Statins and Primary Prevention (2 pages)

NNT – Number Needed to Treat: Statin Drugs Given for 5 Years for Heart Disease Prevention (Without Known Heart Disease) (Updated November 2017)

Benefits in NNT

- 98% saw no benefit, no lives were saved
- None (0%) were helped (life saved)
- 1 in 104 (0.96%) were helped (preventing heart attack)
- 1 in 154 (0.65%) were helped (preventing stroke)

Harms in NNT

- 1 in 50 (2%) were harmed (develop diabetes)
- 1 in 10 (10%) were harmed (muscle damage)

http://www.thennt.com/nnt/statins-for-heart-disease-prevention-without-prior-heart-disease-2/

Little Benefit for Extending Life

"Results 6 studies for primary prevention and 5 for secondary prevention with a follow-up between 2.0 and 6.1 years were identified. Death was postponed between −5 and 19 days in primary prevention trials and between −10 and 27 days in secondary prevention trials. The median postponement of death for primary and secondary prevention trials were 3.2 and 4.1 days, respectively."

– The effect of statins on average survival in randomised trials, an analysis of end point postponement, Malene Lopez Kristensen, et. al., BMJ Open Journal, Volume 5, Issue 9.

https://bmjopen.bmj.com/content/5/9/e007118.full

Statin Mechanism May Cause Harm

" . . .we present a perspective that statins may be causative in coronary artery calcification and can function as mitochondrial toxins that impair muscle function in the heart and blood vessels . . ."

– Statins stimulate atherosclerosis and heart failure: pharmacological mechanisms, Okuyama H, et. al., Expert Rev Clin Pharmacol, 2015 Mar;8(2):189-99.

https://www.ncbi.nlm.nih.gov/pubmed/25655639

[See also: Statin Adverse Effects: A Review of the Literature and Evidence for a Mitochondrial Mechanism, Beatrice A. Golomb, et. al., Am J Cardiovasc Drugs, 2008; 8(6). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2849981/]

Study and 3 Analyses: Statins have No Benefit for Primary Prevention

”No benefit was found when a statin was given for primary prevention to older adults."

– Effect of Statin Treatment vs Usual Care on Primary Cardiovascular Prevention Among Older Adults The ALLHAT-LLT Randomized Clinical Trial, by Benjamin H. Han, MD, MPH, et. al., JAMA Intern Med. 2017;177(7):955-965.

https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2628971

“Conclusions:. Therefore, statins have not been shown to provide an overall health benefit in primary prevention trials.”

– Do Statins have a Role in Primary Prevention?” Therapeutics Letter #48, posted on October 16, 2003.

http://www.ti.ubc.ca/pages/letter48.htm

“Conclusion This literature-based meta-analysis did not find evidence for the benefit of statin therapy on all-cause mortality in a high-risk primary prevention set-up.”

– Statins and All-Cause Mortality in High-Risk Primary Prevention: A Meta-analysis of 11 Randomized Controlled Trials Involving 65 229 Participants, Kausik K. Ray, et. al., Arch Intern Med, 2010;170(12):1024-1031.

https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/416105

“. . . statin treatment, in particular when used as primary prevention, is of doubtful benefit.”

– LDL-C Does Not Cause Cardiovascular Disease: a comprehensive review of current literature, Uffe Ravnskov, et. al. , Expert Review of Clinical, Volume 11, 2018 - Issue 10.

https://www.tandfonline.com/doi/abs/10.1080/17512433.2018.1519391

Statin Benefits Overstated

"We have described the deceptive approach statin advocates have deployed to create the appearance that cholesterol reduction results in an impressive reduction in cardiovascular disease outcomes."

– How statistical deception created the appearance that statins are safe and effective in primary and secondary prevention of cardiovascular disease, Diamond DM, et. al., Expert Rev Clin Pharmacol, 2015 Mar;8(2):201-10.

https://www.ncbi.nlm.nih.gov/pubmed/25672965