



Full Eye Care

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1 WHAT IS AGE-RELATED MACULAR DEGENERATION (AMD)?

The macula is the centermost part of the retina and involved in central vision. When the macula is damaged, as in AMD, the central vision is slowly lost. Damage is due to loss of layers as well as irregular deposits of protein, called drusen, in the lower layers of the retina causing light and images not to focus properly.

2 WHO IS AT HIGHEST RISK OF DEVELOPING AMD?

Risk factors for AMD include

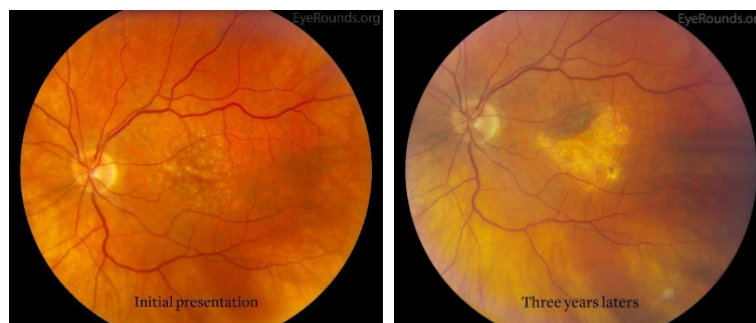
- Eating a diet high in saturated fat (cheese, butter, red meat)
- Smoking
- Family history
- Caucasian race
- High blood pressure, heart disease

Controlling as many risk factors as possible can help slow down/prevent the disease.

3 WHAT IS THE DIFFERENCE BETWEEN WET AND DRY AMD?

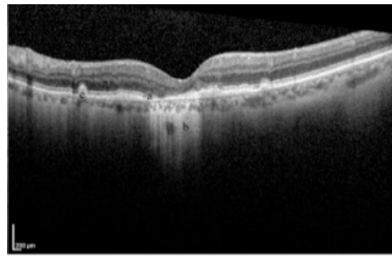
Dry AMD is the most common form and 80% of patients who have AMD have the dry form. This leads to very slow, progressive vision loss over 10-20 years.

The wet form is much rarer, but can result in sudden vision loss. In wet AMD, abnormal blood vessels begin to grow in the choroid, the vascular layer surrounding the retina. These vessels can leak blood and other fluid, causing scarring and vision loss in the macula.

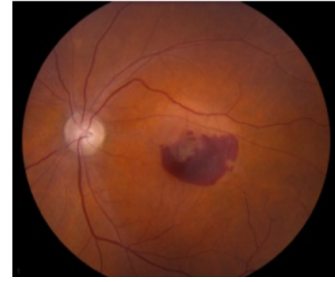


In this fundus photo, drusen is initially seen in the central part of the retina, the macula. Years later, drusen has been replaced by geographic atrophy, which can cause significant vision loss.

Photo credits: www.eyerounds.org



This OCT image shows drusen as well as discontinuity of the retinal pigment epithelium (RPE) in the area of geographic atrophy.



In this eye with wet macular degeneration, there is choroidal neovascularization with subretinal hemorrhage.

4 WHAT IS THE TREATMENT FOR DRY AMD

Studies known as AREDS (Age Related Eye Disease Study) and AREDS2 (Age Related Eye Disease Study 2) were completed in 2001 and 2013, respectively.

These studies looked at patients with early, intermediate, and advanced AMD, and concluded that adding anti-oxidants and zinc supplementation reduced progression to advanced AMD by 25% in patients who had intermediate AMD or advanced disease in one eye.

The AREDS2 formulation includes:

- Vitamin C (500 mg)
- Vitamin E (400 IU)
- Lutein (10mg) and Zeaxanthin (2 mg)
- Zinc (80 mg)
- Copper (2 mg)

Smokers taking beta carotene, which is the carotenoid used in the initial AREDS study, had higher risk of developing lung cancer, and the AREDS2 study showed that Lutein (10 mg) and Zeaxanthin (2 mg) can safely replace beta carotene and did not have increased cancer risk. Therefore, it is a good option for everyone.

5 WHAT IS THE TREATMENT FOR WET AMD?

Wet AMD is treated with anti-VEGF (vascular endothelial growth factor) drugs. These drugs are administered as monthly injections in the eye. Dr. Ali will discuss the risks, benefits, and frequency of these injections with you to optimize your treatment.

Learn more at:

- <https://www.aao.org/eye-health/diseases/amd-treatment>
- <https://www.nei.nih.gov/research/clinical-trials/age-related-eye-disease-study-areds>