

## HYPERTENSION

### The 2017 American College of Cardiology Adult Blood Pressure Guidelines

<u>Blood Pressure</u>	<u>Systolic</u>		<u>Diastolic</u>
Normal	< 120 mmHg	and	< 80 mmHg
Elevated	120 - 129 mmHg	and	< 80 mmHg
Hypertension stage 1	130 - 139 mmHg	or	80 - 89 mmHg
Hypertension stage 2	≥ 140 mmHg	or	≥ 90 mmHg
Hypertensive crisis	> 180 mmHg	and/or	> 120 mmHg

*\*It may be necessary to accept higher blood pressures for the safety of older patients with specific medical conditions*

### ***How is blood pressure measured and when is it considered hypertension?***

With each heartbeat blood is pumped out of the heart into the arteries. This is when the blood pressure is at its highest and is known as systole. As the chambers of the heart refill with blood, the blood pressure gradually drops until just before the next heartbeat. This is when the blood pressure is at its lowest and is known as diastole. For example, if a blood pressure is 120/80, the higher number is the systolic blood pressure and the lower number is the diastolic blood pressure. These readings are measured with a blood pressure cuff and a stethoscope or with a portable digital blood pressure monitor.

It is important to measure blood pressure in the doctor's office and at home. Measure your pressure several times a week at different times of the day using a monitor that goes around your upper arm. After taking a reading, wait a minute, and then take it once more. If the readings are close, average them. If they are not, repeat the pressure and average the three readings. Record the date, time, and blood pressure in a notebook or app and review it with your health care provider at each appointment.

### ***Obtaining an accurate blood pressure:***

- Sit quietly for five minutes with back supported, feet on the floor, legs uncrossed, and your arm supported with the cuff at heart level. Remain quiet while taking the measurement.
- Check your cuff - readings taken with too small a cuff or over clothes can be inaccurate.
- Avoid caffeine and alcohol for 30 minutes beforehand.

### ***How is hypertension harmful?***

It is called the silent killer because most people have no signs or symptoms.

### ***Complications of high blood pressure:***

- **Heart attack or stroke** - High blood pressure can contribute to hardening and thickening of the arteries (atherosclerosis), which can lead to a heart attack, or cause the rupture of an artery in the brain resulting in a stroke.
- **Aneurysm** - Increased blood pressure can cause blood vessels to weaken and bulge, forming an aneurysm. If an aneurysm ruptures, it can be life threatening.
- **Heart failure** - As the heart works harder to pump blood against the higher pressure in vessels the heart muscle thickens. Eventually, the thickened muscle may have a hard time pumping enough blood to meet the body's needs which can lead to heart failure. This may cause weakness, swelling of the feet and legs, fluid accumulation in the lungs, and shortness of breath.
- **Kidney failure** - High blood pressure is a leading cause of kidney failure in the United States.
- **Blindness** - High blood pressure is a leading cause of blindness in the United States.
- **Hypertensive crisis** - This occurs when blood pressure is severely elevated. It may be accompanied by pain in the back of the head, blurred vision, and chest pain. This is a life threatening emergency requiring immediate medical attention.

### ***Why do I have hypertension?***

The cause of high blood pressure is not known for most patients. For this reason, it is called essential or idiopathic hypertension. Idiopathic means relating to any disease or condition that arises spontaneously or for which the cause is unknown.

#### ***Risk factors:***

- **Age** - Blood pressure generally increases with age.
- **Race** - High blood pressure is more common among African Americans who often develop elevated pressures earlier in life.
- **Family history**
- **Increased weight**
- **Lack of exercise** - If possible, strive for 30 minutes of activity most days.
- **Tobacco use** - Raises blood pressure, causes atherosclerosis and lung cancer. Do not smoke.
- **Increased dietary salt** - Eat a well-balanced, low salt diet, < 2,000 mg of sodium per day. Avoid salt in processed, packaged, or canned foods. Use herbs or spices to add flavor to foods.
- **Alcohol consumption** - For healthy adults, no more than one drink a day for women and men older than age 65, and no more than two drinks a day for men age 65 and younger. One drink equals 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of 80-proof liquor.
- **Stress**
- **Chronic medical conditions** - Certain chronic conditions may increase your risk of high blood pressure, such as kidney failure, renal artery stenosis, hyperaldosteronism, diabetes, sleep apnea, and rare endocrine and anatomical disorders.
- **Medications** - Avoid non-steroidal anti-inflammatory drug use like, aspirin, ibuprofen or naproxen, cold remedies, decongestants, and birth control pills as they may raise your pressure.

### ***What can I do to control my blood pressure?***

Be aware and *manage* any of the risk factors listed above. If your blood pressure is high, have it taken during several office visits to confirm it is consistently elevated. Occasionally, blood pressure is elevated only at the doctor's office but not at home. This is called "white coat hypertension." It is important to record and review blood pressure readings measured at home with your physician or nurse practitioner. When blood pressure medication is prescribed it is important to take as directed.

### ***What are some medicines prescribed to treat hypertension?***

Several factors are considered when selecting medications: age, race, and other medical problems. Depending on your baseline blood pressure one or more types of medicines may be prescribed.

#### ***Common Antihypertensive Medicines:***

- Diuretics - Hydrochlorothiazide, Furosemide, Spironolactone, and others.
- Angiotensin - converting enzyme inhibitors – Lisinopril, Ramipril, Accupril. This category of medication sometimes causes a dry, hacking cough and may need to be discontinued.
- Angiotensin - receptor blockers - Valsartan, Telmisartan.
- Beta blockers - Lopressor, Tenormin, Corgard.
- Calcium channel blockers - Amlodipine, Verapamil
- Others: Hydralazine, Terazosin, Clonidine Isosorbide Nitrates.

The risk for heart attack, stroke, and other complications from hypertension correspond exponentially to the elevation of your blood pressure. Take control by maintaining a normal weight, making healthy lifestyle choices regarding diet, exercise and stress reduction, take blood pressure medicines regularly, and ***know your numbers*** to limit complications and live a healthier, longer life.

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