

Cholesterol Control is Important

Dr Victor Chan
www.victorchan.com.au

I have received for many times Whatsapp message about ignoring cholesterol control, as recommended in a guideline issued by the US Government. There is also a link to the Washington Post article. Actually, there are a lot of mistakes in the Whatsapp message and the journalist of Washington Post had misunderstood and interpreted wrongly the guideline. I have to reply to my friends again and again. I think it is easier to put my reply here and ask anyone who send me the Whatsapp again to read my reply here.

The following is the long comment I sent to a friend whose husband had ischaemic heart disease and decided to stop treatment after reading the article. Many of my patients had decided to do to same after receiving this deceptive article. It can kill many people.

The article is a bit long. If possible, send to the one who send you the message.

""Thank you for your message about cholesterol. Here is my comment. I don't mind spending some time to explain clearly about this topic. It is a bit long. If you have any question, just feel free to discuss.

The message you sent me about cholesterol is not new. Some patients, including a couple of nurses, have asked me for my comment about this in the last few years. Many people have misconception about this matter. Can you please forward my comment to the one who sent this to you?

Before commenting on the message, I would like you understand the difference between serum cholesterol, diet cholesterol and diet saturated fat, as well as the difference between primary and secondary prevention.

The effect of a medicine to treat or prevention is measured by Number To Treat (NTT). That means the number of people to take the medicine in order to achieve the desired effect. The higher NTT, the less cost effective.

Number to treat (NTT) people to prevent one cardiac event in those who never had problem (primary prevention) is much larger than NTT to prevent one cardiac event in those who already had a problem (heart or brain)(secondary prevention). For primary prevention, the benefit versus side effect of using a medicine for prevention (benefit to risk ratio) is lower, many more people have to take the medicine to avoid very few cardiac attacks. As a result, the occurrence of side effect with one benefit is higher. So it is not necessary to lower the cholesterol to a level as much as for secondary prevention. The upper limit of the bad cholesterol, LDL is different for people having different risk factors. For those who already have ischemic heart disease or stroke, the LDL should be lowered to a very low level of less than 1.8, to prevent progression of the widespread narrow arteries to further narrowing. For those who have intermediate risk level, such as those who smoke, having diabetes or hypertension, family history of cerebrovascular or heart problems, the LDL should be less than 3.0.

The **serum** level of **LDL** is more important than the level of **total** cholesterol which also includes the good HDL cholesterol. High LDL causes atherosclerosis with deposit of cholesterol plaques in the inner lining of the arteries, causing narrowing and blockage.

Many people having high cholesterol were told to avoid fatty meats or chicken skin. They thought that fatty meat contains high cholesterol. That is not true. Fatty meat and chicken skin are high in saturated fat, not cholesterol. When they are told that diet cholesterol is not important, they think that they can take fatty meat or chicken skin. That is not correct. Saturated fat in fatty meat or chicken skin is converted into cholesterol by the liver and raise serum bad cholesterol LDL. That is why the American guideline remove high cholesterol diet from the nutrient list of concern, but advise people to avoid high saturated fat diet, and to take low/no fat dairy products.

There are a lot of difference between the content of whatsapp message and the guideline in the website link.

The American guidelines has this:

“Cholesterol

*Previously, the Dietary Guidelines for Americans recommended that cholesterol intake be limited to no more than 300 mg/day. The 2015 DGAC will not bring forward this recommendation because available evidence shows no appreciable relationship between consumption of **dietary** cholesterol and **serum cholesterol**, consistent with the conclusions of the AHA/ACC report. 2, 35 Cholesterol is not a nutrient of concern for overconsumption.”*

It is true that diet cholesterol in diet is not the main cause of high serum cholesterol. I agree with the guideline that cholesterol in diet is no longer a nutritional concern. It is responsible for a low proportion of the serum cholesterol. That is why I do not recommend patients to buy a certain kind of margarine made from a plant high in sterol, which claims that it can compete with the diet cholesterol and reduce its absorption. Use of it does not improve the level of serum cholesterol.

The serum cholesterol is mainly made by the liver at night from saturated fat, such as fat meat, butter, chicken skin. Statins block the biochemical pathway of the conversion. That is why they have to be taken after dinner, not in the morning.

In the message you sent me: *“This means eggs, **butter, full-fat dairy products**, nuts, coconut oil and meat have now been classified as *safe* and have been officially removed from the nutrients of concern list.”* This is incorrect. This is the conclusion drawn by the writer of the message who has no knowledge in organic chemistry, biochemistry, physiology, pharmacology, pathophysiology and clinical medicine.

