

The “High” Cholesterol Myth

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Date Released : 22 Aug 2009

As health and fitness professionals, we are on the front line in the battle against the misinformation that is propagated by those with financial interests. It is our duty to purvey the scientific facts about the prevention of disease.

Pharmaceutical companies have altered the definition of high cholesterol in order to increase the number of people who are eligible for cholesterol medications. As a result, increasing numbers of our clients are being told that they have high cholesterol when in fact their cholesterol is normal.

What is Normal Cholesterol?

The first thing to note about cholesterol levels is that they vary tremendously between different people. Supporters of cholesterol-lowering medications would have us believe that the ideal cholesterol level is below 200 mg/dl, but we have known for decades that cholesterol can vary from 105 mg/dl to 343 mg/dl in people who are perfectly healthy⁶. Figure 1 below shows the range of cholesterol levels found in healthy people.

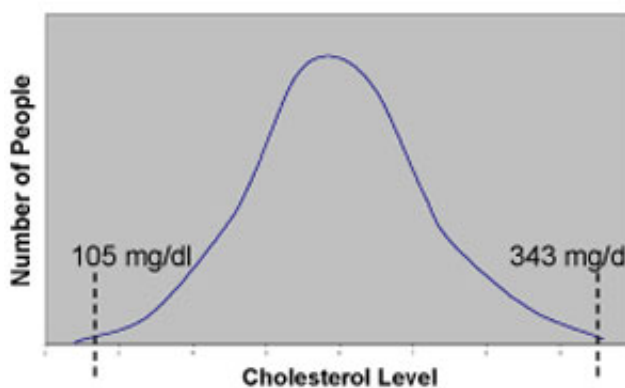


Figure 1

This same range of cholesterol levels has been seen in people who do have heart disease and people who do not have heart disease, as documented by Professor Brisson using data from the Framingham Study, which is one of the largest studies ever done on cholesterol.

If people with heart disease have the same cholesterol levels as people who do not have heart disease, then it is impossible for cholesterol to be a risk factor.

A person may have a cholesterol level that is above the average, or above the arbitrary level set by drug companies, but is this actually high for them as an individual? The only way we can find out the answer to this question is if cholesterol has been measured more than once over a reasonable period of time. Even then, the cholesterol measurement itself is often unreliable since the obtained value can be influenced by the following:

- Body position
- Smoking or other nicotine use
- Stress
- Pain
- Fear
- Pregnancy
- Lack of exercise
- The use of various drugs and medicines
- Alcohol consumption
- How blood is drawn for the test
- The presence of hepatitis, gall bladder obstructions, low-thyroid function, etc
- The season of the year⁷

There are instances where a person has experienced a significant increase in cholesterol over time, but these cases are related to a problem with the metabolism of cholesterol: not cholesterol per se. In these cases, it is advisable to work with a holistic health practitioner such as a Certified Metabolic Typing Advisor, CHEK Practitioner or Naturopath, in order to systematically address this issue.

Blindly attempting to lower cholesterol without addressing any underlining imbalances will result in more problems in the long term.

Cholesterol Levels Have Actually Declined

Despite all the hype about cholesterol, many industrialized countries around the world have seen a significant reduction in the average cholesterol level and even greater reductions in the number of people with so called "high" cholesterol.

For example, in the USA, the number of people with a cholesterol level above 240 mg/dl in 2002 was around half the number in 1962. Figure 2 below shows cholesterol levels for all USA adults aged 20 to 74 years.

	Year: 1960-1962	Year: 1999-2002
Average cholesterol level	222 mg/dl	203 mg/dl
% of people with cholesterol above 240mg/dl	33%	17%

Figure 2

A similar trend can be seen in England, where cholesterol levels have reduced over a shorter period of time². More importantly, this reduction in cholesterol is much more apparent in older age groups, the very people who are at greater risk for developing heart disease. But unfortunately, these reductions in cholesterol have not resulted in reductions in the rate of heart disease¹.

The Role of Cholesterol within the Body

Far from being a deadly substance, cholesterol is a life creating and life supporting molecule. Cholesterol is needed by every single one of the body's 70 to 100 trillion cells.

Cholesterol, along with saturated fats, is vitally important for the structural integrity of all the cells that make up the body. Physicists have investigated what happens when cells do not contain enough cholesterol. The result is cells die quickly or do not function!

