



## **Cholesterol**

Despite its bad reputation, cholesterol is a type of fat that exists in all cell membranes. Cholesterol is vital for such physiological functions as:

- ✓ transmission of nerve impulses
- ✓ formation of vitamin D (essential for calcification of bones)
- ✓ synthesis of testosterone and oestrogen (major reproductive hormones)
- ✓ formation of bile (needed to break down fats & eliminate toxins)
- ✓ keeping the cell healthy and functioning properly.

Cholesterol serves as a starting point for the synthesis of four critical regulatory hormones in the body which help maintain essential functioning of biological mechanisms.

Approximately 80% of total body cholesterol is manufactured in the liver with the remaining 20% derived from the diet. The liver balances total body cholesterol depending on dietary intake. However, when dietary intake is chronically high, the liver's ability to compensate with decreased production may become compromised.

### **Numerous factors increase high blood cholesterol:**

- × low fibre intake
- × high sugar intake
- × caffeine
- × **stress**
- × lack of exercise
- × smoking
- × high fat intake
- × nutrient deficiencies

A healthy liver filters cholesterol for removal from the body as bile salts. Many cholesterol-lowering medications inhibit liver production of cholesterol but in so doing also inhibit the liver's ability to filter out cholesterol for removal. This cholesterol then becomes oxidised and more prone to causing plaque build up in blood vessels.

### **How to keep cholesterol at a healthy level**

By ensuring a **healthy lifestyle, nutritious diet** and **functioning digestive system**, cholesterol imbalances may be controlled naturally. Due to the liver's function in maintaining healthy cholesterol levels, it is imperative that this organ be healthy. A great way to check is by **Haemaview Live Blood Screening** which reveals signs of liver stress long before dangerous enzymes are released and traceable in blood pathology.



When having your **cholesterol levels checked, request a breakdown** of the following components in order to receive an accurate indication of what's happening in your body:

**LDL** = low density lipids which float freely in the blood stream and are considered "**bad**" cholesterol

**HDL** = high density lipids which collect the LDL for removal by the liver and are considered "**good**" cholesterol

**Triglycerides** = major cause for inflammation within the body and are stored as fat and often an **indicator of insulin resistance**

**Trans-fats** = these are plant-derived fats that have had their structure changed due to food processing (margarine, vegetable shortenings and any foods containing these products such as cakes, biscuits and hot chips). The body is unable to get rid of trans-fats so they **accumulate in tissues and blood vessels** and increase triglyceride levels in the blood stream.

**When you have a blood test insist on a full breakdown of your cholesterol levels.**

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## **Expert opinions on cholesterol:**

### **Eating More Frequently May Lower Your Cholesterol**

A person's cholesterol levels may depend not only on what he or she eats, but also how often.

Researchers found that middle-aged and older adults who ate frequently throughout the day had lower "bad" cholesterol levels compared with those who tended to down one or two large meals per day. This was despite the fact that the frequent eaters, on average, had a higher calorie and fat intake.

The researchers looked at data on more than 14,600 men and women aged 45 to 75 who were part of a larger cancer study. Participants were asked about their current eating habits and activity levels, and had their cholesterol levels, blood pressure and weight recorded.

The researchers found that participants' **total cholesterol counts declined as their eating frequency increased.** Those who ate at least five or six times a day had the lowest total cholesterol, on average, while the highest measurements were found among those who dined only once or twice a day. The same pattern showed up for LDL ("bad") cholesterol.

They found a decrease of approximately 5% in concentrations of total cholesterol and low density lipoprotein (LDL) cholesterol in men and women who eat six or more times a day compared with those who eat once or twice a day.

Frequent eaters did not, however, have higher levels of "good" HDL cholesterol, which is believed to help protect the heart from disease.



Yet the findings are biologically plausible. Animal research has shown that those given infrequent large meals show metabolism patterns different from animals fed more often -- including a higher absorption of sugar in the intestines, higher after-meal peaks of the sugar-regulating hormone insulin, and greater activity in enzymes that synthesize cholesterol.

As for humans it could also be that **frequent eaters metabolize what they eat rather differently than infrequent eaters.**

Despite the higher calorie and fat intake among frequent eaters in this study, the findings do not give people license to gorge on French fries.

The authors stressed that their data do not provide evidence for advocating frequent snacking on junk food. They advised that people who wish to hold down their cholesterol levels should first and foremost eat more fruits and vegetables and cut their saturated fat intake.

