



## **Seattle Eye M.D.s**

**Brian J. Carey, MD - Darwin J. Liao, MD, MPH**

(206)652-9000 - Office

(206)381-1732 - Fax

info@eyemds.net

www.eyemds.net

523 Pine Street, Suite 200

Seattle, WA 98101

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## **Macular Degeneration and Nutrition**

Both doctors and the public have shown growing interest in the relationship between diet and health. Good nutrition depends on a healthy mixture of proteins, carbohydrates, fats, vitamins and minerals. Protein is needed for the building blocks and chemical machinery of our bodies; carbohydrates are needed for immediate fuel and energy; fats are needed for long term storage of fuel and energy. Vitamins are organic compounds that our bodies cannot manufacture but are essential for maintaining good health. The eye, like any other part of the body, benefits from a healthy diet. Although the exact causes of macular degeneration are not understood, there is some evidence that vitamins and minerals may play a preventive role.

Macular degeneration is damage or breakdown of the macula, the small part of the retina responsible for central vision. It 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 visual loss in people over 65.

Zinc, one of the most common minerals in our body, is very concentrated in the eye, particularly in the retina and macula. Zinc is necessary for the action of over 100 enzymes, including chemical reactions in the retina. Studies show some older people have low levels of zinc in their blood. Because zinc is important for the health of the macula, some think that supplements of zinc in the diet may slow down the process of macular degeneration. Scientific studies are not complete and there is no agreement concerning the value of zinc supplements. It is possible that too much zinc may interfere with other trace minerals such as copper.

Normal chemical reactions from light in the eye activate oxygen that may cause macular damage. Some vitamins function as antioxidants that work against this activated oxygen. It may be claimed that antioxidant vitamins (vitamins A, C and E) can help slow down macular degeneration and other aging problems. As in the controversy over zinc, there is no agreement that these antioxidants actually help macular degeneration.

The first step to overall good health is a balanced diet. Vitamins and minerals are commonly given as supplements to the diet in amounts determined by recommended daily allowances. These supplementary dosages cause no apparent harm and are commonly available. Large doses of vitamins, called therapeutic doses, in amounts many times the recommended daily allowances, may not be completely safe.

Nutrition and macular degeneration is still being researched. Consultation with your ophthalmologist before beginning to take therapeutic doses of any vitamin or mineral is advisable.