

The Low-Down on Cholesterol:

Why You Need It -- and the Real Methods to Get Your Levels Right

DR. MERCOLA



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Cholesterol could easily be described as the smoking gun of the last two decades. It's been responsible for demonizing entire categories of foods (like eggs and saturated fats) and blamed for just about every case of heart disease in the last 20 years.

Yet not too long ago, cholesterol, and the fear that yours is too high was rarely talked about. And even long before that there was no such thing as a heart disease epidemic.

Somewhere along the way however, cholesterol became a household word -- something that you must keep as low as possible, or suffer the consequences.

You are probably aware that there are many myths that portray fat and cholesterol as one of the worst foods you can consume. Please understand that these myths are actually harming your health.

Not only is cholesterol not going to destroy your health (as you have been led to believe), but it is not the cause of heart disease.

And for those of you taking cholesterollowering drugs, the information that follows could not have gotten to you fast enough. But before I delve into this life-changing information, let's get some basics down first.



What is Cholesterol, and Why Do You Need It?

That's right, you do *need* cholesterol.

This soft, waxy substance is found not only in your bloodstream, but also in every cell in your body, where it helps to produce cell membranes, hormones, vitamin D and bile acids that help you to digest fat. Cholesterol also helps in the formation of your memories and is vital for neurological function.

Your liver makes about 75 percent of your body's cholesterol,¹ and according to conventional medicine, there are two types:

- 1. **High-density lipoprotein, or HDL:** This is the "good" cholesterol that helps to keep cholesterol away from your arteries and remove any excess from arterial plaque, which may help to prevent heart disease.
- Low-density lipoprotein, or LDL: This "bad" cholesterol circulates in your blood and, according to conventional thinking, may build up in your arteries, forming plaque that makes your arteries narrow and less flexible (a condition called atherosclerosis). If a clot forms in one of these narrowed arteries leading to your heart or brain, a heart attack or stroke may result.

Also making up your total cholesterol count are:

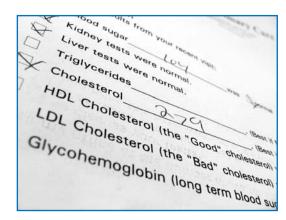
- Triglycerides: Elevated levels of this dangerous fat have been linked to heart disease and diabetes. Triglyceride levels are known to rise from eating too many grains and sugars, being physically inactive, smoking cigarettes, drinking alcohol excessively and being overweight or obese.
- Lipoprotein (a), or Lp(a): Lp(a) is a substance that is made up of an LDL "bad cholesterol" part plus a protein (apoprotein a). Elevated Lp(a) levels are a very strong risk factor for heart disease. This has been well established, yet very few physicians check for it in their patients.

Total Cholesterol is NOT a Good Indicator of Your Heart Disease Risk

Health officials in the United States urge everyone over the age of 20 to have their cholesterol tested once every five years. Part of this test is your total cholesterol, or the sum of your blood's cholesterol content.

The American Heart Association recommends that your total cholesterol is less than 200 mg/dL, but what they do not tell you is that total cholesterol level is just about worthless in determining your risk for heart disease, unless it is above 300.

I have seen a number of people with levels over 250 who actually were at low heart disease risk due to their HDL levels. Conversely, I have seen even more who



had cholesterol levels under 200 that were at a very high risk of heart disease based on the following additional tests:

Your HDL/Cholesterol ratio

Your Triglyceride/HDL ratios

HDL percentage is a very potent heart disease risk factor. Just divide your HDL level by your cholesterol. That percentage should ideally be above 24 percent.

You can also do the same thing with your triglycerides and HDL ratio. That percentage should be below 2.

Keep in mind, however, that these are still simply *guidelines*, and there's a lot more that goes into your risk of heart disease than any one of these numbers. In fact, it was only after word got out that total cholesterol is a poor predictor of heart disease that HDL and LDL cholesterol were brought into the picture. They give you a closer idea of what's going on, but they still do not show you everything.

Cholesterol is Neither "Good" Nor "Bad"

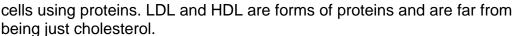
Now that we've defined good and bad cholesterol, it has to be said that there is actually only **one** type of cholesterol. Ron Rosedale, MD, who is widely considered to be the leading anti-aging doctor in the United States, does an excellent job of explaining this concept:²

"Notice please that LDL and HDL are lipoproteins -- fats combined with proteins. There is only one cholesterol. There is no such thing as "good" or "bad" cholesterol.

Cholesterol is just cholesterol.

It combines with other fats and proteins to be carried through the bloodstream, since fat and our watery blood do not mix very well.

Fatty substances therefore must be shuttled to and from our tissues and



In fact we now know there are many types of these fat and protein particles. LDL particles come in many sizes and large LDL particles are not a problem. Only the so-called small dense LDL particles can potentially be a problem, because they can squeeze through the lining of the arteries and if they oxidize, otherwise known as turning rancid, they can cause damage and inflammation.

