

Have you seen this video on social media? Have you wondered if it is legit?



Well, the claims made here about statins are in fact a highly selective misrepresentation of the evidence.

There was a Cochrane review in 2011 which raised questions about the use of statins for primary prevention of cardiovascular disease but the authors admitted the studies were of poor design. This is what they actually said:

2011 Cochrane Review on the use of Statins for the primary prevention of cardiovascular disease.

“AUTHORS’ CONCLUSIONS: Although reductions in all-cause mortality, composite endpoints and revascularisations were found [ie statins work] with no excess of adverse events [i.e. are safe], there [were problems with some bias in some of the studies]. There was no clear evidence of any significant harm caused by statin prescription or of effects on patient quality of life.”

Taylor F1, Ward K, Moore TH, Burke M, Davey Smith G, Casas JP, Ebrahim S. Statins for the primary prevention of cardiovascular disease *Cochrane Database Syst Rev*. 2011 Jan 19;(1):CD004816 doi: 10.1002/14651858.CD004816.pub4. <https://www.ncbi.nlm.nih.gov/pubmed/21249663>

Because of the poor quality of studies in this review, the authors undertook a further but wider review and ensured included studies were of high quality (randomised and blinded to remove any bias), and included the latest studies. Two years later they published...

2013 “Cochrane Review on the use of Statins for the primary prevention of cardiovascular disease.”

“OBJECTIVES: To assess the effects, both harms and benefits, of statins in people with no history of CVD. Two review authors independently selected studies for inclusion. Eighteen randomised control trials (19 trial arms; **56,934 participants**) were included.

AUTHORS' CONCLUSIONS: Reductions in all-cause mortality, major vascular events and revascularisations were found with no excess of adverse events among people without evidence of CVD treated with statins.

"These benefits are similar in people at lower (< 1% per year) risk of a major cardiovascular event."

Taylor F1, Huffman MD, Macedo AF, Moore TH, Burke M, Davey Smith G, Ward K, Ebrahim S. Statins for the primary prevention of cardiovascular disease. *Cochrane Database Syst Rev*. 2013 Jan 31;(1):CD004816. doi: 10.1002/14651858.CD004816.pub5. <https://www.ncbi.nlm.nih.gov/pubmed/23440795>

So the second larger and higher quality review demonstrated statins were both effective and safe in primary prevention of cardiovascular disease.

DIABETES: So what about the claim of an increase in diabetes in statin users? The studies observing an increase in were reviewed in 2015.

"PURPOSE OF REVIEW: In randomized trials and many observational studies, statins are associated with a modest excess of type 2 diabetes mellitus.

Review Report: "The excess risk of diabetes appears to be confined to those who are already at risk for developing diabetes. Diabetes is diagnosed only 2-4 months earlier in statin-treated patients and therefore is unlikely to have no long-term adverse consequences [and earlier diagnosis is a good thing].

"SUMMARY: The clinical impact of statin-associated diabetes is likely unimportant. The cardiovascular risk reduction benefit from statin far outweighs the potential for adverse effects in all but the very lowest risk individuals."

Robinson, JG Statins and diabetes risk: how real is it and what are the mechanisms? *Curr Opin Lipidol*. 2015 Jun;26(3):228-35. doi: 10.1097/MOL.0000000000000172. <https://www.ncbi.nlm.nih.gov/pubmed/25887679>

This is probably a reflection of greater screening for diabetes on anyone with raised lipids and so discovered because they are on statins but not caused by statins and so this is a good thing!

What about the "Rapid aging" claim?

"The Guardian" reviewed this in 2015

On Sunday the Express front page warned us that 'statins age you faster'. But what does the research really show?

The researchers found that the stem cells exposed to statins changed in to immune cells at lower levels than those that weren't exposed to statins. The authors think this might be beneficial to the prevention of cardio-vascular disease, as there is some suggestion that lower levels of these immune cells are associated with less inflammation in patients with cardio-vascular disease.

<https://www.theguardian.com/science/sifting-the-evidence/2015/sep/28/do-statin-really-age-you-faster>

This is a good thing, not something to be afraid of!

There is also good evidence for statins inhibiting telomere shortening associated with heart disease, aging and memory loss. <https://www.ncbi.nlm.nih.gov/pubmed/22022767> http://www.telomer.com.tr/wp-content/uploads/2015/12/TL_risk_of_coronary_disease_and_statins_SamaniNJ_Lancet_2007.pdf <https://www.sciencedaily.com/releases/2013/08/130829112854.htm>

What about "Brain Damage"??

- **Neurological side effects:** The FDA warns on statin labels that some people have developed memory loss or confusion while taking statins. These side effects reverse once you stop taking the medication. **[So this is not "damage"]**. There is limited evidence to prove a cause-effect. <https://www.mayoclinic.org/diseases-conditions/high-blood-cholesterol/in-depth/statin-side-effects/art-20046013>
- A very large controlled trial compared 482,543 statin users with 2 control groups: 482,543 matched nonusers of any Lipid Lowering Drugs (LLDs) and 26,484 users of non-statin LLDs. There was a reported memory loss in the first 30 days but for both the statins and non-statin lipid lowering drugs suggesting the temporary loss is a detection bias not caused by the drug. Strom, Brian L. et al. "Statin Therapy and Risk of Acute Memory Impairment." *JAMA internal medicine* 175.8 (2015): 1399-1405. <https://www.ncbi.nlm.nih.gov/pubmed/26054031> interpretation <https://medicalxpress.com/news/2015-06-statin-dont-memory-loss.html>
- In fact statins are being trialled to Reduce the Burden of Cognitive Impairment in Patients Who Are Critically Ill. See 2011 **2011 "Statins and Brain Dysfunction"** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3168859/>

Further more....

Atorvastatin is highly effective in reducing LDL

2012 Cochrane Review on Lipid lowering efficacy of atorvastatin

Studies show that atorvastatin in doses of 10 to 80 mg/day decreases blood total cholesterol and LDL-cholesterol by 36% to 53% and withdrawals due to adverse effects were not statistically different between atorvastatin and placebo.

<http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD008226.pub2/abstract;jsessionid=B04D58465A05B89B7356478CBBE4650D.f02t03>

And Statins are safe and effective in children.....

2017 Cochrane Review on the evidence for the effectiveness and safety of statins in children with inherited high blood cholesterol. **Authors' conclusions:** Statin treatment is an effective lipid-lowering therapy in children with familial hypercholesterolemia. No significant safety issues were identified. http://www.cochrane.org/CD006401/CF_statin-children-inherited-high-blood-cholesterol

Dr Keith Blayney 14 July 2018