**British Medical Journal December 1, 2001;323:1286-1288**

Some interesting information regarding cholesterol-lowering medications can be found at:

<http://www.mercola.com/article/statins.htm#>

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### **New Cholesterol Guidelines Issued**

New federal guidelines for managing cholesterol issued in the US will increase the number of Americans who are treated for high cholesterol -- either by diet or drugs -- by roughly **36 million.**

Among other changes, the guidelines now recommend

- **an even lower intake of saturated fat**
- **a higher blood level of HDL, or "good" cholesterol**
- **more rigorous testing of fatty substances in the blood (triglycerides)**

People with high cholesterol are said to be at risk for heart disease, the **leading cause of death in the US.**

About 500,000 Americans die of heart disease each year. Other risk factors include

- **smoking**
- **excess weight**
- **a sedentary lifestyle**
- **type 2 diabetes**



The guidelines update the previous recommendations made in 1993. The new recommendations still focus on lowering LDL, or "bad" cholesterol, with a level below 100 milligrams per deciliter of blood (mg/dL) still considered ideal.

However, the guidelines include a change in the recommended level of HDL or "good" cholesterol. Now an HDL level of less than 40 mg/dl is considered to be a risk factor for heart disease, as opposed to 35 mg/dl.

The guidelines also place greater emphasis on **triglycerides**, another fatty substance in the blood. The guidelines recommend that doctors urge patients whose triglyceride level is borderline to lose weight and exercise.

Healthy adults should also have a lipoprotein analysis, which measures triglycerides, total cholesterol, LDL and HDL cholesterol once every 5 years. Previously, a screening test that looked only at total and LDL cholesterol was advised.

Recommendations include:

- Patients should consume no more than 7% of calories from saturated fat rather than the previous recommendation of 10%.
- Adults are advised to consume no more than 35% of calories from total fat, up from the previous recommendation of 30%, provided that the main source is unsaturated fat, which does not raise cholesterol levels.
- The new target for cholesterol is less than 200 mg a day versus the previous target of under 300 mg.

The soluble fibre found in cereal grains, beans, peas, legumes, and fruits and vegetables may help to lower cholesterol level, and exercising and maintaining a healthy body weight have been shown reduce LDL cholesterol and boost HDL cholesterol levels.

Women are **advised against choosing hormone replacement therapy** (HRT) as a replacement for cholesterol-lowering drugs. According to the NHLBI, HRT does not appear to lower the risk for a major heart attack among postmenopausal women with heart disease and may increase the risk of stroke.

Overall, the guidelines mean that **65 million** Americans should make dietary changes to lower cholesterol, up from 52 million who are now candidates, and **36 million should be taking cholesterol-lowering drugs**, compared with 13 million who are prescribed the drugs.

**The Journal of the American Medical Association May 16 2001;285:2486-2497**

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**Dr. Mercola's Comment:**

OK, here we go again. Now the "experts" have raised the ante. They changed the "normal" range so even more people will be put on cholesterol lowering drugs.

Prior to the new recommendations 13 million Americans "qualified" to be placed on these drugs. With these new recommendations 36 million Americans now qualify -- nearly triple the amount.

After all, that is the answer, isn't it? If people can't lower their cholesterol by following the low-fat nonsense then they need to take these drugs to prevent them from falling prey to the number one killer in the US, heart disease.

Hogwash. Nothing could be further from the truth.

If you have been receiving the newsletter for some time you will be familiar with my position on this issue. If not, I would encourage you to study the links below.

About one year ago the experts predicted that HALF the population will be taking these types of drugs.

The big issue here is that these potent medications will be over the counter in the near future with a massive PR campaign to encourage people to swallow these potentially dangerous drugs.

The amazing thing about these new recommendations is that they completely ignore the previously published evidence that are quite clear in documenting that the actual cholesterol level itself is not the most important risk factor. It is actually the ratio between the level of total cholesterol and HDL.

The ideal HDL/cholesterol ratio should be higher than 25% and generally speaking the higher the better.

The ideal triglyceride/cholesterol ratio should be below 2.0.

If you did not know any better and just listened to the "experts" you would think cholesterol is an evil substance and that most of us would benefit from lowering our cholesterol as low as possible.

Not so. Cholesterol is a vitally important substance that is responsible for building our cell membranes and many of our hormones. If the level drops to low we are actually at increased risk for depression.

There are likely to be some people who benefit from them, but it is probably far less than 5% of the people who currently take them. These are individuals with total cholesterol above 350 who have inherited liver processing problems.

If these individuals take the statin drugs however, they should also take Coenzyme Q10, which is important for heart health and, like cholesterol, is reduced when one takes these



drugs. The proper way for nearly everyone else to control their cholesterol levels is by reducing their grain intake by following the food choice program I recommend.

Another problem is the fact that low cholesterol is associated with numerous problems, as you can see from some of the studies below.

[http://www.mercola.com/2001/may/26/cholesterol\\_guidelines.htm](http://www.mercola.com/2001/may/26/cholesterol_guidelines.htm)