# Your cholesterol problem does not have much to do with your diet.

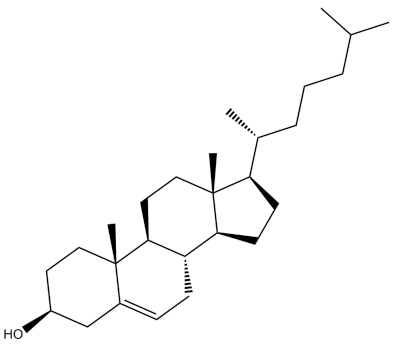
You often hear it: “I have to pay attention to my cholesterol, so I avoid eating fats.” Cholesterol-lowering medications such as statins are still included today as one of the most commonly prescribed medications around the world. Statins and other cholesterol-lowering medications are not only prescribed for high cholesterol levels. They are also often prescribed for other cardiovascular diseases.

Now there are some questions you should ask yourself:

- Is cholesterol dangerous or is it also useful in our body?
- Are low-cholesterol products actually better?
- To what extent is the so-called cholesterol problem genetically?
- Are cholesterol-lowering drugs safe and necessary to prevent heart disease?

The purpose of this blog is to share clear and correct scientific information about cholesterol. This way you can draw your own conclusions and have a critical view when discussion around this topic arises now and in the future.

## Is cholesterol dangerous?




To answer this, we have to go back in time for a moment, to the 1960s and 1970s. In 1960, butter and other saturated fats lost their reputation due to a rise in cardiovascular disease. The blame was then placed on cholesterol. Before I take you into the science behind this, it is important to first understand how cholesterol became a target.

In 1950 it was suspected here and there that sugar plays a role in the development of cardiovascular disease. This was a big problem because sugar became one *‘booming*

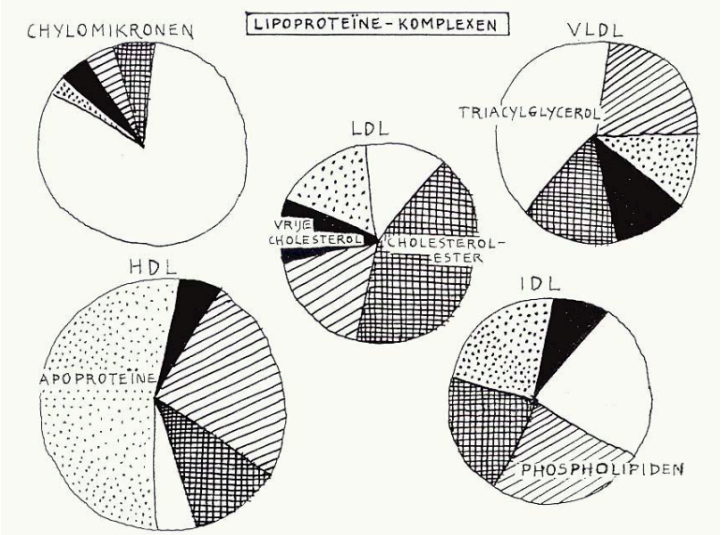
*business'* for the food industry, where it could be hidden in all kinds of 'ready-to-eat' foods as a seasoning and addictive factor. But the slave trade also played a major role. In addition to the cotton industry, slaves were also used for sugar cultivation. If it were known that sugar played a major role in the development of an emerging lifestyle disease, the overall success of the sugar industry could fall apart. The Sugar Research Foundation sponsored their first study in 1965. The article appeared in the *New England Journal of Medicine* and blamed fat and cholesterol as causes of cardiovascular disease (and not sugar!). The evidence that consumption of sucrose (another name for sugar) was also a risk factor was significantly weakened. An investigation into these facts was conducted in 2016. You can read more about it in this article: https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2548255

It was and, unfortunately, still is a major problem that scientific studies are sponsored by the food industry. Unfortunately, this leads to biased and often incorrect conclusions, resulting in a lot of confusion. And in this case, to this day, protocols that have gotten completely out of hand that do not address the actual problem, but often make it worse.

