



## **NUTRITIONAL SUPPLEMENTS AND YOUR EYES**

### **Background**

Scientists have long wondered whether taking vitamin and/or mineral supplements could help prevent, treat or cure certain eye conditions. Some early scientific studies seemed to show that supplements might be able to prevent cataracts and age-related macular degeneration (AMD), or keep the condition from getting worse. The Age-Related Eye Disease Study (AREDS), looked at the potential benefit of high dose supplements.

### **What is AREDS?**

The AREDS was a major study sponsored by the National Eye Institute, one of the Federal government's National Institutes of Health, and was conducted at 11 major medical center research facilities around the country. In the study, scientists looked at the effects of zinc and antioxidants (beta-carotene, Vitamin C, Vitamin E), and a combination of both, on people with cataracts and those with varying stages and types of AMD. They also studied people without evidence of cataract or AMD to determine if zinc and/or antioxidants could prevent the development of these conditions.

### **What Were the Results?**

The study showed a number of important things:

- High doses of antioxidants and zinc can reduce the risk of vision loss from advanced AMD by about 19 percent in high-risk patients (patients with intermediate AMD or advanced AMD in only one eye).
- Supplements do not appear to provide significant benefits to people with mild AMD.
- These nutritional supplements do not prevent the development of AMD nor do they restore vision already lost to AMD.
- Nutritional supplements do not seem to prevent cataracts or to keep them from getting worse over time.

### **Should I Take Nutritional Supplements?**

If you have intermediate or advanced AMD, talk to your physician about taking nutritional supplements. They can help you determine if they may be beneficial for you.

### **What are the Side-Effects of Nutritional Supplements?**

While most people in the study experienced no serious side effects from the doses of zinc and antioxidants used, a few taking zinc alone had urinary tract problems that required hospitalization. Some patients taking large doses of antioxidants experienced some yellowing of the skin. Stomach upset has also been reported.

### **Will These Vitamins Interfere with My Medications?**

It is very important to talk with your primary care physician before taking AREDS supplements and to follow dosage recommendations carefully.

### **Can I Take These Vitamins In Addition to a Multivitamin?**

In the AREDS study, approximately two-thirds of patients were taking a multivitamin along with the AREDS formulation. If you are already taking daily multivitamins and your doctor suggests you take the AREDS formulation, be sure to review all your vitamins with your doctor before you begin.

### **Do These Vitamins Help If I Have Early or No Macular Degeneration?**

The AREDS study did not show a benefit for vitamins in patients with early or no macular degeneration.

### **Which AREDS Supplements Are Available Over-The-Counter and How Often Should I Take Them?**

There are several brand name AREDS formulations now available. The frequency varies based upon the specific supplement. We encourage you to check the packaging information for specific instructions.

### **There Are Many Vitamins Now Available For General Eye Health. Are They Effective for Macular Degeneration?**

Many nutritional supplements may be available and promoted as beneficial for eye health. Their effectiveness, however, has not been proven by scientific studies.

### **What If I Can Not Swallow or Have Difficulty Swallowing Vitamins?**

Powder versions of the AREDS vitamins are available.

### **Will My Insurance Cover the Cost of Vitamins?**

Unfortunately, insurance plans do not cover the cost of these supplements.

### **What Were The Results Of The AREDS 2 Study?**

The AREDS 2 study found that a modified formula (substituting beta-carotene for antioxidants lutein and zeaxanthin) provided a 20% risk reduction beyond the original formula in those with low dietary intake of lutein and zeaxanthin. This formula was also beneficial because it removed beta-carotene, which has been associated with lung cancer in smokers.

### **What Are The Doses Of The AREDS 2 Formulation?**

The daily doses in the AREDS 2 formula are:

- Vitamin C 500 mg
- Vitamin E 400 IU
- Lutein 10 mg
- Zeaxanthin 2 mg
- Zinc 80 mg, as zinc oxide
- Copper 2 mg, as cupric oxide

### **Sources:**

American Academy of Ophthalmology: [www.aaao.org](http://www.aaao.org)

National Eye Institute: [www.nei.nih.gov](http://www.nei.nih.gov)

Disclaimer: The information contained does not substitute for the advice of a qualified eye care professional and is not intended to constitute medical advice.