

Vitamins & Supplements for Age-related macular degeneration

Some patients with age-related macular degeneration (AMD) will benefit from the use of a vitamin supplement available without prescription and taken by mouth. This supplement reduces the chance of future vision loss for some patients. This supplement does not help all patients with AMD, and it is important to understand who benefits from its use.



What research supports the use of vitamins in AMD?

The **Age-Related Eye Disease Study (AREDS)** was a six-year clinical trial of 3,640 participants aged 55 to 80 years old sponsored by the National Eye Institute. Researchers found that a combination of antioxidants prevented progression of intermediate stage AMD. The study helped identify optimal vitamin formulations for both smokers and non-smokers.

The **AREDS 2 Study** subsequently followed more than 4,000 participants for 5 years to investigate the relative benefits of several variations on the original formulas. This study identified a single vitamin formulation which provides the maximum benefit to patients regardless of prior smoking history.

The AREDS 2 supplement recommended based on the study contained:

452 mg of Vitamin C	400 IU of Vitamin E
10 mg of Lutein	2 mg of Zeaxanthin
70 mg of Zinc	1.6 mg of Copper

This combination reduced progression from intermediate AMD to advanced AMD by 25%. The addition of Omega-3 Fatty Acids did not provide any extra benefit in the AREDS 2 Study.

As a comparison, the Recommended Daily Allowance (RDA) is 90 mg/day for vitamin C, 15 IU of vitamin E, 0.9 mg/day of beta-carotene, 11 mg/day of zinc, and 0.9 mg/day of copper.

BayAreaRetinaAssociates

Diseases and Surgery of the Retina and Vitreous



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The AREDS supplement did not benefit eyes with early stage AMD or eyes that already had advanced AMD with poor vision. The AREDS supplement *is* recommended for patients with advanced AMD in one eye if the fellow eye has no AMD or AMD with vision of 20/100 or better. This supplement is not a cure for AMD, nor will it restore vision already lost by AMD.

What other research supports vitamin use for AMD?

Omega-3 fatty acids were not shown to provide a vision benefit in the prospective AREDS 2 Study. However, large population studies have demonstrated that a higher dietary intake of omega-3 fatty acids, particularly in the form of fish, is associated with decreased progression of AMD. A review of almost 90,000 individuals revealed that regular fish intake was associated with a 38% reduction in late stage AMD. Based on data from the AREDS 2 Study, omega-3 fatty acids in the form of vitamin supplements do not seem to provide the same beneficial effects seen from dietary intake of fish or other foods naturally containing omega-3 fatty acids.

Lutein and zeaxanthin are critical components of pigments in the macula (central retina) and both are included in the AREDS 2 formulation. Large population studies have demonstrated that higher dietary intake of foods rich in lutein and zeaxanthin reduced the risk of developing AMD or progression of existing AMD. Leafy green vegetables such as spinach and collard greens contain high amounts of lutein and zeaxanthin.

A wide variety of vitamins are currently marketed for eye health or vision health. Many of these vitamins are not based on scientific evidence. If you are unsure about an eye-related vitamin supplement or advertisement, look for the AREDS or AREDS 2 formulation to be sure that the supplement includes ingredients based on high quality scientific data.

Ask your eye doctor if you are unsure whether AREDS or similar vitamins are suitable for you.

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Bay Area Retina Associates is a group practice of retinal surgeons. All members of the group are board certified by the American Academy of Ophthalmology and have completed fellowship training in vitreoretinal surgery. BARA surgeons have expertise in the treatment of retinal detachment, diabetic retinopathy, age-related macular degeneration, macular hole, epiretinal membrane, and retinal vascular disease. BARA physicians see patients in eight offices and perform surgery at several hospitals and surgery centers around the East Bay.