AGE-RELATED MACULAR DEGENERATION

PATIENT EDUCATION

What is age-related macular degeneration (AMD)?

Age-related macular degeneration (AMD) is a degenerative condition of the macula (portion of the retina responsible for central vision). AMD is the most common cause of vision loss in the United States in those age 50 or older. AMD is genetic in origin and is partially environmentally influenced (UV radiation exposure, nutrition, high blood pressure, age, smoking, cholesterol, and other risk factors play a role in progression of AMD).T here are 2 types of age-related macular degeneration (AMD), dry (nonexudative, no bleeding) and wet (exudative, bleeding). AMD can cause deprivation of oxygen and other nutrients to the retina; this deprivation causes deterioration and impairs the functionality of the retina. The severity of AMD varies widely and can be different in each eye. About 80% of patients may not notices any vision threatening changes or may only have slight visual distortion centrally. The other 20% of patients will have visual changes that will likely impair their ability to read and drive. In the most severe cases the patient will lose central vision completely. Fortunately, AMD does not usually cause total blindness as it does not affect the peripheral vision.

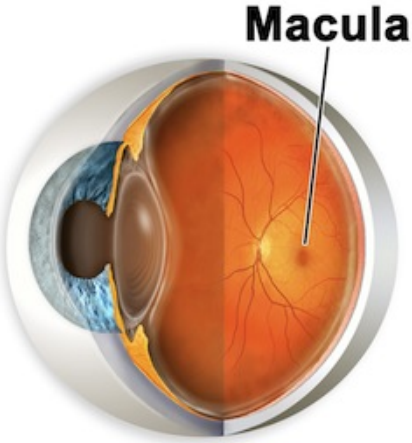

Photo credit: https://www.eyetoeyederby.com/

Dry AMD

Dry AMD (sometimes called atrophic AMD) makes up about 90% of the cases. With this type of AMD, the macula thins with age. Those with this type of AMD may have yellow deposits, known as drusen in the macula. A couple of small drusen may not impact one's vision, but as they get bigger and become more numerous, they can distort or dim vision and lead to central vision loss. The most severe form of dry AMD is called geographic atrophy, it can produce central vision loss.

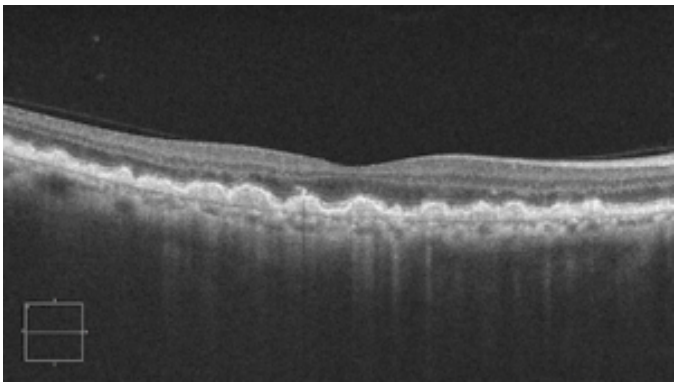

Photo credit: https://eyeguru.org/

Wet AMD

Wet AMD, also known as neovascular AMD, is a less common, but more serious type of AMD—only about 10% of people with macular degeneration have this form. With this type of AMD, abnormal blood vessels grow under the macula and bleed and leak fluid into the retina. This can cause vision to become distorted, create blind spots, and can lead to a loss of central vision. These blood vessels are like weeds growing through cracks, and eventually, they form a scar which can lead to permanent loss of central vision. Any stage of dry AMD can progress into wet AMD. Compared to dry AMD, wet AMD progresses much quicker and can cause patients to experience a more significant vision loss. However, if caught early enough, there are treatment options that can stabilize a patient's vision and lower the risk of experiencing further vision loss.

