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Absolute Risk Reduction Due to Statin Use According to Sex

I would like to thank Dr. Mosca for her insightful editorial (1) on our publication detailing a meta-analysis of the effects of statin use in women and men (2) and for highlighting the importance of reduction in absolute risk, particularly in primary prevention. She also raised the issues of cost and adverse events in this population. We performed an additional meta-analysis to examine absolute risk reduction (ARR).

In women, the ARR of the primary endpoint was statistically significant in primary prevention trials (0.7% [95% confidence interval (CI): 0.3 to 1.0]; $p = 0.0004$) and more pronounced (4-fold) in secondary prevention trials (2.8% [95% CI: 1.5 to 4.2]; $p = 0.0001$). The corresponding number needed to treat over a 4-year period was 148 for primary prevention and 36 for secondary prevention. In men, the ARR of the primary endpoint was also statistically significant in primary prevention trials (2.3% [95% CI: 1.1 to 3.4]; $p = 0.0001$) and more pronounced in secondary prevention trials (3.4% [95% CI: 2.0 to 4.7]; $p < 0.0001$). The corresponding number needed to treat over a 4-year period was 43 for primary prevention and 29 for secondary prevention.

We do not have sufficient data to perform cost-effectiveness analyses. However, with the availability of high-potency generic statins, the cost of medication will continue to decrease. Because there were only 2 studies reporting sex-specific adverse effects, we are not able to make firm statements about their adverse-effect profile specific to women. However, their widespread use in both men and women suggests that they are typically well tolerated. We agree with Dr. Mosca on the importance of enrolling more women in clinical trials and that sex-specific data should be included in the corresponding publications.

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