The **guideline** recommend low/non-fat dairy (see below), and avoid saturated fat. Butter is saturated fat, it has to be reduced,

The guideline: “For most people, this will mean: Improving food and menu choices, modifying recipes (including mixed dishes and sandwiches), and watching portion sizes. Including more vegetables (without added salt or fat), fruits (without added sugars), whole grains, seafood, nuts, legumes, low/non-fat dairy or dairy alternatives (without added sugars). Reducing consumption of red and processed meat, refined grains, added sugars, sodium, and saturated fat; substituting saturated fats with polyunsaturated alternatives; and replacing solid animal fats with non-tropical vegetable oils and nuts.”

Your message says: “US cardiologist Dr Steven Nissen said: *It's the right decision. We got the dietary guidelines wrong. They've been wrong for decades.*” This is totally true. The previous guideline recommend low cholesterol diet. The 2015 guideline has removed this recommendation. It does not say high serum cholesterol is harmless.

He also said "When we eat more foods rich in this compound, our bodies make less. If we deprive ourselves of foods high in cholesterol - such as eggs, butter, and liver - our body revs up ." The first sentence is true. He just explains the physiology of cholesterol in the body. However, the message did not finish the second sentence. Let me finish it. If we do not get cholesterol from diet, the body make enough cholesterol by the liver for the other parts of the body. Dr Nissen did not say we should stop statin. Instead he endorse the use of statin, as evidence in the follow from the web:

“Steven E. Nissen, is a cardiologist, researcher and patient advocate. He is chairman of cardiovascular medicine at the Cleveland Clinic, in Cleveland, Ohio.

Does Steve Nissen, an outspoken critic of inappropriate industry influence in medicine, have his own conflict of interest problem?

This week Nissen, the chief of cardiology at the Cleveland Clinic, was widely quoted in news reports about the FDA advisory panels evaluating two new highly promising cholesterol drugs from Amgen and Sanofi/Regeneron.

Nissen was broadly supportive of the drugs. Although *he has been one of the leading voices against approving and using drugs based solely on their effect on surrogate outcomes, he was much more liberal about these drugs than some other experts and many of the panel members.*”

You can see that Dr Steve Nissen has been made used of in your message. He is not against the use of statins. He has been misquoted.

Actually, Statins do not only reduce conversion of saturated fat into LDL, They also has anti-inflammatory effect, which stabilise the cholesterol plaque in the inner layer of the arteries, so it will not drop off easily and block the blood vessel down stream.

Your message has this: “*The Real Truth about Cholesterol*

The majority of the cholesterol in you is produced by your liver. Your brain is primarily made up from cholesterol. It is essential for nerve cells to function. Cholesterol is the basis for the creation of all the steroid hormones, including estrogen, testosterone, and corticosteroids. High cholesterol in the body is a clear indication which shows the liver of the individual is in good health.”

Yes, this physiological explanation is well written. But it does not tell you the harmful effect of high LDL cholesterol.

In the message: “Dr. George V. Mann M.D. associate director of the Framingham study for the incidence and prevalence of cardiovascular disease (CVD) and its risk factors states: Saturated fats and cholesterol in the diet are not the cause of coronary heart disease. That myth is the greatest deception of the century, perhaps of any century

*Cholesterol is the biggest medical scam of all time**

Wikipedia has this:

“He (George V. Mann) is **widely misquoted** to this day (for example in *Breitbart*^[52], who said “then butter is not bad”), George V. Mann **did not say** in the *New England Journal of Medicine* (NEJM) that the lipid theory is “the greatest scam in the history of medicine”.^{[53][54]} Mann studied the mainly meat diet of Alaskan Eskimos, Congolese pygmies, and the Maasai of Tanzania and Kenya, and thought other factors like lack of exercise were also responsible for heart disease.^[55]”

In the message: “*There is no such thing as *bad Cholesterol**

*So you can stop trying to change your Cholesterol level. Studies prove beyond a doubt, cholesterol doesn't cause heart disease and it won't stop a heart attack. The majority of people that have heart attacks have normal cholesterol levels. “ **No reference given, written by the writer of the message, wrong conclusion.***

It is true that many people that have heart attacks have normal total cholesterol. Many of these people have low good HDL cholesterol and high bad LDL cholesterol. So the total cholesterol is normal. The American Guideline advises to limit intake of saturated fat. If high LDL not relevant, the Guideline would not have recommended restriction of saturated fat.

The message has this: “*ONLY 15% OF CHOLESTEROL IS BEING DONATED BY THE FOOD WE EAT. If the fat content is less in our food we eat, our liver got to work more to maintain the level at 950 mg. If the cholesterol level is high in our body, it shows the liver is working perfect.*”

It is correct that the liver is working perfect if cholesterol level is high in our body. But it does not described the bad effect of high cholesterol.

