

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Narrator

Meet John Douglas. He's 73 years old, and a retired businessman who is now involved in commercial real estate. His total serum cholesterol level is low at 157, his Low Density Lipoprotein –cholesterol, LDL-C is 87 and his High Density Lipoprotein-cholesterol HDL-C is 70, both look good. We'll explain all of this in just a bit.

Natural Sound

“Good morning”

John Douglas

Real Estate Agent

“They told me it was the best they had seen in a while in somebody of my age.”

Narrator

John's secrets: routine regular exercise, cigarette avoidance and a healthful diet.

John Douglas

“Well, I like to do a certain amount of exercise but primarily I'm very much in to fruits and vegetables and try to stay away from cheeses and that sort of thing. I was told once a long time ago that cheese is nothing but a ball of fat. I believed that then and I believe it now.”

Narrator

John, who is of Greek ancestry, benefited from the Mediterranean style diet his mother and father served in their household.

John Douglas

“The philosophy of the Mediterranean diet is there should always be vegetables prepared with meats and so forth, so that you're not overindulging in meat and fats and cheeses and that you're really constantly going on the vegetables and fruits.”

Narrator

John's healthful lifestyle habits help keep his blood cholesterol levels within the normal range and reduce his risk for developing cardiovascular disease such as a heart attack or a stroke

Narrator

Cholesterol is a soft, waxy substance that's found in the body's cells and carried along with fats in the bloodstream. The human body needs a certain amount of cholesterol to function properly.

Richard Safeer, MD

American Heart Association

“Cholesterol is a nutrient and like any nutrient our body needs cholesterol.”

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Narrator

Cholesterol is essential for normal body function, and it comes from two sources. Much of it is manufactured in the liver, and it is found in almost every organ of the body; it is used to form cell membranes, manufacture hormones, plus a number of other important body chemicals. The other source of cholesterol is from food. When a person eats foods containing fats and cholesterol the food is broken down by digestive enzymes and the fats and cholesterol are absorbed through the small intestine.

And are sent to the liver for processing, storage and shipping throughout the body. Cholesterol and fats are members of a family of molecules called lipids. Cholesterol and fat molecules can't travel through blood in their original form because as fatty substances they don't mix with water, a major component of blood. So, cholesterol and fat are packaged with special proteins called lipoproteins, which are soluble and thus can travel through the blood.

The major cholesterol carriers in the blood are called the low-density lipoproteins or LDLs. Since LDL cholesterol is the prominent cholesterol laid down in the walls of arteries, it is often called the *bad* cholesterol.

Overtime, it can build up in the artery walls and together with other substances it can form a thick hard deposit called plaque that can cause narrowing and eventually may cause clogging of those arteries. This condition is commonly called hardening of the arteries, more accurately known as *atherosclerosis*. Atherosclerosis is a major cause of heart attacks and strokes.

In contrast, another type of cholesterol carrier are the high-density lipoproteins or HDLs. HDLs are responsible for removing cholesterol from the arterial walls and carrying it back to the liver to be repackaged or metabolized. Because of this ability to clear the arteries HDL is often referred to as the *good* cholesterol.

Richard Safeer, MD

University of Maryland / Clinical Professor

“HDL cholesterol is an important ingredient in keeping our blood vessels healthy.”

Narrator

Triglycerides the most common form of fat in the body also travel in the bloodstream as *lipoproteins*.

Neil Stone, MD

Northwestern University Hospital

“Triglycerides are storage fats this is the fat that you ingest on a daily basis.”

Narrator

The level of triglycerides, HDL cholesterol and LDL cholesterol all work together to determine one's risk for cardiovascular disease.

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Roger Blumenthal, MD

Johns Hopkins Hospital

“One’s total cholesterol, HDL, triglycerides and LDL all contribute to the risk that someone may have for a future heart attack and stroke. Clearly one's higher cholesterol values are associated with a greater chance of developing damage to the inner lining of the blood vessels of what we normally term, hardening of the arteries.