This means that every system within the body can be affected by a lack of cholesterol, since all of these systems are dependent upon healthy, living, properly functioning cells. Blood cells and nervous system cells are particularly vulnerable to damage caused by a lack of cholesterol.

A lack of cholesterol can cause white blood cells, needed for the immune system, to break down or stop functioning. This may explain why people with low cholesterol are more vulnerable to infection.

Cholesterol is also responsible for a number of other specific functions within the body. It provides the starting point for all of the steroidal hormones. These hormones are involved in virtually every body function. All steroidal hormones are created from cholesterol (see Figure 3).

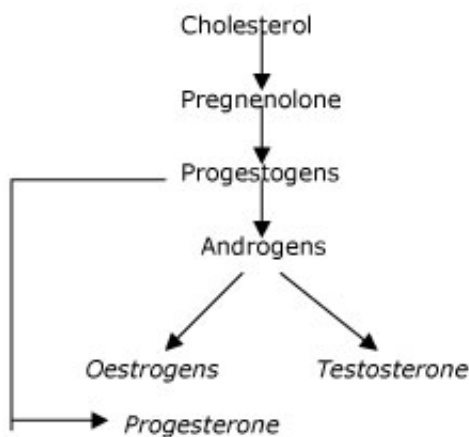


Figure 3

Cholesterol also forms the starting point for the synthesis of vitamin D and for the production of bile acids. The bile acids are needed for the digestion and absorption of fats and fat-soluble vitamins.

In a nutshell, without enough cholesterol in the body, basic cell structure could not be formed, there would be a deficiency in some vital nutrients, the hormonal system would not function correctly, bodily systems would break down, the brain and nervous system would malfunction and digestion would be compromised.

Unfortunately, those who are obsessed with lowering cholesterol conveniently ignore these facts of physiology.

Why So Much Interest in Cholesterol?

A huge amount of money is being made from the misconceptions about cholesterol. In fact, a cholesterol-lowering industry is now in

place that generates around US\$29 billion each year.

We are constantly told that cholesterol clogs up the arteries and causes a heart attack. This idea stems from an out dated and inaccurate view of heart disease that the food industry and pharmaceutical companies would like us all to believe.

It has been known for some time that heart disease is mostly an inflammatory condition. The process starts with initial tissue damage. This tissue damage actually occurs underneath the inside wall of the artery or blood vessel, and once it is present, the body reacts by sending various substances to the affected area.

A wide range of different molecules are found in the wall of an artery that has been damaged in this way.

Yes, fat and cholesterol are present, along with a number of other substances such as monocytes and macrophages (white blood cells that are associated with inflammation). Cytokines are also found that have specific effects on cell-to-cell interaction. So too are T lymphocytes, which are white blood cells that increase in the presence of an infection⁵.

Heart disease has been compared with rheumatoid arthritis, a condition that also has key inflammatory and immune system components.

The inflammation that occurs in heart disease is very similar to the type of inflammation we experience. For example, in the case of a sprained ankle joint, pulled muscle or other structural injury. In the case of a muscular skeletal injury, we are fully aware of it and we know that if we rest the affected area or undertake appropriate treatment, it will normally repair itself.

However, in the case of tissue damage and inflammation in the arteries, we usually have no idea that it is taking place. Therefore, we may continue doing whatever is causing or aggravating the inflammation, until one day we start to experience symptoms or in the worse case, a heart attack.

There are a wide range of things that can cause or contribute to this type of arterial damage including:

- High levels of stress/poor stress response
- Wrong balance or "mix" of foods
- Eating too many grain-based foods
- High blood glucose levels
- Eating too many refined foods and sugars
- High blood pressure
- Low thyroid function/adrenal gland exhaustion
- Hormonal imbalances
- Exercise: wrong type or amount for the individual person
- Processed and de-natured foods
- Psychology: depression, negative attitude
- Lack of protective nutrients
- Excessive toxins
- Infection
- Lack of sleep

One of the main causes of heart disease is eating too much carbohydrate for our own individual metabolism. This results in high blood glucose, which damages our arteries in several ways. This is the subject of my next article.

Note: Cholesterol can be measured in both mg/dl and mmol/l. A conversion table is below (LDL, HDL and Total Cholesterol).

mg/dl	mmol/l
20	0.5
40	1.0
60	1.5
80	2.1
100	2.6
120	3.1
140	3.6
160	4.1
180	4.6
200	5.1
220	5.6
240	6.2
260	6.7

280	7.2
300	7.7
320	8.2
340	8.7
360	9.2
380	9.7

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