The message has this: “Experts say that there is nothing like LDL or LDL. Cholesterol is not found to create block any where in human body.”

This is totally wrong. That is why the medical experts condemn this message. It misled many people to ignore **serum cholesterol level**. The plaques that block the coronary blood vessels and blood vessels in the brain are cholesterol. It has been proven world wide and unarguably correct that there are good HDL and bad LDL cholesterol, shown by pathophysiolgist, and other non clinical scientists worldwide, who do not get any incentive from the large drug companies.

The message quoted only part of the guideline. Further reading of The guideline, (mentioned in the message), ***Dietary Guidelines for Americans (DGAC) 2015*** has this

“Saturated fat.

The DGAC used the 2013 American Heart Association/American College of Cardiology (AHA/ACC) report on lifestyle management to reduce CVD risk for its evaluation of saturated fat intake. The DGAC concurred with the AHA/ACC report that saturated fat intake exceeds current recommendations in the United States and that lower levels of consumption would further reduce the population level risk of CVD. The DGAC also convened a working group on saturated fat (see Part D. Chapter 6: Cross-Cutting Topics of Public Health Importance for details). In addition, the DGAC conducted food pattern modeling to demonstrate the dietary changes that would be necessary to have diets with various levels of saturated fat as a percent of total energy (see USDA Food Patterns Modeling Report in Appendix E-3.5: Reducing Saturated Fats in the USDA Food Patterns). It is important to note that the median intake of saturated fat in the United States was 11.1 percent of total energy for all age groups in the 2007-2010 WWEIA data. However, a large majority (71 percent) of the total population consumed more than 10 percent of calories from saturated fat, with a range by age group from 57 percent to 92 percent (Figure D1.4). Further, 65 percent to 69 percent of the age groups at highest risk of CVD (males and females older than age 50 years) had intakes more than 10 percent of total calories were from saturated fat, the DGAC concluded that the U.S. population should continue to monitor saturated fat intake. **Saturated fat is still a nutrient of concern for overconsumption, particularly for those older than the age of 50 years.** “

So LDL level is related to heart attack.

Some people promotes less use of statin, but recommended use of some alternatives, which they claim to be totally harmless. Why??

High cholesterol is common and many people are using statins. It is a huge market. Some bad guys try to scare those who are using statins to their own advantage. They want to have a share of this huge market. There are many useless harmful products promoted in the internet, claiming they are totally harmless. Some of these are helped by pseudoscience, misleading articles or books that sound scientific to lay people.

Here is a book review about a widely sold book:

"I just finished reading the book *The Cholesterol Hoax* by Dr. Sherry Rogers. My reaction is very mixed.

I have to say that overall, she convincingly presents her arguments. As well written and valuable as this book is, there are numerous reasons to question the way she says you should correct your problems.

First, and most glaring, was her endless and utterly shameless self-promotion of her other books and her monthly newsletter. Had the book's editor deleted all of this dead weight from the manuscript, the book would have been 80 pages shorter.

I also wonder why she made the following conflicting arguments throughout. She essentially said high cholesterol doesn't matter and that it doesn't need to be treated, and then spent most of the book telling you how to lower it.

Before I was halfway through the book, I lost count of all the supplements and liquids she recommended. Even if every capsule and oil she said to take was practical both economically and with no contraindications, who could possibly take them all? Or even half of them?

Another repeatedly suspicious assertion was her brand-name promotion of Carlson's products. She says that their products have more pure elements in them than other brands, but never states how she came to these conclusions. Did she test them against other brands? If so, which ones? Does she have a vested interest in the company?

Plus, she never mentions even the remote possibility of side effects from some of the supplements she promotes, even though many people who post in various public forums (such as this one) have side effects from them. "

Like selective listening, some people has selective reading. They just remember what they want to know. Those who are reluctant to take medicine and are scared of side effects will jump to conclusion very readily when they read messages that diet cholesterol is not important and stop taking statins. Your message contains correct sentences, but there are many misleading and incorrect data.
So the summary,

1. Keep LDL at the level appropriate for the risk factors. Very low for those who already have vascular problem. Must take medicine to control it if necessary. Statins also has other benefits in addition to lowering LDL. Its risks is little compared to its benefits for high risk patients.
2. Dietary cholesterol not as important as before. But it does **not** mean that serum cholesterol level can be ignored. Food with **high saturated fat** have to be avoided.
3. Don't take anything that has no clinical evidence of benefit and side effects. There are many useless and harmful commodities promoted to ignorant people. They are sold for money. They are expensive and harmful, and more important, deprived you of the opportunity to properly control LDL at the proper level.
4. Many so called clinical evidence are from trials with a group of a small number of patients. Only many well designed trials examined by biostatistic can tell whether a medicine is effective and safe or not.