



# HEART SMART GAZETTE

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All information provided by the American Heart Association and available on their website



## JUMP ROPE FOR HEART

On Friday, January 30 we will be celebrating our participation in the Jump Rope for Heart program. This program helps the American Heart Association fund cardiovascular research and education. Students from Primer through the Fourth grade will jump rope during their physical education classes. Please come join us and bring your tennis shoes!

### Facts to Know

#### How does the heart work?

The normal heart is a strong, muscular pump a little larger than a fist. It pumps blood continuously through the circulatory system. Each day the average heart "beats" 100,000 times and pumps about 2,000 gallons of blood.

The heart has four chambers. The upper two chambers are the right and left atrium, and the lower two are the right and left ventricle. Blood is pumped through the chambers, aided by the four heart valves. The valves open and close to let the blood flow in only one direction.

The heart consists of 2 pumps side by side. The pump on the right side moves blood to your lungs, where waste gases such as CO<sub>2</sub> are removed and O<sub>2</sub> is added. Freshly oxygenated blood returns to the pump on the left side, which moves it out into the rest of your body.

Blood carrying carbon dioxide travels from the right atrium, to the right ventricle, then into the lungs where carbon dioxide is exchanged for oxygen. Blood carrying oxygen travels from the left atrium to the left ventricle and onward to the rest of the body.

#### What is high blood pressure?

Blood pressure is the force in the arteries when the heart beats (systolic pressure) and when the heart is at rest (diastolic pressure). It is measured in millimeters of mercury (mm Hg).

## American Heart Association Recommended Blood Pressure Levels

Blood Pressure Category	Systolic Pressure (mm Hg)	Diastolic Pressure (mm Hg)
Normal	Less than 120	& Less than 80
Prehypertension	120-139	or 80-89
High		
<i>Stage 1</i>	140-159	or 90-99
<i>Stage 2</i>	160 or higher	Or 100 or higher

Even without any symptoms, a blood pressure level in the prehypertensive range can increase your risk of stroke, heart attack, heart failure and kidney failure. High blood pressure is often called the "silent killer" because you can have it for years without knowing it. In fact, about one-third of the 50 million Americans with high blood pressure don't know they have it. Symptoms such as headaches, dizziness or nosebleeds typically don't occur until high blood pressure has advanced to a higher stage. But many people with uncontrolled high blood pressure never have any of these symptoms.

You may be able to lower your blood pressure with lifestyle changes. Start with a diet high in fruits and vegetables and low in fat and saturated fat while decreasing salt and sodium intake. Then make sure you get at least 30 minutes a day of physical activity on most days of the week. Lifestyle changes are not always enough and your doctor may prescribe medication. It is important to take medicine exactly as prescribed and never stop taking it without your doctor's permission.

#### Why is LDL cholesterol considered "bad"?

When too much LDL cholesterol circulates in the blood, it can slowly build up in the inner walls of the arteries that feed the heart and brain. Together with other substances it can form plaque, a thick, hard deposit that can clog those arteries. This condition is known as atherosclerosis. If a clot forms and blocks a narrowed artery, it can cause a heart attack or stroke. The levels of HDL cholesterol and LDL cholesterol in the blood are measured to evaluate the risk of having a heart attack.

LDL cholesterol of less than 100 mg/dL is the optimal level. Less than 130 mg/dL is near optimal for most people. A high LDL level (more than 160 mg/dL or 130 mg/dL or above if you have two or more risk factors for cardiovascular disease) reflects an increased risk of heart disease. That's why LDL cholesterol is often called "bad" cholesterol.

### **Why is HDL cholesterol considered "good"?**

About one-third to one-fourth of blood cholesterol is carried by high-density lipoprotein (HDL). HDL cholesterol is known as the "good" cholesterol because a high level of it seems to protect against heart attack. (Low HDL cholesterol levels [less than 40 mg/dL] increase the risk for heart disease.) Medical experts think that HDL tends to carry cholesterol away from the arteries and back to the liver, where it's passed from the body.

### **Triglycerides**

Triglyceride is a form of fat. It comes from food and is also made in your body. People with high triglycerides often have a high total cholesterol, a high LDL cholesterol and a low HDL cholesterol level. Many people with heart disease also have high triglyceride levels. People with diabetes or who are obese are also likely to have high triglycerides. Triglyceride levels of less than 150 mg/dL are normal; levels from 150–199 are borderline high. Levels that are borderline high or high (200–499 mg/dL) may need treatment in some people. Triglyceride levels of 500 mg/dL or above are very high. Doctors need to treat high triglycerides in people who also have high LDL cholesterol levels.

### **What Are Healthy Levels of Cholesterol?**

#### **Your total blood cholesterol level**

Your total blood cholesterol will fall into one of these categories:

**Desirable** — Less than 200 mg/dL

**Borderline high risk** — 200–239 mg/dL

**High risk** — 240 mg/dL and over

Here is some more explanations about each of these categories.

#### **Desirable**

If your total cholesterol is less than 200 mg/dL, your heart attack risk is relatively low, unless you have other risk factors. Even with a low risk, it's still smart to eat foods low in saturated fat, trans fat and cholesterol, and also get plenty of physical activity.

Have your cholesterol measured every five years- or more often if you are a man over 45 or a woman over 55.

### **Cholesterol Ratio**

Total blood cholesterol is the most common measurement of blood cholesterol. It's the number you normally receive as test results. Cholesterol is measured in milligrams per deciliter of blood (mg/dL). Knowing your total blood cholesterol level is an important first step in determining your risk for heart disease. However, a critical second step is knowing your HDL or "good" cholesterol level.

Some physicians and cholesterol technicians use the ratio of total cholesterol to HDL cholesterol in place of the total blood cholesterol. The American Heart Association recommends that the absolute numbers for total blood cholesterol and HDL cholesterol levels be used. They're more useful to the physician than the cholesterol ratio in determining the appropriate treatment for patients.

The ratio is obtained by dividing the HDL cholesterol level into the total cholesterol. For example, if a person has a total cholesterol of 200 mg/dL and an HDL cholesterol level of 50 mg/dL, the ratio would be stated as 4:1. The goal is to keep the ratio below 5:1; the optimum ratio is 3.5:1.



### **How Does Smoking Affect Your Cardiovascular System?**

Cigarette smoke puts added strain on the heart because it causes vessels to clamp down or constrict. If some of the blood vessels have already been narrowed or damaged by heart disease, smoking makes the problem worse.

Smoking also causes temporary changes in your heart; it beats faster, raising your blood pressure and reducing blood flow. Smoking also increases the level of carbon monoxide in your blood, which robs your heart and other tissues of vital oxygen.

#### **Did you know?**

Due to American Heart Association research funding, people are able to take medication that helps lower high cholesterol or high blood pressure. People who have pacemakers or stents are also beneficiaries of American Heart Association funding.