

TerranearPMC Safety Share

Week of September 2, 2014 – Cholesterol

Last month was National Cholesterol Education Month. This is a time where health organizations throughout the nation campaign for the population to be aware of the health effects caused by an unhealthy accumulation of cholesterol in our bodies: the substance that has been identified as being responsible for increased health risks for heart attacks and strokes – two leading causes of death in the United States. One way to prevent these diseases is to detect high cholesterol and treat it when it is found. Another way is prevention; that is doing certain things like exercise and understanding what foods to avoid as well as what foods to become part of our regular diet.

The word “Cholesterol,” is derived from the Ancient Greek words for bile (*chole*) and *stereos* (solid), followed by the chemical suffix *-ol* for an alcohol. Thus cholesterol is an organic steroid, or sterol. It is also a lipid molecule that is biosynthesized by all animal cells. While too much cholesterol is unhealthy, it nevertheless is an essential structural component of cell membranes, necessary to maintain structural integrity and fluidity. Cholesterol is capable of changing shape which enables it to have the capability to move about, unlike bacteria and plant cells which are restricted by their cell walls.

Cholesterol is a waxy, fat-like substance that in excess amounts can build up on the walls of arteries and form blockages. This can lead to heart disease, heart attack, and stroke.

There are two kinds of cholesterol: high-density lipoprotein (HDL) and low-density lipoprotein (LDL). HDL is also called "good" cholesterol. LDL is called "bad" cholesterol. When we talk about high cholesterol, we are talking about "bad" LDL cholesterol. The latest information indicates that LDL levels less than 130 milligrams per deciliter (mg/dl) of blood is considered good, while numbers exceeding 160 is high. For HDL, the higher the number the better with levels less than 40 are being considered to be too low.

Seventy-one million American adults have high cholesterol or poor cholesterol levels (meaning high LDL or low HDL levels), but only one-third of them have the condition under control. That means many Americans do not know they are at risk to a heart attack or stroke. Screening is the key to detecting high cholesterol. Because high cholesterol does not have symptoms, many people do not know that their cholesterol is too high. Screening is a simple blood test to check your cholesterol level.

While the National Cholesterol Education Program recommends that adults aged 20 years or older have their cholesterol checked every 5 years, one may need to have cholesterol levels checked more often if any of the following statements applies:

- Your total cholesterol is 200 mg/dL or higher.
- You are a man older than age 45 or a woman older than age 50.
- Your HDL cholesterol is lower than 40 mg/dL.
- You have other risk factors for heart disease and stroke.



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Although the number of people who said they were screened for cholesterol within the previous 5 years increased from 73% to 76% from 2005-2009, only a handful of states have met the goal of 82% Healthy People set for 2020.

Below are some proactive or therapeutic lifestyle changes we can do to help control unhealthy cholesterol levels.

- **Eating a healthy diet.** Avoid saturated fats and trans fats, which tend to raise cholesterol levels. Other types of fats, such as polyunsaturated fats, can actually lower blood cholesterol levels. Eating fiber also can help lower cholesterol.
- **Exercising regularly.** Physical activity can help lower cholesterol. The Surgeon General recommends that adults engage in moderate-intensity exercise for 2 ½ hours every week.
- **Maintaining a healthy weight.** Being overweight or obese can raise your cholesterol levels. Losing weight can help lower your cholesterol.
- **Not smoking.** If you smoke, quit as soon as possible.

As far as a healthy diet goes, oatmeal always seems to be a primary recommendation. Oatmeal contains soluble fiber (“Thank you Mrs. Castorini, I would LOVE some oatmeal!” – anyone knows the movie where that comes from?). Fiber reduces your low-density lipoprotein (LDL), the “bad,” cholesterol by reducing your body’s ability to absorb LDL. Soluble fiber is also found in such foods as kidney beans, apples, pears, barley and prunes. Five to 10 grams or more of soluble fiber a day decreases your total and LDL cholesterol!

Eating fatty fish can be heart healthy because of its high levels of omega-3 fatty acids, which can reduce your blood pressure and risk of developing blood clots. In people who have already had heart attacks, fish oil — or omega-3 fatty acids — reduces the risk of a sudden reoccurrence.

You should bake or grill the fish to avoid adding unhealthy fats. If you don't like fish, you can also get small amounts of omega-3 fatty acids from foods like ground flaxseed or canola oil. Just remember that you may take an omega-3 or fish oil supplement to get some of the benefits, but you won't get other nutrients in fish, such as selenium.

Walnuts, almonds and other nuts can reduce blood cholesterol. Rich in polyunsaturated fatty acids, walnuts also help keep blood vessels healthy. Eating about a handful (1.5 ounces, or 42.5 grams) a day of most nuts, such as almonds, hazelnuts, peanuts, pecans, some pine nuts, pistachio nuts and walnuts, may reduce your risk of heart disease. Just make sure the nuts you eat aren't salted or coated with sugar. All nuts are high in calories, so a handful will do.

Olive oil has been given a lot of recognition lately as being a potent mix of antioxidants that can lower your “bad” (LDL) cholesterol but leave your “good” (HDL) cholesterol untouched.

Margarines, orange juice and yogurt drinks with added plant sterols can help reduce LDL cholesterol by more than 10 percent: However, there is substantial controversy these days regarding margarine. Therefore orange juice may be the better option as the amount of daily plant sterols needed for positive results is at least 2 grams. This equates to about two 8-ounce (237-milliliter) servings of plant sterol-fortified orange juice a day.

TELL ME WHAT YOU EAT, AND I'LL TELL YOU WHO YOU ARE

Jean Anthelme Brillat-Savarin (French lawyer and politician, and an epicure and gastronome)

