



## Vitamin & Mineral Supplements and Your Eyes

### **Background**

Scientists have long debated whether taking vitamin and/or mineral supplements could help prevent, treat or cure certain eye condition(s). Some early scientific studies seemed to show that supplements had the potential to prevent or slow the progression of cataract and age-related macular degeneration (AMD), although more complete study was needed to answer some important questions:

- Which supplements are helpful for which condition(s)?
- Which patients will benefit from supplementation?
- What doses of supplements would benefit patients?
- What other effects might these supplements might have on the body?

A recent study, the Age-Related Eye Disease Study (AREDS), sought to address these questions, and seems to have given us some (but not all) of the answers to these questions.

### **What is AREDS?**

The Age-Related Eye Disease Study (AREDS) is a major study sponsored by the National Eye Institute (NEI), one of the Federal government's National Institutes of Health, and conducted at 11 major medical center research facilities around the country. In the study, scientists looked at the effects of zinc and antioxidants, and a combination of both, on patients With cataracts, and on those with varying stages and types of age related macular degeneration (AM D). They also studied patients without evidence of cataract or AMO to determine if zinc and/or antioxidants can prevent the development of these conditions.

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

The study showed a number of important things:

- High levels of antioxidants and zinc can reduce the risk of vision loss from advanced AMD by about 19% in high-risk patients (patients with intermediate AMD or advanced AMD in one eye but not the other).

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- Supplements do not provide significant benefit to patients with minimal AMD.
- These nutritional supplements do not prevent the initial development of AMD, nor do they improve vision already lost to AMD.
- Nutritional supplements do not seem to prevent cataracts, or keep them from getting worse over time.
- While most patients 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. The long-term effects of taking large doses of these supplements are still unknown.

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

If you have intermediate (or advanced AMD in one eye only), talk to your physician about taking nutritional supplements. He or she can help you determine if they may be beneficial-and safe-for you, and what types and doses of supplements to take.

The doses used in the study were:

- Vitamin C 50a mg
- Vitamin E 400 I U
- Beta-carotene 15 mg

- Zinc 80 mg, as zinc oxide
- Copper 2 mg, as cupric oxide (copper should be taken with zinc, because high-dose zinc is associated with copper deficiency.)

It is very important to talk with your physician before taking large-dose supplements, and to follow his or her dosage recommendations carefully. Some supplements may interfere with each other or other medications. Smokers and ex-smokers probably should not take beta-carotene, as studies have shown a link between beta-carotene use and lung cancer among smokers.

### **Where Can I Get More Information?**

More information on AREDS is available from the National Eye Institute of the National Institutes of Health, [www.nei.nih.gov/amd](http://www.nei.nih.gov/amd). Your Eye M.D. is your best source of information about eye care. You can also get trustworthy information from the American Academy of Ophthalmology's partner Web site, Medem - [www.medem.com](http://www.medem.com)