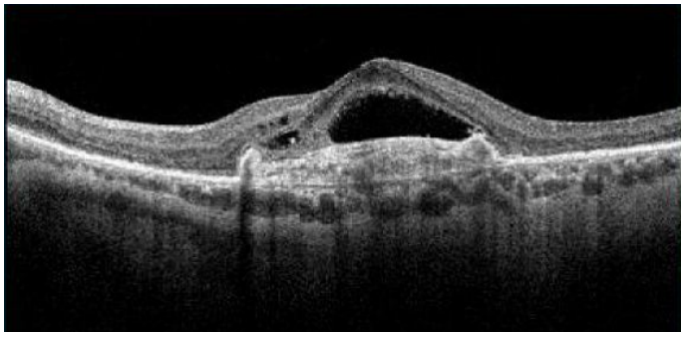

Photo credit: https://eyewiki.aao.org/

Signs and Symptoms of Macular Degeneration

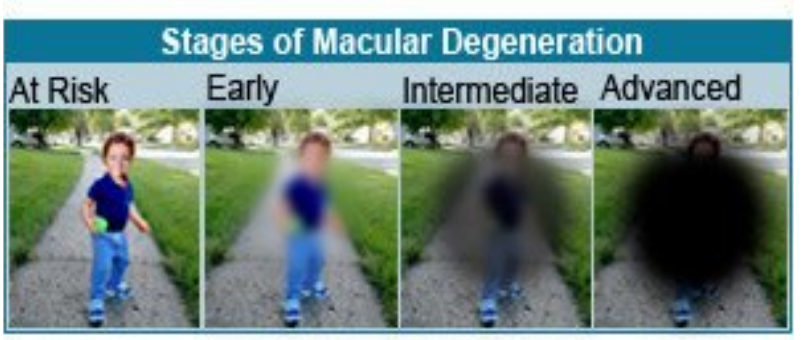

Photo credit: https://www.drugs.com/cg/macular-degeneration.html

- Dry (nonexudative) macular degeneration:
  - Gradual loss of central vision
- Wet (exudative) macular degeneration:
  - Sudden decrease of central vision
- Difficulty reading, seeing detail, and/or driving
- Distorted vision, straight lines appear wavy (tile work, door, or window frames)

Recommendations to slow progression

- ✓ Stay away from smoking, including second-hand smoke
- ✓ Keep blood pressure and cholesterol under control
- ✓ Wear sunglasses whenever outside (including rainy/cloudy days)
- ✓ Eat a diet rich in antioxidants
  - Dark leafy green vegetables (spinach, kale)
  - Dark skinned fruits (purple grapes, blueberries)
- ✓ Take AREDS 2 formula vitamins as directed on the box
- ✓ Current smokers should be taking the AREDS "Smoker's formula" which does not contain beta-carotene
- ✓ Check Amsler grid once daily with reading glasses (if needed), call your provider if you notice any changes on your Amsler grid at home, this could be progression of the disease and should be checked in a timely manner.
  - We suggest taping the Amsler grid to your bathroom mirror so you can check it every morning and night while brushing your teeth

Treatment Options

Dry (nonexudative) **macular degeneration:**

- There are currently no approved treatments for dry AMD. Still, there are steps one can take, such as consuming specially formulated vitamins, to decrease the risk of the condition progressing into its most advanced form.

Wet (exudative) **macular degeneration:**

- Anti-VEGF medications are the most widely used treatment for wet AMD. These medicines are injected into the eye to help stop blood vessel growth and bleeding. The primary goal of these injections is to prevent further vision loss. These injections are typically ongoing at a set interval determined by each patient's specific needs and response to treatment.

Tips to Make Reading Easier

- Consult a low vision specialist – trained specialists to help visually impaired patients improve their quality of life
- Increase lighting with lamps that shine directly on reading material
- Use hand-held magnifiers or phone camera zoom features
- Large print texts or audiobooks
- Large screen TVs and computers

Injection FAQ

Are intravitreal injections safe?

Yes! As with any procedure on the surface of the eye there is a risk of bleeding and infection, but St. Luke's takes extra caution in prepping patients for their injection. Patients are draped, skin is cleaned, and sterile field are created to minimize infection.

- To help us minimize infection further:
  - ✓ Do not wear eye makeup
  - ✓ Keep eyebrows trimmed
  - ✓ Do not submerge your head underwater for 3 days after injection (showers are okay)
- Call to report pain and/or large decrease in vision

Do intravitreal injections hurt?

We do our best to minimize all pain. Each patient is given plenty of time to allow their eye(s) to numb. Most patient's report a pressure feeling, but not sharp pain.

What can I expect after an injection?

There is no down time after receiving an injection. You will notice what looks like oil and water mixing in your vision for a short time. You may also notice an increase in floaters, some of these floaters will go away with time.

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