



## **Macular Degeneration (AMD), Nutrition, and Supplements**

Age-related macular degeneration (AMD) is caused by damage or breakdown of the macula, the small part of the eye's retina that is responsible for our central vision. This condition 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 vision loss in people over 65 years of age.

The most important thing you can do to prevent or slow down macular degeneration is to stop smoking or never to start. Because of the effects of smoking on the tiny vessels inside the eye and the circulation, smokers have a much higher incidence of blindness from macular degeneration. One more reason to stop smoking now! In addition, regular exercise can reduce the rate of progression of macular degeneration by as much as 25%. Unfortunately for the many of us who are overweight, a high body mass index more than doubles your chances of having vision loss from macular degeneration. High blood pressure also plays a role.

Although the exact causes of AMD are not fully understood, the Age Related Eye Disease Studies (AREDS and AREDS 2) both demonstrated that antioxidant vitamins and zinc may reduce the impact of AMD in some people. Be sure to ask your doctor every year what the latest research is showing, because our advice may change when new studies become available. For example, the most recent studies show that you need less zinc than we recommended several years ago.

Deposits under the retina called drusen are a common feature of AMD. Drusen alone usually do not cause vision loss, but when they increase in size or number, this generally indicates an increased risk of developing advanced AMD. People at risk for developing advanced AMD have significant drusen, prominent dry AMD, or abnormal blood vessels under the macula of one eye (wet form).

The study found that people at risk for developing advanced stages of AMD lowered their risk by about 25% when treated with a high-dose combination of vitamin C, vitamin E, and zinc. Among those who have either no AMD or very early AMD, the supplements did not appear to provide an apparent benefit. In other words, taking high doses as a preventative has not been shown to be of benefit, but taking it after the diagnosis has been made is a good idea.

The AREDS nutrient supplementation shown to be beneficial contains: Vitamin C - 500 mg; Vitamin E - 400 IU; zinc oxide - 25mg; copper as cupric oxide - 2mg (to prevent copper deficiency which may be associated with high zinc supplementation); lutein - 10mg; and Zeaxanthin - 2mg. In some updated formulas, 1,000 mg of omega-3 fatty acids (350 mg DHA and 650 mg EPA) is used in place of copper.

The levels of antioxidants and zinc that were shown to be effective in slowing AMD's progression cannot be consumed through your diet alone. These vitamins and minerals are recommended in

specific daily amounts as supplements to a healthy, balanced diet. Vitamin supplements are not a cure for AMD, nor will they restore vision that you may have already lost from the disease. But slowing down the progression is a worthy goal in itself.

Some people may not wish to take large doses of antioxidants or zinc because of medical reasons. For example, Vitamin E has anti-clotting properties which may be a concern if you are on blood thinners, and may be a problem for men with enlarged prostates. The study did not reveal any evidence of toxicity of the treatment itself. Beta-carotene, however, has been shown to increase the risk of lung cancer in smokers or recent past smokers., so it is no longer in the recommended formula.

There are commercially available forms of this exact combination; look for the words “AREDS 2” on the label. Any brand that has these vitamins and minerals in these amounts is a good place to start. However, many brands make several different eye vitamins and you do need to read the label carefully to make sure you are getting the correct one - the brand name alone is not a good enough guide. There are also MANY brands that are labeled for macular degeneration or “to promote eye health” that simply do not have the correct formulations and are a waste of your money. If you cannot take one of the ingredients due to other health concerns, or if you have difficulty finding the combination supplement, you may also take the components individually as listed above. The majority of brands labeled AREDS 2 may still be sold with the higher level of zinc, which may cause side effects. The higher level will not hurt you, but look for a brand with only 25mg if you have any stomach upset or other side effects.

Diet also plays a significant role in the formation of macular degeneration and speed at which it progresses. Fruits and vegetables, particularly dark green leafy vegetables and others with a very deep color, and all the berries and brightly colored fruits, are very protective. Try to eat as much of these as you can. (Aren't you glad you live in Skagit Valley and can eat our wonderful blueberries?) Foods that make macular degeneration worse are simple refined sugars and foods with a high glycemic index - the same kinds of foods that are bad for diabetes are bad for your eyes, too - and saturated fats found in high fat dairy products and red meats. Fish is good, whole grains are good. Nuts of all kinds are also very good for your eyes and heart. The risk of vision loss from macular degeneration can be reduced by as much as 46% simply by increasing your intake of dark green leafy vegetables and fish, and cutting back on unhealthy fats. This is great dietary advice for many other diseases and aging changes as well as well!

Cascadia Eye carries a brand of AREDS supplements that meet these criteria, although they do still contain the higher levels of zinc. It is also available online and by phone with a doctor recommendation, to be sent directly to your home, with cost savings if you buy several months at a time. If you need help, call 360-424-2020 and one of our staff can help you out.