

AGE-RELATED MACULAR DEGENERATION

Dr. Brant R. Gehler O.D.

Age-related macular degeneration or AMD is a disease that can threaten your sight. This disease blurs the central vision which you need for activities such as reading, driving, and sewing. AMD affects the macular region of the retina. This is the part of the eye that gives you your fine central vision and allows you to see detail. Macular degeneration gives no warning and has no pain. There are different levels of macular degeneration. Some patients have a small change in their vision and others will have greatly reduced vision. Some people lose vision in one eye and others will lose vision in both eyes. It is the leading cause of vision loss in Americans 60 years of age and older.

There are two forms of age-related macular degeneration: Wet and dry. Wet AMD occurs when abnormal blood vessels behind the retina start to grow under the macula. These vessels can break and cause leakage in fluid to accumulate in a place that normally has none. This causes decrease in vision. There is a quick loss of central vision when this occurs. This form is considered to be an advanced form of AMD. It is more severe and often times the vision is more impaired. An early symptom of wet AMD is when straight lines appear to be more curved or wavy. If you see this you should contact your health care professional at once.

Dry AMD occurs when the light sensitive cells in the macula slowly break down. This will gradually cause a decrease in your central vision. As dry AMD worsens the blurred spot in the central part of your vision increases. Loss with this type is usually more gradually. Patients with this form will often times complain about people faces not being very clear and hard to read stop signs while driving. It makes it more difficult to read. Dry AMD usually affects both eyes but can be in one eye. The usual sign of AMD is drusen in the macular area which your eye doctor can see when he views the retina. Drusen are little yellow deposits that are visible under the retina. This is often found in people over the age of 60. Again, contact your eye care professional if you feel like these symptoms pertain to you.

The dry form of macular degeneration has early and intermediate stages. The wet form does not have stages and is considered an advanced form of macular degeneration. Dry AMD can turn into wet AMD.



There are risk factors for AMD. AMD can occur during the middle age but increases with aging. Smoking, obesity, race, (Caucasians are more likely to lose vision than African Americans), family history, and gender (women are more at risk than men) are also factors.

AMD is detected through a comprehensive eye exam which would include visual acuity testing and a dilated eye exam to view the retina for signs of macular degeneration. An Amsler Grid is a good test for macular degeneration. The lined grid has a dot in the middle which you stare at monocularly. With macular degeneration patients will see warped or curved lines or areas of holes on the Amsler Grid. If macular degeneration is found during the exam, a referral to a retinal specialist may be needed to do fluorescein angiography which would look for leakage in the retina.

The National Eye Institute Age-Related Eye Disease Study or AREDS study found that taking a formulation of antioxidants like Zinc can reduce the risk of advanced age-related macular degeneration. This is not a cure but rather slows down the AMD process. The study was performed in a multi-center setting over seven years and looked at more than four thousand patients with early, intermediate, and advanced age-related macular degeneration. The researchers concluded that high levels of antioxidants and zinc significantly reduced the risk of advanced age-related macular degeneration.

The study tells us that patients 55 years of age and older and who are at high risk for developing advanced age-related macular degeneration should consider taking a combination of antioxidants and zinc. The AREDS study formula for taking supplements is: Vitamin C 500 mg, Vitamin E 100 IU and Vitamin A 15 mg (in the form of beta-carotene), 80 mg Zinc (zinc oxide) and 2 mg of copper (cupric oxide). We have to keep in mind that this does not cure age-related macular degeneration nor does it guarantee any specific visual outcomes. What AREDS tell us, is that those who are at high risk of developing advanced stages of age-related macular degeneration can lower their risk by 25 percent when treated with this formula. In addition, patients who have intermediate or advanced age-related macular degeneration in only one eye can lower their risk of visual loss by about 19 percent. The AREDS study also found that the formula that they arrived at is contraindicated for smokers or former smokers because the beta-carotene increases the risk of lung cancer. There are some formulations such as: VisiVite, which has a smokers formula which substitutes Lutein for beta-carotene.

Of the ingredients that the AREDS study looked at, zinc probably raises the most red flags. There are several reasons for this: 1. More than 75 mg daily of zinc can cause copper deficiency anemia. This is why the copper was added to their formula. 2. Zinc can cause urinary tract infections, kidney stones and enlarged prostates. 3. Zinc can cause gastrointestinal irritation, vomiting, nausea and fever. 4. Zinc is loosely associated with Alzheimer's disease, but there is not enough evidence yet to confirm this. There are other recent additives such as the photonutrients. One such photonutrient is Lutein which is a primary carotenoid. Lutein was not commercial available when the AREDS study was started, but studies since have shown that patients with age-related macular degeneration have low levels of Lutein and antioxidants. Opinions vary about how much Lutein one should take. Some clinicians suggest 12 mg daily which is equivalent of 4 large salad bowls of spinach. Others believe that 6 mg of Lutein daily for several months and then lowering the dosage to 2 mg daily works best. Another nutrient that has been looked at is DHA, which is docosahexaenoic acid. This fatty acid is found in oily fish such as tuna, mackerel and salmon. DHA is part of every cell membrane in the body, including the cells in the retina. Some clinicians recommend that patients take 500 mg of DHA daily.

Whether you take the AREDS formula vitamins or supplements of the Lutein or DHA, it is best to take them with food. This is especially helpful since Vitamin E, Lutein and DHA are all fat soluble. As always, follow the label directions as far as the dosage to be taken.

I would encourage everyone 55 years of age or older to have a dilated eye exam and have regular check ups to determine their risk of developing age-related macular degeneration.

Brant R. Gehler, O.D.