## Is cholesterol guilty or not?

No. Cholesterol is not only harmless. We cannot live without it.
We have different types of cholesterol. Each type is assigned a function.
And surprisingly, their function was assigned based on how they were measured. This means that the physiology of these molecules is interpreted from a certain model and therefore not from reality. The different types are:

- VLDL *(very low density lipids)*: These are mainly triglycerides (blood fats)
- LDL *(low density lipids)*: This consists mainly of cholesterol
- HDL *(high density lipids)*: This consists mainly of phospholipids and molecules that transport cholesterol and other blood fats.




M.Girardin D.O., Evost Fellow, Pro-sector 1995, Reedition 2007

This brings us to the concept of "good" and "bad" cholesterol. HDL is often called the "good cholesterol", because it transports fats away from the organs. LDL consists mainly of cholesterol (towards the organs), hence the name "bad" cholesterol. In the 1980s it was assumed that lowering LDL would reduce the risk of developing cardiovascular disease. Some scientists were critical of this claim as there were a number of errors in the studies. No consensus could be found. Not even after a study with cholesterol-lowering medication that proved the opposite in favor of the cholesterol hypothesis.

Cholesterol metabolism is complicated, but logical. All forms of blood fats and molecules each have a task. For example, one carries fats from our digestive system to our liver for further processing. And another for transporting blood fats from your liver through your body, where other cells and tissues take fats for storage as energy or building cell membranes. If everything goes well, the circle is complete and they all find their way back to your liver. Once back in the liver, excess cholesterol will be broken down by the bile. And it is precisely at this point that a lot can go wrong. If your liver and bile system don't do it right, then you'll hit your mark with too much cholesterol that can't get excreted through your bowel movements and your cholesterol levels rise. What happens here is that your bile cannot reduce cholesterol. Your liver does not receive a signal that there is a cholesterol build-up, and your body thinks it needs to produce more. This is the biochemical feedback system. The production of cholesterol in the body is ideally tailored to how much cholesterol comes in through food. So, if your cholesterol levels are (too) high, it is best to think about **your bile and liver function first.**

Huh? Do we produce cholesterol ourselves? Yes, we do! Cholesterol is THAT important. If we don't get it through our diet, we will produce it ourselves!

Cholesterol is necessary for many substances and tissues in our body.

It is the basic substance for our steroid hormones, being our sex hormones (testosterone, estrogen, progesterone) and our anti-stress hormone, cortisol.
It is even the basic substance for the production of vitamin D.

Our nervous system is a large “fat mass” and partly consists of cholesterol. It is not without reason that breast milk contains 50% cholesterol! It serves the normal development of our brain and our hormonal system. It's very simple: **cholesterol is indispensable**. If we do not get it from our diet, evolution has ensured that we can be self-sufficient (endogenous cholesterol). Making cholesterol yourself is a lot of work. This is only possible if you have a surplus of sugars. This is then converted into fats via the liver. You need to produce cholesterol yourself, so you also need to have a properly functioning liver! If this is not the case, you prefer to get your cholesterol from food (exogenous cholesterol). The feedback system is therefore completely dependent on exogenous cholesterol.

## Are low-cholesterol products and light products really better?

Cholesterol can only be found in animal foods such as: dairy (milk products, cheese, butter), eggs (egg yolks), meat, fish, crustaceans and shellfish. Plant foods do not contain cholesterol. So you can delete the doubt about whether coconut oil is bad for your cholesterol. Plant based foods do contain cholesterol like substances that help with cholesterol management.

Due to the bad reputation of fats, butter is still completely banned from shopping carts by many. As a result, vegetable oils and butters have gained popularity. Unfortunately, light products have also seen their rise as a result. They are considered better for our health, but unfortunately they are and remain highly processed products. Margarine is a deodorized product and it gets its yellow color because colorings are added to it so that it resembles butter. The light products lose their nutritional value and the vegetable oils (such as peanut oil, corn oil, sunflower oil, etc.) contain too many pro-inflammatory fatty acids; omega 6 fatty acids. These fatty acids are not necessarily bad. But, if you consume too much omega 6 compared to omega 3, then you have a problem. The result? Inflammation due to a deficiency of the anti-inflammatory omega 3 fatty acids.

