

# Patient Focus

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## Age-Related Eye Disease Study Results Released

Researchers with the Age-Related Eye Disease Study (AREDS) reported in 2001 that a nutritional supplement called the AREDS formulation can reduce the risk of developing advanced age-related macular degeneration (AMD). The original formulation contains vitamin C, Vitamin E, beta-carotene, zinc and copper. In 2006, the same research group, based at the National Eye Institute, began a second study called AREDS2 to determine if they could improve the AREDS formulation. The researchers substituted lutein and zeaxanthin for beta-carotene, which prior studies had associated with an increased risk of lung cancer in smokers. Omega-3 fatty

acids (DHA and EPA) were added and the dose of zinc was lowered.

The study found that while omega-3 fatty acids had no effect on the formulation, lutein and zeaxanthin together appeared to be a safe and effective alternative to beta carotene.

In the first AREDS trial, taking the original formulation reduced the risk of advanced AMD by about 25 percent over a five-year period. In the AREDS2 trial, adding lutein/zeaxanthin to the original formulation had no additional overall effect on the risk of advanced AMD. However, trial participants who took the AREDS

formulation containing lutein/zeaxanthin and no beta-carotene had a slight reduction in the risk of advanced AMD compared to those participants who took AREDS with beta-carotene. Also, for participants with very low levels of lutein/zeaxanthin in their diet, adding these supplements to the AREDS formulation helped lower their risk of advanced AMD.

Therefore, the AREDS2 Study results suggest:

- Substituting lutein and zeaxanthin for beta-

carotene eliminates the extra risk of cancer for smokers and is somewhat more effective in preventing advanced AMD.

- Neither lutein/zeaxanthin nor DHA/EPA, when added to the original AREDS formulation, had any overall effect on the risk of advanced AMD.

Source: [www.nei.nih.gov/amd/](http://www.nei.nih.gov/amd/)

Penn State Hershey Eye Center retina specialists and their patients participated in the AREDS and AREDS2 clinical trials.

## The AREDS Formulation

The new AREDS formulation (which is not the AREDS2 formulation currently available) is expected to be commercially available in the near future. Until the new formulation becomes available, recommendations regarding AREDS vitamins for patients with AMD remain the same as prior to the AREDS2 study. The retinal specialists at Penn State Hershey Eye Center recommend the following guidelines for patients with AMD:

- Do not smoke.
- Eat a diet rich in dark green, leafy vegetables and orange vegetables.
- Protect your eyes from the sun.
- Control blood pressure, cholesterol, and weight.
- Exercise.
- Take the AREDS nutritional supplements as instructed by your eye care provider.

- If you have been a smoker within the past year, speak to your eye care provider about the possibility of an alternative supplement.

The National Eye Institute (NEI) recommends that people with intermediate AMD in one or both eyes or with advanced AMD (wet or dry) in one eye but not the other take the AREDS formulation each day. However, this combination of nutrients does not help prevent AMD nor does it slow progression of the disease in those with early AMD.

Patients can take multivitamins while taking one of the AREDS formulations; however, these formulations are not a substitute for a multivitamin. The AREDS formulations contain specific vitamins and minerals in much higher doses than what is

found in multivitamins. Taking a multivitamin alone will not provide the same vision benefits as an AREDS formulation.

Many patients take prescription medications and use over-the-counter drugs, dietary supplements, and herbal medicines. High-dose supplemental nutrients can sometimes interfere with

medications and compete with other vital nutrients for absorption into the body. Individuals who are considering taking an AREDS formulation should discuss this with their primary care doctors and/or eye care professionals.

*Source:*  
[www.nei.nih.gov/areds2/PatientFAQ](http://www.nei.nih.gov/areds2/PatientFAQ)



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