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Do Statins Actually Extend Life, or Cut It Short?

Analysis by Dr. Joseph Mercola Fact Checked | March 23, 2022

STORY AT-A-GLANCE

- A 2015 systematic review of statin trials found that in primary prevention trials, the median postponement of death was just 3.2 days. In secondary prevention trials, death was postponed 4.1 days
- A 2018 review presented substantial evidence that total cholesterol and LDL cholesterol levels are not an indication of heart disease risk, and that statin treatment is of "doubtful benefit" as a form of primary prevention for this reason
- Tactics used in statin studies to exaggerate benefits include excluding unsuccessful trials, cherry-picking data, ignoring the most important outcome — an increase in life expectancy — and using a statistical tool called relative risk reduction to amplify trivial effects
- If you look at absolute risk, statin drugs benefit just 1% of the treated participants. Out of 100 people treated with statins for five years, one person will have one less heart attack
- Statin trials minimize health risks by using a run-in period. Participants are given the drug for a few weeks, after which those who suffer adverse effects are simply excluded, thereby lowering the perceived frequency and severity of side effects

This article was previously published September 11, 2019, and has been updated with new information.

Researchers have repeatedly failed to find evidence that high cholesterol is a risk factor for cardiovascular disease. In fact, there's plenty of evidence suggesting that higher

cholesterol may actually be healthier than lower levels. Not only that, research done at Johns Hopkins in 2021 on COVID patients indicated that being on statins "may be associated with an significantly increased risk — nearly 1 chance in 5 — of more serious illness."[1]

As I've discussed in many previous articles, three (to some degree interrelated) factors that have a far greater influence on your cardiovascular disease (CVD) risk are:

- Insulin resistance[2]
- Chronic inflammation[3]
- High iron[4]

Elevated iron levels will significantly contribute to inflammation, but even if your iron is normal, chronic inflammation can be caused by a wide range of factors, starting with your diet. Your diet is also the key factor at play when it comes to your insulin level, and can worsen the effects of iron overload.

Unfortunately, these primary contributors are rarely the focus of CVD prevention and treatment in conventional medicine. Instead, statins (cholesterol lowering drugs) are the go-to first line of defense, and this despite the many studies showing cholesterol isn't a part of the problem.

Eye-Opening Finding: Statins Extend Life by About Three Days

A systematic review[5] published in 2015 that deserves far more attention than it has received assessed the ability of statins to postpone death and improve mortality rates. Eleven statin trials with a follow-up between two and 6.1 years were included in the review.

In primary prevention trials (meaning studies in which statins were used as a primary prevention for CVD), death was postponed between a negative five days (meaning they died five days sooner than the control group) and 19 days.

In secondary prevention trials, death was postponed between a negative 10 days and 27 days. The median postponement of death in primary prevention trials was 3.2 days, and in secondary prevention trials 4.1 days.

This is a truly astounding finding, considering people take stains for years, if not decades, and the fact that these drugs are associated with a wide range of serious side effects that can decimate quality of life.

British MP Calls for Parliamentary Inquiry Into Statins

The good news is, more and more scientists are now starting to see this truth. A March 9, 2019, article[6] in European Scientist reported:

> *"Earlier this week, the Chair of the British Parliament Science and Technology Committee, Sir Norman Lamb MP made calls for a full investigation into cholesterol lowering statin drugs.*
>
> *It was instigated after a letter was written to him signed by a number of eminent international doctors including the editor of the BMJ, the Past President of the Royal College of Physicians and the Director of the Centre of Evidence Based Medicine in Brazil … calling for a full parliamentary inquiry into the controversial medication."*

In the article, the lead author of the letter, cardiologist Aseem Malhotra, discusses the dangers of statins, and how the flawed cholesterol hypothesis and the corresponding low-fat myth are pushing patients' health in the wrong direction. He writes, in part:[7]

> *"It is not just financial interests that bias research findings but also intellectual hubris in medicine too. It was the father of the evidence based medicine movement the late Professor David Sackett who said 'Fifty percent of what you learn in medical school will turn out to be either outdated or dead wrong within five years of your graduation, the trouble is no one can tell you which half so you have to learn to learn on your own.'*

In the past 30 years, there have now been 44 randomized controlled trials that reveal no cardiovascular mortality benefit from diet or various drug trials from lowering cholesterol.

Most conspicuous was the recent ACCELERATE trial with over 12,000 patients at high risk of heart disease that revealed no reductions in heart attack, stroke or death despite a 37% reduction in LDL-cholesterol.

But how many doctors actually keep up with the latest evidence? Many will defend the cholesterol lowering dogma with their more inquisitive patients by saying they're just following guidelines, unaware that the guidelines themselves are based upon biased research often written by scientists with strong personal or institutional financial ties to the industry."