Narrator

Because of the strong connection between high blood cholesterol levels and the risk of future heart attacks or strokes, the National Cholesterol Education Program, recommends all adults after the age of twenty get what is called a lipoprotein profile, a blood test for fats and cholesterol at least every five years. The blood test includes the HDL cholesterol level, LDL cholesterol level, the total cholesterol level, as well as the triglycerides level.

The goal for every individual is to keep all of those levels in the normal range throughout life.

Roger Blumenthal, MD

Johns Hopkins Hospital

“A normal total cholesterol is less than 200 and normal HDL cholesterol for a man is greater than 40 and for a woman it's probably 10 points higher greater than 50. The bad LDL cholesterol should be less than 130 and the triglycerides, or the blood fats should be less than 150.”

Narrator

Those cholesterol guidelines may change depending on a person’s age or risk factors for cardiovascular disease. Up next, we’ll take a look at how risk factors for heart disease play a role in determining optimal blood cholesterol levels.

Narrator

High blood levels of cholesterol can increase your risk for coronary artery disease, heart attack and stroke, especially when they are in combination with other risk factors.

Roger Blumenthal, MD

Johns Hopkins Hospital

“The risk factors for a heart attack or stroke are increasing age, increasing blood pressure, increasing cholesterol, cigarette smoking, diabetes, lack of exercise, a high-fat diet as well as a family history of early heart disease in a relative.”

Narrator

Those risk factors play a key role in determining how low the LDL cholesterol should be.

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Narrator

For adults with just one of those risk factors: LDL should be 130 or below.
For adults with two or more risk factors: for example those with a family history of heart attack or stroke, or who smoke, or who are overweight, or have hypertension and/or diabetes, the LDL should be kept at 100 or below.

For patients who are considered at very high risk: those who already have cardiovascular disease, and also either smoke, have diabetes and/or hypertension, are judged to be at much higher risk of having a heart attack or stroke. Experts have determined that there should be a new goal of achieving and maintaining an LDL of 70 or below.

Patients should talk with their doctors to determine if an LDL of 70 is an appropriate goal for them after considering their individual risk factors.

Narrator

Charles Fiore is 63 and after a routine check up he discovered his cholesterol was high. The reading scared him because he had a strong family history of heart disease.

Charles J. Fiore

Patient

“My father died at 45 years old from atherosclerosis, his brother had open heart surgery at 40 he subsequently died at 62, his father, my grandfather died at 62 and another brother has angina.

Narrator

Charles’ family history put him at risk especially because his relatives had heart attacks at such young ages. Patients with this sort of strong family history should have their lipoprotein profiles studied early on.

Richard Safeer, MD

American Heart Association

“Children at some point between childhood and adolescence should probably have their cholesterol checked once just to make sure that there's no genetic abnormality that put them at high risk, specifically children of parents who've had heart disease at a young age.”

Narrator

Many patients can considerably reduce their chance of developing cardiovascular disease and improve their quality of life by making appropriate lifestyle changes to avoid risk factors. Coming up next, we’ll show you how lowering fat intake can help reduce the level of bad cholesterol, plus we’ll explain the difference between good fat and bad fat.

###

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Narrator

A diet rich in fruits and vegetables can help maintain or lower cholesterol levels, especially if patients, at the same time, avoid or minimize foods that contain or are prepared with a lot of saturated fats and contain too many calories.

Fat is necessary to fuel the body, and is one of the best energy sources. Fats can be divided into three types: saturated...monounsaturated...and...polyunsaturated. Saturated fatty acids are the main culprit in raising cholesterol levels.

Roger Blumenthal, MD

Johns Hopkins Hospital

"The saturated fats are considered to be the more harmful type of fats, the higher level of saturated fats in the diet the higher your level of LDL or bad cholesterol."

Narrator

Saturated fats exist in all animal products: beef, lamb, pork, poultry, seafood, butter, eggs and other dairy products. Reducing intake of these types of food can lower LDL cholesterol and decrease your calorie consumption.

And in addition to naturally saturated fats are oils that have been chemically changed to be more saturated: these are called "trans-fats".