In addition, cardiovascular disease is mainly caused by having too much chronic inflammation. How does that happen? Inflammation-promoting foods! These are foods such as oils with bad fatty acid composition, sugars, too many carbohydrates and processed foods in general.

We need our fats. Preferably in the right proportions (omega 3 / omega 9 / omega 6). Let it be clear: **Eliminating fat from your life has the opposite effect.** Go for quality and nutrient density.

## To what extent is the cholesterol problem genetic?

Another good one: “yeah, but everyone in our family has high cholesterol, so it's just genetic.”

And yes, this may indeed be genetic...

A genetic abnormality in the correct metabolism of cholesterol is known as: **Gilbert's Syndrome.** This is a condition in which an important enzyme in the liver does not function properly. This prevents the liver's yellow waste product (bilirubin or bile) from being excreted by the liver and leaving the body through urine or bile. Gilbert's syndrome occurs **in 3-7% of the population**.

If Gilbert's syndrome is not present, the cause of your cholesterol increase lies elsewhere. This could be:

- Malfunction of the bile (obstruction)
- Poor liver function (perhaps your liver has too much waste to process)
- Poor control from the small intestine
- Malfunction of the pancreas

By the way, fats are very attractive. They are substances that are carriers of aromatics. Aromatics provide aroma and taste. That is why Italian and French cuisine is so popular. And in all honesty, also the fast food chains. Fats give us a lot of energy (comparatively more than carbohydrates and proteins). From an evolutionary perspective, it is therefore very logical that we are drawn to fats .

If you develop an aversion to fat, this usually means that you are not digesting or processing fats properly due to a poorly functioning liver or bile secretion..

Ironically, it is liquid egg yolks that get our liver and bile function going. Why liquid? Because in this case, the phospholipids are still intact, and it is this way that they can give the signal to start bile production. **It's the fat that turns on the system!**

## Are cholesterol-lowering drugs safe and necessary to prevent heart disease?

Cholesterol is essential for life. For our hormones, our nervous system, our vitamin D production, but also for the general health of our cell membranes. By taking cholesterol-lowering agents you compromise all these systems.

The risk of cholesterol-lowering drugs?

- inadequate production of hormones:
- possible deficiency of vitamin D, essential for a normally functioning immune system and bone metabolism.
- Neurological complaints (because our nervous system consists of fats)
- reduced quality of our cell membranes (cholesterol is the basis here)
- damage to our liver cells (especially in high doses): It iIncreases enzymatic activity of ALT and AST, which provokes an inflammatory response. And the liver simply is super important for our cholesterol metabolism, so this is not ideal.

These cholesterol-lowering agents are therefore absolutely not without risks.

Would you like to know more about the risk of death from cardiovascular disease and the lowering impact of statins? Then take a look at the Statin Choice Decision Aid: https://statindecisionaid.mayoclinic.org/.

Please note, use this only as a source of information. Not to personally determine whether you should take statins or stop using them. Always discuss this with your doctor.

## Conclusion

Cholesterol metabolism is a complex system, because we are a complex organism. If there is a shortage of cholesterol in our diet, our body produces it itself.

Yes, our body is a wonderfully intelligent system. We are not a collection of organs that each do their work separately to keep us alive. We are the result of different cells that have developed a network of different systems and control our organs. That network ensures that everything is connected. In the case of a metabolic problem (for example chronically elevated cholesterol levels), you should always first look at the underlying systems and resolve any blockages or problems there. This is before adding things that do not solve the actual problem or may even worsen it.

**The best doctor lives within you.** He has already had an evolutionary career spanning millions of years and therefore knows what to do when problems arise. This is provided that you support your body properly.

We hope to provide interesting insights with this blog post. Do you have any questions or would you like guidance with your cholesterol problem? Please do not hesitate to contact us. This can be done online through this link: https://www.repeathealth.com/afspraken/gratis-health-talk

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*Ashraf J, Ali Khan M, Minhaj S, Khatti S, Aarij KM, Shehzad M, Khan TM. Statins and Abnormal Liver Function Tests: Is There a Correlation? Cureus. 2020 Aug 30;12(8):e10145. doi: 10.7759/cureus.10145. PMID: 33014643; PMCID: PMC7526761.*