

## age-related macular degeneration (AMD) and nutritional supplements

**Age-related macular degeneration (AMD) is a disease of the macula, the small part of the eye's retina that is responsible for our central vision.**

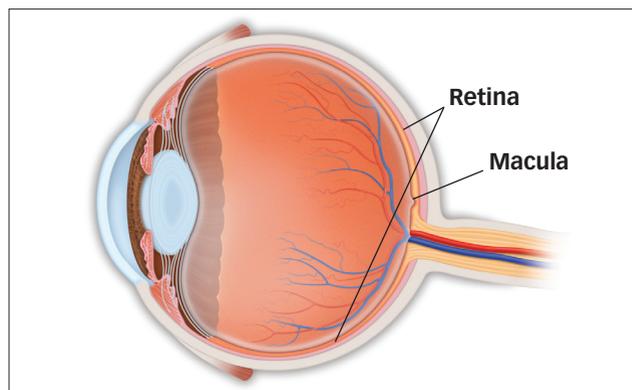
This condition affects both distance and close vision and can make some activities — like threading a needle or reading — very difficult or impossible. Macular degeneration is the leading cause of severe vision loss in people over the age of 50.

Many people with AMD have deposits under the retina called **drusen**. Drusen alone usually do not cause vision loss, but when they grow in size or number, there is an increased risk of developing advanced AMD. People at risk of developing a late stage of AMD may have a large amount of drusen or they may have abnormal blood vessels growing beneath the macula in one eye.

### HOW CAN VITAMINS AND MINERALS AFFECT AMD?

A scientific study called AREDS (Age-Related Eye Disease Study) has shown that some antioxidant vitamins and zinc may reduce the impact of AMD in some people.

The study found that people at higher risk for late-stage macular degeneration who followed a dietary supplement of vitamin C, E and beta-carotene, along with zinc, lowered the risk of the disease progressing to advanced stages by about 25 percent. The same treatment did not appear to achieve the same results among people without AMD, or within the first stages of the disease.



The nutritional supplements used by AREDS that proved to be beneficial contain:

- vitamin C (500 mg);
- vitamin E (400 IU);
- beta-carotene (15 mg);
- zinc oxide (80 mg);
- copper oxide (2 mg, to prevent the loss of copper associated with zinc supplements).

The levels of antioxidants and zinc that were shown to be effective in slowing AMD's progression cannot be consumed through your diet alone. These vitamins and minerals are recommended in specific daily amounts as supplements to a healthy, balanced diet, to benefit the health of people with minimal presence of AMD, or those without evidence of macular degeneration.

Some people may prefer not to take high dosages of antioxidants or zinc for medical reasons. The AREDS study did not reveal any evidence that the treatment may be toxic. However, beta-carotene may increase the risk of developing lung cancer among smokers, or those who have quit smoking recently.

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Another large study in women showed a benefit from taking folic acid and vitamins B6 and B12. And a large study evaluating the benefits of lutein and fish oil (Omega-3) is ongoing, though at this time, the appropriate daily dose of lutein or Omega-3 supplementation is not clear.

### SHOULD I TAKE ANTIOXIDANT VITAMINS FOR MACULAR DEGENERATION?

It is very important to remember that vitamin supplements are not a cure for AMD, nor will they restore vision you may have already lost from the disease. However, specific amounts of certain supplements do play a key role in helping some people at high risk for advanced AMD to maintain their vision. Talk to your ophthalmologist (Eye M.D.) to determine if you are at risk for developing advanced AMD and to learn if supplements are recommended for you.

### COMPLIMENTS OF YOUR OPHTHALMOLOGIST:

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