

## Information From Your Eye M.D.

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### VITAMIN AND MINERAL 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, although more complete studies were needed to answer some important questions:

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

A recent study, the Age-Related Eye Disease Study (AREDS), looked at these questions, and gave us some (but not all) of the answers.

#### 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 people with cataracts and those with varying stages and types of age-related macular degeneration (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.

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. *Smokers and ex-smokers probably should not take beta-carotene, as studies have shown an association between beta-carotene use and lung cancer.* 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, 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 500 mg
- Vitamin E 400 IU
- Beta-carotene 15 mg (approximately 25,000 IU)\*
- 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 primary care physician before taking large doses of supplements and to follow dosage recommendations carefully. Other nutritional supplements may be available and promoted as beneficial for eye health, but their effectiveness has not been proven by scientific studies.

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

Your Eye M.D. is the best source of information on macular degeneration, as well as eye health and safety.

If you would like more information on macular degeneration, please visit the American Academy of Ophthalmology's public information Web site at [www.medem.com/eyemd](http://www.medem.com/eyemd).

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