Thus, you might say that there is 'good LDL' and 'bad LDL.'

Also, some HDL particles are better than others. Knowing just your total cholesterol tells you very little. Even knowing your LDL and HDL levels will not tell you very much."

Cholesterol is Your Friend, Not Your Enemy

Before we continue, I really would like you to get your mind around this concept.

In the United States, the idea that cholesterol is evil is very much engrained in most people's minds. But this is a very harmful myth that needs to be put to rest right now.

"First and foremost," Dr. Rosedale points out, "cholesterol is a vital component of every cell membrane on Earth. In other words, there is no life on Earth that can live without cholesterol.

That will automatically tell you that, in and of itself, it cannot be evil. In fact, it is one of our best friends.

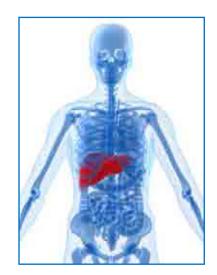
We would not be here without it. No wonder lowering cholesterol too much increases one's risk of dying. Cholesterol is also a precursor to all of the steroid hormones. You cannot make estrogen, testosterone, cortisone, and a host of other vital hormones without cholesterol."

Other "evidence" that cholesterol is good for you?

Consider the role of "good" HDL cholesterol. Essentially, HDL takes cholesterol from your body's tissues and arteries, and brings it back to your liver, where most of your cholesterol is produced. If the purpose of this was to eliminate cholesterol from your body, it would make sense that the cholesterol would be shuttled back to your kidneys or intestines so your body could remove it.

Instead, it goes back to your liver. Why?

Because your liver is going to reuse it.



"It is taking it back to your liver so that your liver can recycle it; put it back into other particles to be taken to tissues and cells that need it," Dr. Rosedale

explains. "Your body is trying to make and conserve the cholesterol for the precise reason that it is so important, indeed vital, for health."

Cholesterol and Inflammation - What's the Connection?

Inflammation has become a bit of a buzzword in the medical field because it has been linked to so many different diseases. And one of those diseases is heart disease ... the same heart disease that cholesterol is often blamed for.

What am I getting at?

Well, first consider the role of inflammation in your body. In many respects, it's a good thing as it's your body's natural response to invaders it perceives as threats. If you get a cut for instance, the process of inflammation is what allows you to heal.

Specifically during inflammation:

- Your blood vessels constrict to keep you from bleeding to death
- Your blood becomes thicker so it can clot
- Your immune system sends cells and chemicals to fight viruses, bacteria and other "bad guys" that could infect the area
- Cells multiply to repair the damage

Ultimately, the cut is healed and a protective scar may form over the area.

If your arteries are damaged, a very similar process occurs inside of your body, except that a "scar" in your artery is known as plaque.

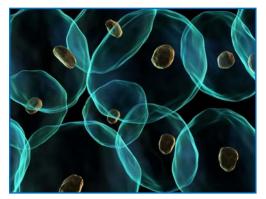
This plaque, along with the thickening of your blood and constricting of your blood vessels that normally occur during the inflammatory process, can indeed increase your risk of high blood pressure and heart attacks.

Notice that cholesterol has yet to even enter the picture.



Cholesterol comes in because, in order to replace your damaged cells, it is necessary.

Remember that no cell can form without it.



So if you have a bunch of damaged cells that need to be replaced, your liver will be notified to make more cholesterol and release it into your bloodstream.

This is a deliberate process that takes place in order for your body to produce new, healthy cells.

It's also possible, and quite common, for damage to occur in your body on a regular

basis. In this case, you will be in a dangerous state of chronic inflammation.

The test usually used to determine if you have chronic inflammation is a C-reactive protein (CRP) blood test. CRP level is used as a marker of inflammation in your arteries. Generally speaking:

- A CRP level under 1 milligrams per liter of blood means you have a low risk for cardiovascular disease
- 1 to 3 milligrams means your risk is intermediate
- More than 3 milligrams is high risk

Even conventional medicine is warming up to the idea that chronic inflammation can trigger heart attacks. But they stop short of seeing the big picture.

In the eyes of conventional medicine, when they see increased cholesterol circulating in your bloodstream, they conclude that it -- not the underlying damage to your arteries -- is the cause of heart attacks.

Which brings me to my next point.

The Insanity of Lowering Cholesterol

Sally Fallon, the president of the Weston A. Price Foundation, and Mary Enig, Ph.D, an expert in lipid biochemistry, have gone so far as to call high cholesterol "an invented disease, a 'problem' that emerged when health professionals learned how to measure cholesterol levels in the blood."³

And this explanation is spot on.

If you have increased levels of cholesterol, it is at least in part because of increased inflammation in your body. The cholesterol is there to do a job: help your body heal and repair.

