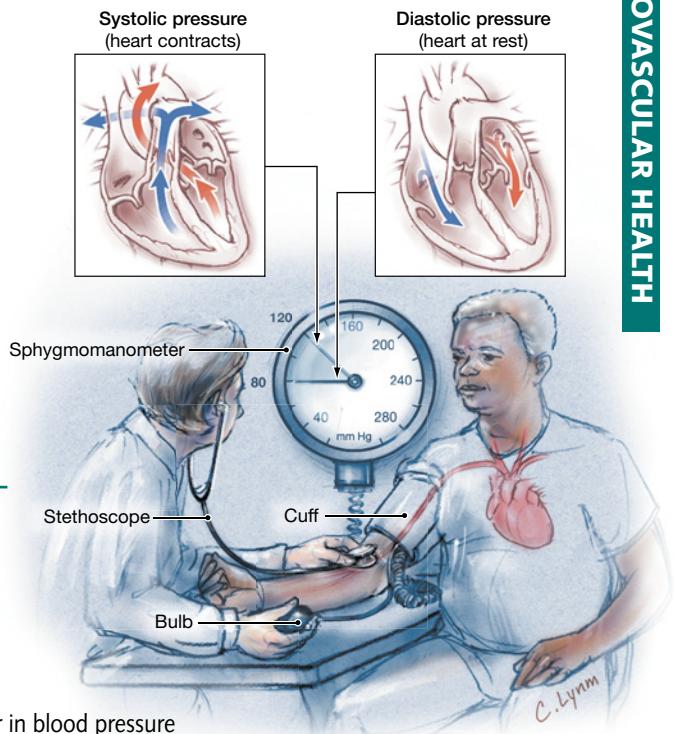
Elevated blood pressure readings, measured by **sphygmomanometry** (a blood pressure cuff, either pumping up the cuff by hand and listening to the arterial sounds with a stethoscope or by using an automated system), lead to the diagnosis of hypertension. Normal **systolic** blood pressure (the upper number in blood pressure measurement) is less than 120 millimeters of mercury (also written as mm Hg), and normal **diastolic** blood pressure (the lower number in blood pressure measurement) is less than 80 mm Hg. Hypertension is present if systolic blood pressure averages 140 or higher or diastolic blood pressure 90 or higher. **Prehypertension** is present if blood pressures are between normal and hypertensive levels.

## COMPLICATIONS

- **Hypertensive heart disease** (enlargement of the heart muscle)
- **Myocardial infarction** (heart attack), which can cause chest pain, shortness of breath, and death
- **Congestive heart failure**, when heart muscle function is inadequate to meet the body's needs
- **Stroke** (brain attack), which can cause sudden loss of vision, weakness on one side of the body, difficulty speaking, and death
- Kidney disease, which may require dialysis
- Visual loss
- Diabetes and **hyperlipidemia** (unhealthy blood levels of cholesterol and triglycerides) often occur along with hypertension.
- **Aortic aneurysms** (enlargement of the aorta, the major blood vessel in the chest and abdomen)

## PREVENTION AND TREATMENT

If hypertension is diagnosed early and well controlled, damage to other tissues can be prevented. Lifestyle modifications, including following a low-salt and low-fat diet, maintaining a healthy weight, exercising at least 30 minutes every day, not smoking, and using alcohol only in moderation are the best ways to reduce your risk of having hypertension. These healthy living recommendations are also the first level of treatment for hypertension. Several types of medications to treat high blood pressure and its complications are often prescribed.



## FOR MORE INFORMATION

- American Heart Association  
[www.americanheart.org](http://www.americanheart.org)
- National Heart, Lung, and Blood Institute  
[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on JAMA's Web site at [www.jama.com](http://www.jama.com). Many are available in English and Spanish. A Patient Page on hypertensive kidney disease was published in the November 20, 2002, issue; one on retinopathy was published in the August 22/29, 2007, issue; and one on coronary heart disease risk factors was published in the December 2, 2009, issue.

Sources: American Heart Association; National Heart, Lung, and Blood Institute; World Health Organization; American Academy of Family Physicians

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