



**Guide To Blood Pressure Readings**

Source: American Heart Association Recommended Blood Pressure Levels

Classification	Systolic mm Hg (upper #)	Diastolic mm Hg (lower #)
Normal	Less than 120	and Less than 80
Prehypertension	120-139	or 80-89
High Blood Pressure (Hypertension) Stage 1	140-159	or 90-99
High Blood Pressure (Hypertension) Stage 2	160 or higher	or 100 or higher
Hypertensive Crisis (Emergency care needed)	Higher than 180	or Higher than 110

**Guide To Blood Cholesterol Levels**

Source: Mayo Clinic Recommended Cholesterol Levels

Category	LDL Cholesterol	HDL Cholesterol
Ideal for people at very high risk of heart disease	Below 70 mg/dL	Less than 200 mg/dL
Ideal for people at risk of heart disease	Below 100 mg/dL	Less than 40 mg/dL
Near ideal	100 to 129 mg/dL	40 to 59 mg/dL
Borderline high	130 to 159 mg/dL	Less than 40 mg/dL
High	160 to 189 mg/dL	40 to 59 mg/dL
Very high	190 mg/dL and above	60 mg/dL and above
Desirable	Below 150 mg/dL	Less than 40 mg/dL
Borderline high	150 to 199 mg/dL	40 to 59 mg/dL
High	200 to 499 mg/dL	60 mg/dL and above
Very high	500 mg/dL and above	60 mg/dL and above



# What, we worry?

## Why You Should Care...

- Heart disease is the **#1 cause of death** in the U.S. today.
- Coronary heart disease** is the most common type of heart disease, killing more than 385,000 people annually.
- Strokes kill almost **130,000 people** a year
- Every year about **715,000 Americans** have a heart attack.

**High blood pressure and high cholesterol are major risk factors for heart disease, yet many people aren't even aware they have the condition(s).**

Many people with high blood pressure are asymptomatic. Even if you feel normal every day your heart and blood vessels may be suffering damage. High blood pressure is called "the silent killer" because it usually has no symptoms. Some people may not find out they have it until they have trouble with their heart, brain, or kidneys. As many as one-third of Americans have high blood pressure, but don't even know it.

The good news is that high blood pressure and cholesterol can be treated and controlled. There are several treatment options available. Many include making healthy lifestyle changes and some include treatment and medication prescribed by your doctor.

Both high blood pressure and high cholesterol contribute to a gradual disease process called atherosclerosis. Fatty material called plaque builds up inside the arteries (the tubes that carry blood from your heart). The arteries become scarred, hardened, narrowed, and less elastic, and they have a tough time supplying enough blood to the body. Eventually an artery may become completely blocked by plaque, or by a blood clot caught in a narrow spot. If the blood supply to the heart is blocked, it causes a heart attack. If the clogged artery supplies blood to the brain, it causes a stroke—also known as a "brain attack." A third possibility is that an arterial wall gets weak and breaks, causing a hemorrhagic stroke, or aneurysm.

## How Heart Disease Happens

HDL, the "good" cholesterol, consists of a lot of protein and a little fat and helps protect against heart disease by carrying cholesterol away from the arteries—that's why a high level (over 60) is desirable. LDL, the "bad" cholesterol, is the type our bodies absorb when we eat fried and fatty foods. It contains a lot of fat, but little protein, making it an unstable compound that can break easily while traveling through your bloodstream, depositing cholesterol on arterial walls. A level below 100 is optimal, and over 160 is considered high risk. Triglycerides, another kind of fat, also contribute to coronary heart disease. Levels under 150 are desired. Everyone age 20 and older should have their cholesterol levels checked at least once every five years. You and your doctor can discuss how often you should be tested.

## For More Information

- American Heart Association  
[www.americanheart.org](http://www.americanheart.org)
- National Stroke Association  
[www.stroke.org](http://www.stroke.org)

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## Cholesterol

### Q: What is cholesterol?

**A:** Cholesterol is a yellowish-white waxy fat that is carried in the blood by lipoproteins. A total cholesterol level under 200 is desirable, and over 240 is high.

