

## Some high blood pressure drugs may be associated with increased risk of vision-threatening disease

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There may be a connection between taking vasodilators and developing early-stage age-related macular degeneration (AMD), the leading cause of vision loss and blindness among Americans who are age 65 and older, according to a study published online in *Ophthalmology*, the journal of the American Academy of Ophthalmology.

AMD – the deterioration of the eye's macula, which is responsible for the ability to see fine details clearly – affects an estimated 11 million people in the United States. In addition to increased age, the cause of AMD may be attributed to several risk factors, including hereditary risk and smoking. Some studies have also found an association between AMD and [high blood pressure](#), but this has been inconsistent. To help clarify the relationship between AMD incidence and blood pressure lowering medications, including vasodilators, researchers from the University of Wisconsin School of Medicine and Public Health conducted a long-term population-based cohort study from 1988 to 2013 of nearly 5,000 residents of Beaver Dam, Wis., aged 43 to 86 years. The research is part of the National Eye Institute -funded Beaver Dam Eye Study, which has since 1987 collected information on the prevalence and incidence of AMD, [macular degeneration](#) and diabetic retinopathy.

The researchers found that, after adjusting for age, sex and other factors, using any vasodilator such as Apresoline and Loniten, which open (dilate) the blood vessels – was associated with a 72 percent greater risk

of developing early-stage AMD. Among people who were not taking vasodilators, an estimated 8.2 percent developed signs of early AMD. In comparison, among those taking a vasodilator medication, 19.1 percent developed the disease.

The researchers also found that taking oral beta blockers such as Tenormin and Lopressor was associated with a 71 percent increase in the risk of neovascular AMD, a more advanced and vision-threatening form of the disease. Among those who were not taking oral beta blockers an estimated 0.5 percent developed signs of neovascular AMD. In comparison among those taking oral beta blockers, 1.2 percent developed neovascular AMD.

While the study provides risk estimates of associations between [blood pressure](#) lowering medications and AMD at various stages, the researchers caution that their study was not able to discern effects of the medications themselves and the conditions for which participants were taking those medications.

"As significant as these results may be, it's important that they be replicated first, and if possible tested in a clinical trials setting before changing anyone's medication regimens," said Ronald Klein, M.D., MPH, lead researcher of the study. "Further research is needed to determine the cause of these increased risks."

Provided by American Academy of Ophthalmology

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