



MEDICAL
GROUP

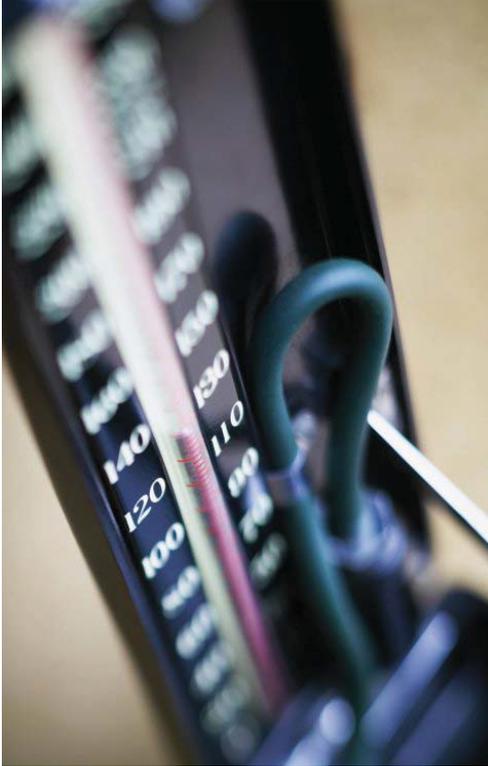
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Diplomates American Board of Internal Medicine & Cardiovascular Diseases
A medical practice dedicated to the prevention, diagnosis, and treatment of heart disease.

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High blood pressure (hypertension)



Blood pressure is the pressure of the blood against the artery walls. The optimum blood pressure is below 120/80 mm Hg. High blood pressure, or hypertension, is a condition in which blood pressure levels exceed normal values. Blood pressure is indispensable for the blood to circulate throughout the body. If the blood does not circulate, the vital organs cannot receive the oxygen and nutrients they need to function. It is important to be informed about blood pressure and how to keep it at a healthy level. There is not a pair of fixed blood pressure figures, but a range. When the heart beats, it pumps blood to the arteries and creates pressure on them. This pressure comes from two forces. The first force is created when the blood is pumped to the arteries by the circulatory system. The second is created when the arteries resist the flood of blood.

When you are healthy, the arteries are muscular and elastic. They stretch when the heart pumps blood through them. How much they stretch depends on how much force the blood exerts.

Normally, the heart beats 60-80 times per minute. The blood pressure increases with each beat and decreases when the heart relaxes between one beat and the next. The blood pressure can change from one minute to the next, but normally, in an adult person, it should remain below 120/80 mm Hg. Blood pressure that is always between 120-139/80-89 is considered pre-hypertension, and if it is always or mostly above 140/90 mm Hg, it is considered hypertension.

Systolic/Diastolic

When blood pressure is taken, you are given two figures. These are:

- Systolic (the higher or top figure): represents the blood pressure when the heart beats.
- Diastolic (the lower or bottom number): represents that pressure when the heart rests between one beat and the next.

The systolic pressure is always stated first and the diastolic second. For example: in 120/80 (120 over 80), the systolic pressure is 120 and the diastolic is 80.



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A blood pressure of 120-139/80-89 mm Hg is considered pre-hypertension. Blood pressure is considered high if it is 140/90 mm Hg or more.

High blood pressure increases the risk of [heart attack](#), [angina](#) pectoris, stroke, [heart failure](#), kidney failure and [peripheral artery disease](#). High blood pressure also increases the risk of developing [atherosclerosis](#). The risk of heart failure increases due to the greater effort that high blood pressure requires of the heart.

Treatment of high blood pressure:

Your doctor may choose one or more of the following courses of action to help keep your blood pressure under control.

Diet

High salt-content diets accelerate hypertension as we grow older. Consuming as little salt as possible can prove beneficial, especially for people sensitive to salt and the elderly. Even eliminating table salt and cooking salt can be beneficial.

What is recommendable is a diet low in saturated fat and with abundant whole grains, fruits and vegetables. Some suggested foods are: nuts, seeds, carrots, spinach, celery, mushrooms, beans, potatoes, avocados, broccoli and foods that contain a moderate amount of proteins (preferably fish, poultry or soy products).

Losing weight immediately reduces blood pressure and helps reduce the size of the heart. Losing weight can allow patients with mild hypertension to reduce [blood pressure] and perhaps the ability to reduce or stop taking medication. An adequate amount of minerals such as potassium, magnesium and calcium can help reduce blood pressure. Most people should obtain this mineral through potassium-rich foods, such as potatoes, avocados, bananas, fat-free dairy products, red beads, oranges, prunes and melons. Calcium regulates the tone of the smooth muscle that covers the blood vessels. Hypertension itself causes the body to lose calcium. Vitamin C offers specific benefits for hypertension, since it prevents dangerous effects on nitric acid, the substance that keeps arteries flexible.

Smoking is a significant risk factor. Alcohol consumption can also increase the risk, unless it is consumed in moderation. The consumption of a few cups of coffee a day in healthy individuals is not very likely to cause damage. However, daily consumption of a large amount of caffeine can be deleterious. Hypertensive people should definitely avoid excessive caffeine.



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Exercising regularly can help the arteries stay elastic. This allows for better blood circulation and helps keep blood pressure low. It is recommended to do moderate-intensity exercise to lower blood pressure more effectively than high-intensity exercise.

The medications designed to lower blood pressure can also be used to achieve your blood pressure objective. Your doctor may choose an antihypertensive medication that acts centrally on the heart to lower blood pressure. Otherwise, your doctor may choose an antihypertensive that acts peripherally dilating the arteries to reduce blood pressure. Talk to your doctor about these options. **Most patients** with hypertension will **end up requiring more than one medication** to get their blood pressure adequately controlled.

For more information on high blood pressure, [click here](#).

Written by and/or reviewed by Mark K. Urman, M.D. and Jeffrey F. Caren, M.D.

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PLEASE NOTE: The information above is provided for general informational and educational purposes only, and is not intended to be a substitute for medical advice, diagnosis, or treatment. Accordingly, it should not be relied upon as a substitute for consultation with qualified health professionals who are familiar with your individual medical needs.

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