



A statin a day keeps the doctor away: comparative proverb assessment modelling study

**Briggs Adam D M, Mizdrak Anja, Scarborough Peter. A statin a day keeps the doctor away:
comparative proverb assessment modelling study. *BMJ*. 2013; 347 :f7267**

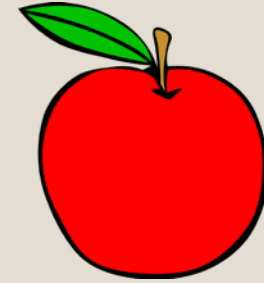
Study, population, & methods

- Primary prevention of vascular mortality
- UK adults aged ≥ 50 years
- Preventable Risk Integrated Model (PRIME)

Intervention



vs.



- **Statin**
 - + Reduces risk of vascular mortality by 12% per 1.0 mmol/L reduction in LDL (avg. reduction 1.08 mmol/L over one year)
 - - AEs: myopathy, rhabdomyolysis, diabetes mellitus
- **Apple**
 - + Keeps the doctor away
 - - None widely recognized

Outcomes

- **Vascular disease mortality**
 - Stroke, cardiac death, vascular death
- **Related adverse events**
- **Cost**

Results - Statins

- Reduced vascular deaths by **9400** (95% CI 7000, 12,500) over one year
- Associated harms:
 - 1200 excess cases of myopathy
 - 200 cases of rhabdomyolysis
 - 12,300 cases of diabetes mellitus
- Cost to NHS **£180 million (\$295 million)**

Results - Apples

- Reduced vascular deaths by **8500** (95% CI 6200, 10,800) over one year
- None modeled
- Cost to NHS ~£260million

Limitations

- Assumed 70% adherence
- Applied treatment effect uniformly to all people 50 and older, regardless of age, sex, risk profile
- Ignored potential risks & challenges of apple consumption
 - e.g., distress associated with finding half a worm inside your apple, greater time & effort required to consume an apple vs. statin

LETTERS

A STATIN A DAY KEEPS THE DOCTOR AWAY

Comparison of statins and apples was unfair

Timo E Strandberg *professor*

Department of Medicine, University of Helsinki, 00029 Helsinki, Finland

Briggs and colleagues' study suggested comparable mortality benefits from statins and apples.¹ However, their study may not give due credit to statins for several reasons.

Firstly, the clinical effect of statins was based on rigorous mostly placebo controlled trials, whereas the effect of apples was based on data from observational studies. This is inevitable because no placebo controlled trials have studied the effects of apple consumption. But unequal study design leads to bias, because study participants may also benefit from a placebo,² so net benefit will be narrower in controlled drug trials.

Secondly, like apples, statins may also have anticancer effects.³

prevent disease I think that eating apples also falls under the banner of "medicalisation."

Although Briggs and colleagues' study may be a prime example of comparing apples with oranges, I agree with their bottom line—statins and apples are beneficial for health. I therefore consume both.

Competing interests: I have studied statins and cholesterol over two decades and during this time have cooperated with all companies marketing statin drugs in various ways. I take one statin a day and fruit at least five times a day. I prefer oranges to apples.

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Merry Christmas + Happy Holidays

