How useful are cholesterol inhibitors (“statins”)?

Cholesterol inhibitors or “statins” aim to reduce cholesterol levels in the blood.

“Statins” have conquered the world. Some years ago, Pfizer was turning over 10 billion dollars a year with “Atorvastatin” (“Lipitor”). With just one drug per year! Even for spoiled pharmaceutical companies the statins were like the “big bang”.

Do statins have other advantages? They reliably reduce levels of cholesterol in the blood. They reduce the risk of heart disease, but, however, only to a negligible extent. To prevent one heart attack or one death by heart attack per year, about 200 patients have to take a statin every day. Then one in 200 patients benefits with regard to his heart. This is next to nothing. Will I be the one who draws the lucky number of the 200 contenders?

As if that weren’t enough! When examining the larger studies, it is striking that among the patients treated with statins, there is no reduction in the number of deaths, despite the decrease in circulatory complications. This suggests that taking statins is probably not without risk.

Statins strongly intervene in the body’s cell metabolism. They therefore have an accordingly wide range of effects on the body, and risks are associated with their intake. Statins inhibit the synthesis of cholesterol in the liver. “NO” is released in the blood vessels (see the sections on “oxidative stress”). Statins block cell respiration, obstructing the production of energy in the cell and stimulating the process of aging. They influence growth and differentiation in various cells, which suggests they may influence the development of cancer.

Too little cholesterol is damaging

Lowering cholesterol levels in the blood, the advice given to practically all heart patients nowadays, should be classified as damaging. It was striking that in various studies, many
patients who died from cancer had low levels of cholesterol. Vice versa, at higher levels of cholesterol the rate of cancer is lower (54). Older people in particular appear to require higher (!) levels of cholesterol to survive; lower levels are associated with an increased risk of mortality, particularly due to cancer and severe infections (55). In my book “Herzinfarkt – Neue Wege” (45), more detailed information can be found on these studies.

**Cholesterol is indispensable for life**

Cholesterol is an extremely important substance for the human body. It is an essential substance for the membranes of all cells in the body. Cholesterol is an effective “radical scavenger” and protects the organism against the destructive attacks of the “superoxide radicals”. Cholesterol is the origin of cortisone produced in the body and of all sexual hormones, male and female. 20% of our brain consists of cholesterol; nerve and brain function are dependent on cholesterol. It doesn’t sound too good when one hears the body is only to be allowed small portions of this very important substance.

![Image of HDL and LDL](image.png)

Nearly everyone has heard of “good” (“HDL”) and “bad (“LDL”) cholesterol.

HDL cholesterol protects against oxidative attacks of oxygen radicals, as explained in Section 6. LDL cholesterol is neither “good” nor “bad”, it is simply “innocent”. “LDL” is not damaging. Only when “LDL” is oxidized by super oxide radicals does it heat up the oxidative fire. Only “ox-LDL” is potentially damaging. To avoid “ox-LDL” accumulating, it makes little sense to demonize “LDL” and cholesterol as a whole. The main point is to lower one’s own personal radical burden and to ensure a stable immune system, as explained in the corresponding section.

But, to return to “statins”. It was quickly realized that the beneficial influence of statins on the heart and circulation hat nothing to do with the levels of cholesterol in the blood. The effect on the circulation can be observed after a few days, long before there is a decrease in blood cholesterol levels. In addition: the favorable effect on the heart is independent of whether a high or a low cholesterol level is reduced, and also of whether the decrease in the cholesterol level is large or only moderate (56).

Why do statins have beneficial effects on the heart and circulation? The answer is that statins have the capability to stimulate the production of “NO” in the blood vessels and to protect this “NO” against the attacks of free radicals (57,58). This effect can be observed after the tablets have been taken for 3 to 4 days. “NO” stimulates the production of “cGMP” and has its good aspects, as already discussed in the previous section.
The legend of harmful cholesterol: a product of marketing

The highly exaggerated story of cholesterol is much ado about nothing, a play produced by the pharmaceutical industry, which is performed by doctors and their helpers, the journalists in all media. The statins are sold to the public as a weapon in the “war against harmful cholesterol”. The “good” can overcome the bad if it is applied constantly and is put to use early and resolutely enough. Nowadays, even the lowest cholesterol levels are judged to be harmful. Thus, the whole of humanity has been declared to be in need of treatment, as long as they have access to the necessary dollars or euros. Statins are not cheap.

Why all this fuss? The angle of the story is that arteriosclerotic “plaques” in the vessel wall contain cholesterol. The development of these arteriosclerotic structures has, at least at the beginning and during the early phases, nothing to do with cholesterol (28). Older plaques tend to store cholesterol. Evidence has shown that there is no connection between the cholesterol levels in the blood and the fat content of the plaques, at least in most people. There is an exception: a congenital metabolic disease that is luckily rare. The size and growth of arteriosclerotic “plaques” in the coronary arteries cannot be influenced by taking statins.

Cholesterol and arteriosclerosis are two completely different things, just as arteriosclerosis of the coronary arteries and heart attacks are a mismatch. Only in rare cases is there a causal connection between sclerosis of the coronary arteries and heart attacks. A connection between blood cholesterol and coronary arteriosclerosis is only found in a minority of genetically disposed persons. The popular assumption that raised cholesterol levels increase the risk of heart attacks is unfounded in the overwhelming majority of the population.

But appearances triumph! Cholesterol – arteriosclerosis – heart attack, these are the three acts of the play. It is dramatic piece: In the first act, the bad guy steals his way into the human body via the yolk of the egg and the tasty cheese. This does not go unpunished: The particle of fat sticks to the artery and makes the walls of the artery bulge and come out in lumps. Then the finale: total blockage of the arteries - the heart no longer has access to indispensable fuel. In the stranglehold of cholesterol, the heart sacrifices a smaller or larger part of its working muscle during the attack and the holder of this heart sometimes loses his life.

This is not bad acting, but it is a bad play. It makes one go soft in the head, it causes unnecessary fear and increase peoples’ dependence on doctors and industrial interests. When, in the epilogue, the masquerade of the fat particles ends with the “statins” appearing on the horizon they are greeted as saviours. Unfortunately, they are often quite useless and the
damage they cause is not to be underestimated. One thing is guaranteed: on the one hand, a lot of money is earned by certain parties, and on the other, a lot of money is unnecessarily wasted.

In order to prevent one heart attack or a death by heart attack per year, 200 people would have to take one statin per day, which possibly makes them age more quickly. If only 23 heart attack patients were to follow a diet similar to that in countries surrounding the Mediterranean, tasty like the food in the South of France or Italy, one life would also be saved per year or one heart attack prevented. In “Herzinfarkt – Neue Wege” (45), I urge heart patients to free themselves from their dependency on high-tech medicine. One can do a lot oneself.