High blood pressure is the #1 risk factor for stroke—a leading cause of death in America. It contributes to cardiovascular disease, kidney disease, dementia (a form of memory loss in older people), eye damage, and congestive heart failure.

## Blood Pressure

### Q: What is high blood pressure (hypertension)?

**A:** Blood pressure is the force of blood pushing against the walls of your blood vessels. High blood pressure makes the heart work harder than normal, causes it to grow abnormally large, and puts both the heart and arteries under greater strain.

# Blood Pressure & Cholesterol




# 9 Strategies To Reduce BLOOD PRESSURE

There's a lot you can do to lower your blood pressure. In fact, many experts recommend that people with stage 1 hypertension (140/90-159/99), and no other risk factors, try lifestyle changes for a year before going on medication. By changing how they eat, drink, exercise, deal with stress, and by quitting smoking, many people have been able to reduce their risk for serious health complications.

**Lose Weight.** This is probably the most effective lifestyle change for lowering blood pressure. Losing even as few as 5-10 pounds reduces the workload on your heart.

**Reduce Salt Intake.** A diet high in salt can cause retention of fluids, which in turn may raise blood pressure levels. It's best to keep your salt intake to less than 2,300 mg a day—or 1,500 mg if you're age 51 or older, or if you are black, or if you have high blood pressure, diabetes or chronic kidney disease. To get on top of salt intake, try eating whole and homemade foods, and swapping the saltshaker for spicy, no-salt herb blends. Salt alternatives containing potassium, magnesium, and less sodium may also be helpful.

**Eat a Diet High in Fruit, Vegetables, Whole Grains, and Low-Fat Dairy Products.** The typical American diet may be the main reason we have higher rates of heart disease and stroke than many other countries. We've replaced healthy whole foods with processed foods containing too much fat and salt. Research indicates that eating more foods containing potassium, calcium, magnesium, and fiber may help reduce blood pressure.

**Find Regular Ways to Relax.** Research has shown that stress can cause temporary rises in blood pressure and, if experienced over a long term, may result in hypertension. There are many ways to reduce stress—exercise, meditation, deep breathing techniques, yoga, and prayer are classic methods. You may also find gardening, your favorite music, hot baths, humorous books and movies, or time with friends just as relaxing.

**Exercise.** A moderate program of aerobic exercise such as brisk walking, bicycling, swimming, or running for 30-45 minutes most days of the week can produce a drop of about 10 points in elevated systolic and diastolic levels. It can also help you lose weight and handle stress. Consult your physician before starting a new exercise program.

**Ask Your Doctor About Aspirin.** Some health care professionals recommend taking a daily dose of aspirin for people with heart disease. Only take a daily dose if your doctor advises you to do so.

**Take Medications if You Need Them.** Finding the right medications requires patience and good communication between you and your doctor. Do not take any medications without first consulting your physician.

**Limit Alcohol.** Moderate drinkers (no more than two drinks a day for men, and one drink a day for women) actually have lower risk for heart disease than nondrinkers. However, at higher levels, drinking aggravates hypertension, reduces your heart's pumping ability, and interferes with the effectiveness of medications.

**Quit Smoking.** When a smoker lights up, their systolic blood pressure (the first number) can go up more than 20 points on average, then go back down over the next half hour. So smokers with high-normal readings actually have intermittent high blood pressure every time they smoke. Quitting isn't easy—get help. It takes most people many attempts before they quit for good—so don't give up! If you succeed, your risk of heart disease will be cut in half within a year.

## More Ways Than One...

### Reduce Your Cholesterol Levels

For most, a diet high in saturated fats is the primary cause for high blood cholesterol and LDL levels. But recent research indicates that to really control the problem, you need to exercise as well as eat a low-fat, low-cholesterol diet. Doing just one isn't nearly as effective. Here are 8 strategies:

**REDUCE TOTAL FAT INTAKE** to no more than 30% of your total daily calories.

**REDUCE SATURATED FAT** to no more than one-third of the fat you eat. Major sources of saturated fat include butter, cheese, whole milk, cream, meat, poultry, chocolate, coconut, palm and palm kernel oil, lard and solid shortenings. Most processed foods such as cookies, crackers, and other bakery goods contain trans fatty acids which increase cholesterol. Look for "hydrogenated" or "partially hydrogenated" oils on labels and avoid them.