These are fats that are created when oils are "partially hydrogenated." Trans-fats are used to extend the shelf life of many commercially prepared baked goods. Trans fats can be found in vegetable shortenings, some margarines, crackers, cookies and snack foods. Trans-fats like saturated fats raise the LDL cholesterol.

Now, let's talk about the good fats. Monounsaturated fat lowers total blood cholesterol by lowering LDL cholesterol, without lowering HDL cholesterol. These fats are generally found in vegetable oils such as olive oil, peanut oil and canola oil.

Polyunsaturated fats are found in vegetable oils such as corn oil, safflower oil, and sunflower oil. Polyunsaturated fats are also present in fish and fish oils, which also help decrease triglyceride levels. Polyunsaturated fats lower LDL cholesterol and total cholesterol, but they also lower HDL cholesterol, therefore, this fat should be limited to a certain degree.

Some types of foods contain unique polyunsaturated fats called Omega-3 fatty acids. These fatty acids seem to make blood platelets less sticky and thus less likely to provoke a clot. And this will decrease the risk of artery blockage and heart attacks.

Fish with high amounts of Omega-3 include salmon, albacore tuna, mackerel, sardines, herring and rainbow trout. Other foods high in Omega 3's include flaxseed and eggs.

Remember, no matter how good they are, too many of any of these fats will increase dietary fat intake, and may cause patients to gain weight. You will recall that excess body weight is one of the known risk factors that can increase blood cholesterol levels.

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Narrator

The American Heart Association recommends limiting fat intake to no more than 30% of daily calories. So, a 2,000-calorie-a-day diet should contain no more than 65 grams or a little less than 600 calories of fat. If patients follow these recommendations, and read labels which now are required to list the percentage of fat in food, they can drop excess weight, and lower their cholesterol levels.

Roger Blumenthal, MD

Johns Hopkins Hospital

“Clearly one of the things we like people to do is to count the number of calories they take in, in the course of the day. For instance, if somebody’s taking in 2000 cal a day if they can decrease that by about 300 calories a day and get in an extra 10 to 15 minutes of added brisk exercise a day then they will lose a couple pounds a month.”

So, people need to realize it can be just one to 2 pounds of weight loss per month with better dietary and lifestyle habits that can markedly improve their cholesterol numbers, blood pressure numbers and can also significantly decrease their risk of a heart attack and stroke.”

Narrator

One added note about weight: Total body fat is not the only indication of weight related heart problems, fat distribution is just as important. In fact, many researchers believe too much fat around the abdomen poses a greater health risk than fat stored in the lower half of the body.

It’s considered the most dangerous kind of weight gain and a major risk factor for cardiovascular disease because excess fatty deposits around the abdomen appear to indicate a higher level of LDL cholesterol inside the walls of the arteries. As a very general rule: an unhealthy waist circumference for women is above 35 inches, and an unhealthy waist circumference for men is above 40 inches.

Coming up next, we’ll show you which foods can help you lower your blood cholesterol levels and how exercise can help.

Narrator

The right foods can help lower cholesterol.

Non-animal products like fruits, vegetables, grains, nuts and seeds contain no cholesterol, but do contain a lot of fiber. This high fiber content soaks up cholesterol like a sponge and makes it easier for the body to eliminate it. Fiber is best when eaten raw as in salads and uncooked vegetables.

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Two specific foods that lower cholesterol are oatmeal and avocado. The soluble fiber found in whole grain oatmeal is thought to help reduce high blood cholesterol levels. And avocados are high in monounsaturated fatty acids, the good fat.

Charles Fiore was given two choices from his doctor in how to lower his blood cholesterol levels: medications or alter his lifestyle. He chose lifestyle and that seems to have worked for him.

Charles J. Fiore **Patient**

“Not being one that enjoys medication he introduced me to Lisa Bookstein the nutritionist in his practice and I started with her. Over a period of about 2 1/2 to three years she managed to change my diet to a much healthier diet, much lower volumes of food. I feel tremendous.”

