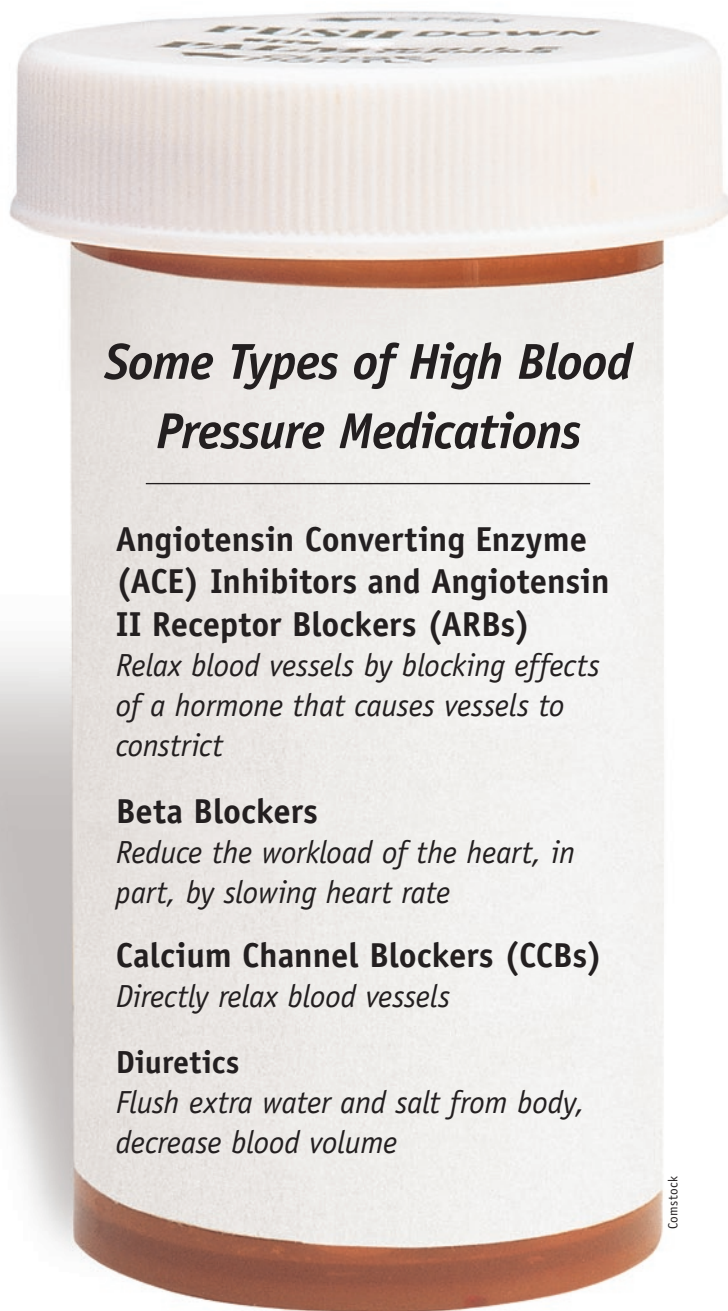


Medications for High Blood Pressure



Some Types of High Blood Pressure Medications

Angiotensin Converting Enzyme (ACE) Inhibitors and Angiotensin II Receptor Blockers (ARBs)

Relax blood vessels by blocking effects of a hormone that causes vessels to constrict

Beta Blockers

Reduce the workload of the heart, in part, by slowing heart rate

Calcium Channel Blockers (CCBs)

Directly relax blood vessels

Diuretics

Flush extra water and salt from body, decrease blood volume

Nearly one in three adults in the United States has high blood pressure, also called hypertension. High blood pressure is dangerous because it increases the risk of

stroke

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heart attack

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heart failure

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kidney failure

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death

“High blood pressure is often called the ‘silent killer’ because it usually has no symptoms until it causes damage to the body,” says Douglas Throckmorton, M.D., Deputy Director of FDA’s Center for Drug Evaluation and Research. Many studies have shown that lowering the blood pressure with drugs decreases that damage.

A Lifelong Condition

Blood is carried from the heart to all parts of the body in vessels called arteries. Blood pressure is the force of the blood pushing forward through the body and against the walls of the arteries. The higher the blood pressure, the greater the risk of stroke, heart attack, heart failure, kidney failure, and death.

Take the medications prescribed for you regularly and don't stop them except on the advice of your health care provider.

Blood pressure is made up of two numbers:

- The “top” number is the systolic blood pressure—the pressure while the heart is pumping blood out.
- The “bottom” number is the diastolic blood pressure—the pressure while the heart is filling up with blood, getting ready to pump again.

It was once believed that only diastolic pressure (the “bottom” number) was important, but this is not true. Elevated systolic pressure alone, particularly common in older people, is just as dangerous as elevations of both systolic and diastolic pressure.

Blood pressure is elevated for two main reasons:

- too high blood volume
- too narrow blood vessels due to a substance our kidneys make called angiotensin.

Most of the time, the cause of a person's high blood pressure is unknown. Once it develops, high blood pressure usually lasts the rest of the person's life. But it is treatable.

Some people can lower blood pressure by losing weight, limiting salt intake, and exercising, but for most people, these steps are not enough. Most people need medication for blood pressure control, and will probably need it all their lives.

Types of Medications

FDA has approved many medications to treat high blood pressure, including

- Diuretics, or “water pills,” which help the kidneys flush extra water and salt from your body and decrease blood volume
- Several kinds of drugs that block the effects of angiotensin, reducing blood pressure by relaxing blood vessels, including
 - Angiotensin converting enzyme (ACE) inhibitors
 - Angiotensin II receptor blockers (ARBs)
 - Beta blockers, which also cause the heart to beat with less force
- Drugs that directly relax the blood vessels, including
 - Calcium channel blockers (CCBs)
 - Other direct dilators (relaxers) of blood vessels
 - Alpha blockers, which reduce nerve impulses that tighten blood vessels
 - Nervous system inhibitors, which control nerve impulses from the brain to relax blood vessels

Many people with high blood pressure will need more than one medication to reach their goal blood pressure. Your health care provider can tell you if you should be on medication and, if so, which drug(s) may be best for you.

Tips for Consumers

- **Controlling your blood pressure is a lifelong task.** Blood pressure is only one of a number of factors that increase your risk of heart attack, stroke, and death. High cholesterol and diabetes are other risk factors. Lifestyle changes—such as weight loss, a healthy diet, and physical

activity—can affect all three risk factors, but many people will also need medications.

- **Take your medicines and monitor your blood pressure.** Take the medications prescribed for you regularly and don't stop them except on the advice of your health care provider. Hypertension tends to worsen with age and you cannot tell if you have high blood pressure by the way you feel, so have your health care provider measure your blood pressure periodically. You may also want to buy a home blood pressure monitor, available in many drug stores, to measure your blood pressure more frequently. Your health care provider or pharmacist can help you choose the right device. Many drug stores also have blood pressure measuring devices you can use in the store.
- **Tell your health care provider about any side effects you are having.** Some side effects may go away over time, others may be avoided by adjusting the dosage or switching to a different medication.

For More Information

Protect Your Health
Joint FDA/WebMD resource
www.webmd.com/fda

Heart Health Online
www.fda.gov/hearthealth/

National Heart, Lung, and Blood Institute
www.nhlbi.nih.gov/hbp/