Scientific Review Declares Statin Claims Are Overblown

Another newsworthy review[8] that ties into Malhotra's arguments against statins was published in the Expert Review of Clinical Pharmacology in September 2018. It identified significant flaws in three recent studies "published by statin advocates" attempting "to validate the current dogma."

The paper presents substantial evidence that total cholesterol and low-density lipoprotein (LDL) cholesterol levels are not an indication of heart disease risk, and that statin treatment is of "doubtful benefit" as a form of primary prevention for this reason. The paper also details the tactics used in statin studies to exaggerate the benefits. Among them:

- Excluding unsuccessful trials where statins either had no or negative impact on CVD risk or mortality
- Using "evidence" that isn't a true exposure-response
- Cherry-picking data that supports the conclusion of benefit

- Ignoring the most important outcome — an increase in life expectancy
- Using a statistical tool called relative risk reduction to amplify trivial effects — This was also addressed more directly in a 2015 report[9,10] titled "How Statistical Deception Created the Appearance That Statins Are Safe and Effective in Primary and Secondary Prevention of Cardiovascular Disease."

  Here, the authors point out that if you look at absolute risk, statin drugs benefit just "1% of the treated participants."[11] This means that out of 100 people treated with the drugs for five years, one person will have one less heart attack.

According to the authors of the 2018 review:[12]

> *"For some years, many researchers have questioned the results from statin trials because they have been denied access to the primary data. In 2004–2005, health authorities in Europe and the United States introduced New Clinical Trial Regulations, which specified that all trial data had to be made public. Since 2005, claims of benefit from statin trials have virtually disappeared."*

How Statin Studies Minimize Appearance of Side Effects

The Expert Review of Clinical Pharmacology paper also points out that statin trials minimize health risks by using a run-in period. Essentially, the participants are given the drug for a few weeks, after which those who suffer adverse effects are simply excluded.[13] Needless to say, this automatically lowers the number of perceived side effects.

In reality, serious side effects may affect anywhere from 20% to 50% of statin users.[14] What's more, muscle damage is likely far more common a side effect than most statin studies claim.

The authors cite one study in which myopathy occurred in just 0.01% of treated individuals. However, myopathy was defined as having a creatine kinase level "more than 10 times higher than normal," the authors note.[15]

Meanwhile, other research that looked at muscle biopsies found patients with normal creatine kinase levels, who complained of muscular symptoms, indeed had microscopic signs of myopathy. "When patients stopped treatment, their symptoms disappeared, and repeated biopsies showed resolution of the pathological changes," the authors note, adding that:[16]

> *"To reject the frequent occurrence of muscular problems with the argument that muscle symptoms are nocebo effects is also invalid. In a study of 22 statin-treated professional athletes, the authors reported that 17 (77%) of the athletes terminated treatment because of muscular symptoms, which disappeared a few days or weeks after drug withdrawal.*
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> *The explanation for statin-induced adverse muscle effects is probably that statin treatment not only blocks the production of cholesterol but also blocks the production of several other important molecules, for instance, coenzyme Q10, which is indispensable for energy production.*
>
> *As most energy is produced in the muscle cells, including those of the heart, the extensive use of statin treatment may explain the epidemics of heart failure that have been observed in many countries."*

Another study[17] published in 2011 supports these statements, concluding that statin treatment lasting longer than two years causes "definite damage to peripheral nerves."

A study[18] published in the August 2019 issue of JACC: Basic to Translational Science presents a new mechanism of statin-induced myopathy. In short, the data suggest statin treatment causes calcium to leak out of your muscle cells.

As explained by Science Daily,[19] "Under normal conditions, coordinated releases of calcium from these stores make the muscles contract. Unregulated calcium leaks may cause damage to muscle cells, potentially leading to muscle pain and weakness."

Another study, a meta-analysis published in 2021 in The BMJ, noted that as seniors age, “the potential harms of [statins and other medications] increase, and for some it may be

the case that the harms of treatment might start to outweigh the potential benefits."[20]

The analysis, which comprised 120,000 patients without a history of cardiovascular disease who were followed for a mean of 3.9 years, found that statins were associated with risks of side effects that included muscle symptoms, liver dysfunction, renal insufficiency and eye conditions.

Statin Use Is Associated With a Wide Variety of Problems

In their Expert Review of Clinical Pharmacology paper, the authors also highlight research showing statin use is associated with a number of significant health complications beside muscle problems:[21]

> *"… [C]ase–control and cross-sectional studies have shown that statin use is observed significantly more often among patients with cataracts, hearing loss, suicidal ideation, peripheral neuropathy, depression, Parkinson's disease, interstitial cystitis, herpes zoster, impotency, cognitive impairments, and diabetes.*
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> *In some of these studies, the side effects disappeared with discontinuation of the statins and worsened with rechallenge. As cholesterol is a vital substance for the renewal of all cells, and since statins also block the production of other molecules necessary for normal cell function, it is not surprising that statin treatment may result in side effects from many different organs."*

Even More Reasons to Avoid Statin Drugs

The scientific fact is, aside from being a "waste of time" and not doing anything to reduce mortality, statins also come with a long list of potential side effects and clinical challenges. Importantly, statins:

1. Deplete your body of CoQ10 — Statins block HMG coenzyme A reductase in your liver, which is how they reduce cholesterol. But this is also the same enzyme that

makes CoQ10, which is an essential mitochondrial nutrient that facilitates ATP production.

