

Macular Degeneration and Nutrition

What is macular degeneration?

Macular degeneration is damage or breakdown of the macula of the eye. The macula is a small area at the back of the eye that allows us to see fine details clearly. Macular degeneration affects both distance and close vision and can make some activities—like threading a needle or reading—difficult or impossible.

Macular degeneration is the leading cause of severe visual loss in persons over 65 years of age. Exactly why it develops is not known, and no treatment has been uniformly effective. (See the American Academy of Ophthalmology brochure on macular degeneration for more information)

What do vitamins and minerals have to do with macular degeneration?

Everyone knows that good nutrition is important for good health in general. Good nutrition requires a diet with a healthy mixture of proteins, carbohydrates, fats, vitamins and minerals. Probably no part of our diet has been as misused or misunderstood as our requirement for vitamins and minerals.

Protein creates the building blocks and chemical machinery of our bodies; carbohydrates supply immediate fuel and energy; fats are used for long-term storage of fuel and energy. Vitamins are organic compounds that our bodies cannot manufacture and are essential for maintaining good health. Minerals, in small amounts, are required for the body's enzyme system (enzymes assist chemical reactions such as the breakdown of food into energy). Certain vitamins and minerals may delay the development of macular degeneration:

Antioxidants

Normal chemical reactions caused by the effect of light on the macula may activate oxygen and cause macular damage over a long time. Some vitamins and minerals function as antioxidants, chemicals which work against this activated oxygen, and perhaps protect the macula from damage. Some experts believe that the following antioxidants may help slow down macular degeneration and other aging factors:

- Vitamins C and E
- Selenium (a mineral)
- Carotenoids (a family of compounds which includes betacarotene) especially those found in leafy green vegetables.

Scientific studies are not complete and not all doctors agree that antioxidants can help prevent macular degeneration.

Zinc

Zinc, one of the most common trace minerals in our body, is highly concentrated in the eye, particularly in the retina and tissues surrounding the macula. Zinc is necessary for the action of over 100 enzymes, including chemical reactions in the retina.

Studies have shown that some older people have low levels of zinc in their blood, either because of poor diet or poor absorption of zinc from normal food. Because zinc is important for the health of the macula, some doctors think that supplements of zinc in the diet may slow down the process of macular degeneration. As in the controversy over antioxidants, there is no agreement that zinc can definitely help macular degeneration. It is possible that too much zinc may interfere with other trace minerals such as copper.

Should I take antioxidant vitamins or zinc for 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. But large doses of vitamins, called therapeutic doses, in amounts many times the daily recommended allowances, may not be completely safe.

Research is still in progress about nutrition and macular degeneration. It is best to consult with your ophthalmologist (Eye M.D.) to decide whether it is advisable for you to begin such treatment.

Why are regular medical eye examinations important for everyone?

Eye disease can occur at any age. Many eye diseases do not cause symptoms until the disease has done damage. Since most blindness is preventable if diagnosed and treated early, regular medical examinations by an ophthalmologist are very important.

Compliments of Your Ophthalmologist

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