**REPLACE SATURATED FATS** with mono-unsaturated "good" fats like olive oil, canola oil, and nuts, which can lower cholesterol. Poly-unsaturated fats like corn, sesame, safflower, soybean, and sunflower oils are good too. Use these oils for cooking and salads, and always bake or broil your food rather than frying. Instead of butter or stick margarine, spread or dip your bread in olive oil.

**REDUCE DIETARY CHOLESTEROL** to 300 milligrams per day by avoiding dairy products made with whole milk and cream, egg yolks, and organ meats such as liver.

**EAT MORE FISH.** Research shows that certain fatty fish oils in the omega-3 group reduce blood cholesterol levels. Fish especially rich in omega-3 oils are salmon, tuna, mackerel, lake trout, bluefish, herring, and sardines.

**EXERCISE.** Aerobic exercise, along with improving your diet, can reduce your blood cholesterol levels by up to 15%. Exercise will also help you lose weight and keep it off. Talk to your doctor about starting an exercise program.

**TAKE MEDS IF PRESCRIBED.** If your total cholesterol, especially your LDL level, remains high despite diet changes and exercise, your doctor may recommend medications.

**EAT AT LEAST 5 FRUITS AND VEGETABLES A DAY.** They help lower LDL (bad) cholesterol according to a variety of studies. It appears that people who eat multiple servings of fruits and vegetables each day consume less saturated fat and have healthier diets. In addition, it also appears that fruits and veggies play an important role in lowering the risk of coronary artery disease.

## Try The DASH Diet

**The Dietary Approach to Stop Hypertension (DASH)** is an eating plan which lowers blood pressure effectively and quickly. It is recommended for everyone, whether or not they have high blood pressure. It's based on a 2,000 a day calorie diet. Most women only need about 1,600 calories, while men use about 2,400 calories.

Food Group	Daily Servings	Serving Sizes	Examples	Significance
Grains and grain products	7-8	1 slice bread • ½ cup dry cereal ½ cup cooked rice, pasta or cereal	Whole wheat bread, English muffin, pita bread, bagel, cereals, grits, oatmeal	Major sources of energy and fiber
Vegetables	4-5	1 cup of raw, leafy vegetables ½ cup cooked vegetables 6 oz. vegetable juice	Tomatoes, carrots, peas, squash, broccoli, collards, kale, spinach, artichokes, beans, sweet potatoes	Rich sources of potassium, magnesium, and fiber
Fruits	4-5	6 oz. fruit juice • 1 medium fruit ¼ cup dried fruit ½ cup fresh, frozen, or canned fruit	Apricots, bananas, dates, oranges, orange juice, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, prunes, raisins, strawberries, tangerines	Important sources of potassium, magnesium, and fiber
Low-fat or non-fat dairy foods	2-3	8 oz. milk • 1 cup yogurt 1.5 oz. cheese	Skim or 1% milk, skim or low-fat buttermilk, non-fat or low-fat yogurt, part-skim mozzarella cheese, non-fat cheese	Major sources of calcium and protein
Meats, poultry, and fish	2 or less	3 oz. cooked meat, poultry or fish	Select only lean; trim away visible fat; broil, roast, or bake instead of frying; remove skin from poultry	Rich sources of protein and magnesium
Nuts, seeds, and legumes	4-5 per week	1.5 oz. or ⅓ cup nuts • ½ oz. or 2 tbs. seeds • ½ cup cooked legumes	Almonds, filberts, mixed nuts, peanuts, walnuts, sunflower seeds, kidney beans, lentils	Rich sources of energy, protein, magnesium, potassium, and fiber

Source: National Heart, Lung, and Blood Institute