2. Inhibit the synthesis of vitamin K2, a vitamin that protects your arteries from calcification.

3. Because of 2 and 3, statins increase your risk for other serious diseases. Aside from the conditions mentioned above, they may also raise your risk for:

    a. Cancer — Research[22] has shown that long-term statin use (10 years or longer) more than doubles women's risk of two major types of breast cancer: invasive ductal carcinoma and invasive lobular carcinoma.

    b. Diabetes — Statins have been shown to increase your risk of diabetes via a number of different mechanisms, two of which include increasing your insulin resistance, and raising your blood sugar. According to one recent study,[23] statins double your risk of Type 2 diabetes, and triple the risk when taken for more than two years.

    c. Cognitive dysfunction, neurological damage[24] and neurodegenerative diseases, including vascular dementia, Alzheimer's disease and Parkinson's disease.[25]

    d. Decreased heart function.[26]

    e. Impaired fertility — Importantly, statins are a Category X medication,[27] meaning they cause serious birth defects,[28] so they should never be used by a pregnant woman or women planning a pregnancy.

Statins Do Not Benefit Patients With Respiratory Disease

Aside from lowering cholesterol, statins appear to have an ameliorating effect on inflammation. For this reason, statins are at times used in the treatment of pulmonary conditions such as chronic obstructive pulmonary disease (COPD). This may be

because statins are a Nrf2 activator[29] and decrease oxidative stress and secondary inflammation.

However, as with the COVID patients I mentioned earlier, while some observational studies have shown a potential benefit, a systematic review[30] by the Cochrane Database of Systematic Reviews failed to find any significant benefit for this patient group. The review had three primary objectives:

a. To determine whether statins reduce mortality rates in COPD

b. To determine whether statins reduce exacerbation frequency, improve quality of life, or improve lung function in COPD

c. To determine whether statins are associated with adverse effects

The review included eight placebo-controlled studies involving 1,323 participants with COPD, with a mean age of 61.4 to 72 years. According to the authors:[31]

> *"We found no statistically significant difference between statins and placebo in our primary outcome of number of exacerbations per person-year, including number of exacerbations requiring hospitalization per person-year …*
>
> *Our primary outcomes of all-cause mortality and COPD-specific mortality showed no significant difference between statins and placebo, with wide confidence intervals suggesting uncertainty about the precision of the results … Results show no clear difference in quality of life, which was reported in three trials …*
>
> *A small number of trials providing low- or moderate-quality evidence were suitable for inclusion in this review. They showed that use of statins resulted in a reduction in CRP and IL-6, but that this did not translate into clear clinical benefit for people with COPD."*

Beware: Next-Gen Cholesterol Drugs Likely Just as Harmful

While some of the dangers of statins are becoming more widely recognized, the dangers of cholesterol-lowering drugs in general is still being swept under the rug as newer drugs are being released.

One next-gen class of cholesterol-lowering drugs is the proprotein convertase substilisin/kexin type 9 (PCSK9) category, also known as PCSK9 Inhibitors.[32] Just as there are many different drugs within the statin category, there are many in the PSCK9 category. Repatha is one of them.

PCSK9 is a protein that works with LDL receptors that regulate LDL in your liver and release LDL cholesterol into your blood. The inhibitors work by blocking that protein, thus lowering the LDL in circulation.

While these drugs are being touted as the answer for those who cannot tolerate some of the side effects of statins, such as severe muscle pain, there's already evidence suggesting PCSK9 inhibitors can produce neurocognitive effects, with some patients experiencing confusion and attention deficits.[33,34,35,36]

Not only that, in 2020 a systematic review of clinical events registered on ClinicalTrials.gov did not show that PCSK9 inhibitors improve cardiovascular health.[37] In fact, the same study found that one PCSK9 inhibitor, Evolocumab, actually increased the risk of all-cause mortality.

At the end of the day, if you're concerned about your heart health, you'd be wise to implement lifestyle changes known to support a healthy heart and help prevent CVD from developing in the first place. You can learn more about your risk factors, recommended tests and drug-free prevention methods in the following articles: "Cholesterol Does Not Cause Heart Disease," "How to Increase Your Health Span," and "Why Your Doctor Is Wrong About Cholesterol."

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