Conventional medicine misses the boat entirely when they dangerously recommend that lowering cholesterol is the way to reduce your risk of heart attacks, because what is actually needed is to address whatever is causing your body damage -- and leading to increased inflammation and then increased cholesterol.

As Dr. Rosedale so rightly points out:2

"If excessive damage is occurring such that it is necessary to distribute extra cholesterol through the bloodstream, it would not seem very wise to merely lower the cholesterol and forget about why it is there in the first place. It would seem much smarter to reduce the extra need for the cholesterol -- the excessive damage that is occurring, the reason for the chronic inflammation."

I'll discuss how to do this later in the report, but first let's take a look at the dangers of low cholesterol -- and how it came to be that cholesterol levels needed to be so low in the first place.

If Your Cholesterol is Too Low ...

All kinds of bad things can happen to your body. Remember, every single one of your cells needs cholesterol to thrive -- including those in your brain. Perhaps this is why low cholesterol wreaks havoc on your psyche.

One large study conducted by Dutch researchers found that men with chronically low cholesterol levels showed a consistently higher risk of having depressive symptoms.⁴

This may be because cholesterol affects the metabolism of serotonin, a substance involved in the regulation of your mood.

On a similar note, Canadian researchers found that those in the lowest quarter of total cholesterol concentration had more than six times the risk of committing suicide as did those in the highest quarter.⁵

Dozens of studies also support a connection between low or lowered cholesterol levels and

violent behavior, through this same pathway: lowered cholesterol levels may lead to lowered brain serotonin activity, which may, in turn, lead to increased violence and aggression.⁶

And one meta-analysis of over 41,000 patient records found that people who take statin drugs to lower their cholesterol as much as possible may have a higher risk of cancer,⁷ while other studies have linked low cholesterol to Parkinson's disease.

What cholesterol level is too low? Brace yourself.

Probably any level much under 150 -- an optimum would be more like 200.

Now I know what you are thinking: "But my doctor tells me my cholesterol needs to be *under* 200 to be healthy." Well let me enlighten you about how these cholesterol recommendations came to be. And I warn you, it is not a pretty story.

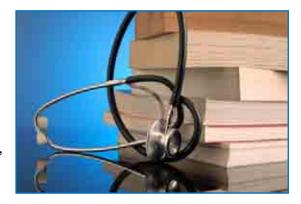
Who Decided What Cholesterol Levels are Healthy or Harmful?

In 2004, the U.S. government's National Cholesterol Education Program panel advised those at risk for heart disease to attempt to reduce their LDL cholesterol to specific, very low, levels.

Before 2004, a 130-milligram LDL cholesterol level was considered healthy. The updated guidelines, however, recommended levels of less than 100, or even less than 70 for patients at very high risk.

Keep in mind that these extremely low targets often require multiple cholesterollowering drugs to achieve.

Fortunately, in 2006 a review in the Annals of Internal Medicine⁸ found that there is insufficient evidence to support the target numbers outlined by the panel. The authors of the review were unable to find research providing evidence that achieving a specific LDL target level was important in and of itself, and found that the studies attempting to do so suffered from major flaws.



Several of the scientists who helped develop the guidelines even admitted that the scientific evidence supporting the less-than-70 recommendation was not very strong.

So how did these excessively low cholesterol guidelines come about?

Eight of the nine doctors on the panel that developed the new cholesterol guidelines had been making money from the drug companies that manufacture statin cholesterol-lowering drugs.⁹

The same drugs that the new guidelines suddenly created a huge new market for in the United States.



Coincidence? I think not.

Now, despite the finding that there is absolutely NO evidence to show that lowering your LDL cholesterol to 100 or below is good for you, what do you think the American Heart Association STILL recommends?

Lowering your LDL cholesterol levels to less than 100.¹⁰

And to make matters worse, the standard recommendation to get to that level almost always includes one or more cholesterol-lowering drugs.

The Dangers of Cholesterol-Lowering Medications

If you are concerned about your cholesterol levels, taking a drug should be your absolute last resort. And when I say last resort, I'm saying the odds are very high, greater than 100 to 1, that you don't need drugs to lower your cholesterol.

To put it another way, among the more than 20,000 patients who have come to my clinic, only four or five of them truly needed these drugs, as they had genetic challenges that required it.

Contrast this to what is going on in the general population. According to data from Medco Health Solutions Inc., more than half of insured Americans are taking drugs for chronic health conditions. And cholesterol-lowering medications are the second most common variety among this group, with nearly 15 percent of chronic medication users taking them (high blood pressure medications -- another vastly over-prescribed category -- were first).¹¹

Disturbingly, as written in *BusinessWeek* early in 2008, "Some researchers have even suggested -- half-jokingly -- that the medications should be put in the water supply." 12

Count yourself lucky that you probably do NOT need to take cholesterol-lowering medications, because these are some nasty little pills.

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