

Can heart disease treatments combat AMD?

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Can treatments that reduce risks for cardiovascular disease (CVD) also help combat age-related macular degeneration (AMD), an eye disease that affects millions of Americans? CVD and AMD share some risk factors—such as smoking, high blood pressure, and inflammation—and a recent study found that people who have early-stage AMD are more likely to develop heart disease. This month's *Ophthalmology*, the journal of the American Academy of Ophthalmology, reports on how two heart disease treatments, low-dose aspirin and statin medications, may impact AMD risk and disease progression.

Low-dose Aspirin May Offer Mild Protection from AMD

Records for 39,421 women enrolled in the 10-year Women's Health Study (WHS) were used to evaluate the impact of low-dose [aspirin](#) on AMD risk. None of the women had AMD at the study outset; they were randomly assigned to take low-dose aspirin (100 mg on alternate days) or a [placebo](#). It is known that low-dose aspirin substantially reduces the risk of serious blood vessel blockage, so researchers reasoned it might affect blood vessels that may play a role in AMD. Aspirin's anti-inflammatory and anti-oxidant effects were also considered potentially relevant. The research was supported by the National Eye Institute.

"Although our study found no large benefit from low-dose aspirin, the possible modest protective effect we did find warrants further study," said lead researcher William G. Christen, ScD, of Brigham and Women's Hospital, Boston, MA. "If future studies confirm our findings, it could

be important to make the public aware of this benefit," he added.

The risk of developing vision-impacting AMD was reduced by 18 percent in women who took low-dose aspirin. During the 10 year study, 245 AMD cases developed, 111 in the aspirin group and 134 in the placebo group. "Vision impact" was defined as a reduction in visual acuity to 20/30 or worse due to AMD. Though not statistically significant, the WHS risk reduction is similar to the result of the only other large randomized trial on this question: the Physicians' Health Study I, which followed 22,071 men who took low-dose aspirin or a placebo for five years.

The primary aim of the WHS was to learn whether Vitamin E and low-dose aspirin would help prevent [heart disease](#) and cancer. The AMD study also found that women who were not taking multivitamins appeared to benefit more from low-dose aspirin than vitamin users.

Statins Do Not Stop Advanced AMD

In the largest study of statin use by advanced AMD patients to date, researchers followed 744 patients enrolled in the Complications of Age-Related Macular Degeneration Prevention Trial (CAPT) for five or six years. Statin drugs are primarily used to lower cholesterol in CVD patients, but they also affect mechanisms thought to impact AMD, including reduction of the inflammatory marker C-reactive protein. Earlier studies on statins' effects had been inconclusive. All patients from the CAPT cohort study were at risk for advanced AMD, but none had developed advanced "wet" or "dry" AMD at baseline. The study was supported by the National Eye Institute.

"The CAPT data did not support a large effect for statins in decreasing advanced AMD risk in patients who already had large drusen in both eyes," said lead researcher Maureen G. Maguire, PhD, Department of

Ophthalmology, University of Pennsylvania. Drusen are whitish deposits, common in the eyes of people older than 60, which may signal AMD. Statin users were at slightly higher risk than non-users for developing advanced AMD, she said.

Dr. Maguire said several factors may be masking a protective effect for statins, the most important being that most patients who take statins for CVD are also at high risk for AMD. Only a randomized controlled trial could reveal statins' impact on AMD in the wider population, but since so many elderly people take statins it could be difficult to recruit a control group. It is also possible that statins may need to be taken for longer than the CAPT study's timeframe to show a protective effect, she added.

Source: American Academy of Ophthalmology

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