Lisa Bookstein **Nutritionist**

“The most difficult thing for patients to do when they're trying to lower their cholesterol is their portions still remain too large. For example if you ask them to cut over to chicken breast they can do that but they still might be eating two or if they're eating bread at dinner instead of just having one piece of bread at dinner they might still be eating three or four. So portion control still remains the cornerstone of how to make changes into a new and healthier lifestyle.”

Narrator

In addition to diet, regular physical activity can increase HDL, the good cholesterol, in most people.

Richard Safeer, MD **American Heart Association**

Exercising helps us burn calories and helps us convert fat to muscle and helps lower cholesterol.”

Narrator

Moderate intensity activities, if done daily and kept up for at least 30 minutes, enough to work up a bit of sweat, will reduce a person's risks.

Lowering high blood cholesterol, lowering LDL and raising HDL through diet and exercise should become a familiar mantra for all of us since it can help prevent heart problems and stroke for most people.

Lisa Bookstein **Nutritionist**

“If you don't make time for health and fitness now sooner or later you'll have to make time for illness.”

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Narrator

Another lifestyle change perhaps equally critical along with changing the diet and adding exercise - is quitting smoking. In fact, many experts believe one of the best things you can do to improve your overall quality of life and help you enjoy a healthful old age, as well as lowering your level of bad cholesterol is to quit smoking.

Richard Safeer, MD

University of Maryland / Clinical Professor

“Smoking not only is bad for your lungs and directly contributes to heart disease by making your heart work harder, but it also has a bad effect on your cholesterol level.”

Narrator

There are many medications and programs to help you quit smoking for good. Ask your health professional if these are appropriate for your individual needs.

Millions of Americans take medication to lower their cholesterol levels but all medications have side effects, and cholesterol-lowering drugs are no exception. Patients with higher than recommended cholesterol levels should explore all available options with their health care providers.

In summary – if you don’t know what your lipoprotein profile numbers are, find out. Every adult age twenty and over should have a lipoprotein blood test done every five years, as long as the results remain within the normal range.

Watch out for saturated and trans fats: limit or avoid high cholesterol foods such as too much beef, lamb, pork, poultry, seafood, processed meats, butter, eggs and other dairy products.

Eat more healthful foods: fruits, vegetables, grains, nuts, seeds, oatmeal and avocado, which all contain no cholesterol and are recommended to help lower blood cholesterol levels. A diet containing these foods can help you live longer and healthier.

Exercise. Get going and move. Regular exercise like walking, gardening, walking the stairs at work or walking mid-day at the office can markedly improve your health. More vigorous daily exercise is even better: swimming, cycling, hiking, jogging, tennis, golf if you walk and carry your clubs, gym workouts. Find something you really enjoy, and make it a part of your daily life.

Watch Your Weight: Even if all you eat is healthful food, additional body fat can raise cholesterol levels on their own. Remember keep ingestion of fat, all fats good and bad, to no more than 30 percent of your daily intake of food.

THE PATIENT CHANNEL PRESENTS: PREVENTING HIGH CHOLESTEROL

Roger Blumenthal, MD
Johns Hopkins Hospital

“People need to realize that if their weight is trending upwards they need to make some changes in their lifestyle, because it's so much harder when you're older to lose weight than to start good exercise habits when you're in your 50s or 60s. It's much better to try to maintain those good exercise habits when you're in your 20s and 30s.”

Narrator

And quit smoking.

And, if necessary, talk with your doctor about appropriate medications. Cardiovascular disease remains the number one killer of both men and women, and high blood cholesterol levels are a major risk factor for a heart attack, stroke or, even death.

This program was reviewed by:

Bruce B. Dan, MD
Managing Editor
The Patient Channel

Robert H. Moser
Executive Vice President Emeritus
American College of Physicians

Dr Blumenthal and Dr. Safeer appear on this program courtesy of the American Heart Association.

Dr. Stone appears on this program courtesy of the National Heart Lung and Blood Institute and the National Cholesterol Education Program

For more information on Cholesterol and Heart Disease please visit the American Heart Association website @ www.heart.org

Or visit the National Heart Lung and Blood Institute website @ www.nhlbi.nih.gov

For menus specifically designed to reduce cholesterol levels please visit our website @ www.thepatientchannel.com