



British and Éire Association of Medical Retina Specialists

Age-Related Macular Degeneration (AMD) is a common eye condition and a leading cause of vision loss among people aged 50 and older. It affects the macula, which is the central part of the retina responsible for sharp, central vision required for tasks like reading, driving, and recognizing faces.

Types of AMD

There are two primary types of AMD:

1. Dry AMD (Atrophic)

- Most common type (about 80–90% of AMD cases).
- Caused by the gradual breakdown of the macula's light-sensitive cells, leading to a slow and progressive loss of central vision.
- The retina develops small yellow deposits called drusen beneath the macula, which are associated with cell damage and vision decline.
- Vision loss is typically gradual, and patients may not notice significant changes in their vision for years.

2. Wet AMD (Neovascular or Exudative)

- Less common but more severe.
- Occurs when abnormal blood vessels grow beneath the retina and leak fluid or blood, damaging the macula.
- This leads to rapid and significant loss of central vision.
- Symptoms may include sudden blurring of central vision or the appearance of a dark or empty spot in the center of vision.

Symptoms of AMD

- Blurry or distorted central vision: Straight lines might appear wavy or bent, or there may be blank spots in the central vision.
- Difficulty seeing in low light: Night vision may become impaired.
- Difficulty reading or recognizing faces: Since the macula is responsible for fine detail, this becomes increasingly difficult.
- Need for brighter light when reading: People with AMD often notice they need more light to do close-up work.
- Loss of contrast sensitivity: Difficulty distinguishing between objects of similar colors or seeing objects in low contrast.

Risk Factors

- Age: AMD is more common in people aged 50 and older, especially those over 65.
- Genetics: A family history of AMD increases the risk.
- Race: AMD is more common in Caucasians, particularly those of Northern European descent.
- Smoking: Smoking significantly increases the risk of developing AMD.

- Diet: A diet lacking in antioxidants, omega-3 fatty acids, and certain vitamins can increase the risk of AMD.
- Obesity: Being overweight may increase the risk of AMD progression, particularly in those who already have the dry form.

Diagnosis

- Eye Examination: An eye care professional (optometrist or ophthalmologist) will conduct a thorough eye exam, which may include:
 - Visual acuity test: To measure the sharpness of vision.
 - Dilated eye exam: The doctor will use eye drops to dilate the pupils and examine the retina and macula for signs of AMD.
 - Amsler grid: A tool used to detect central vision problems. If you see wavy or missing lines on the grid, it could be a sign of AMD.
 - Fluorescein angiography: A dye is injected into the bloodstream, and a special camera is used to look at the blood vessels in the retina.
 - Optical coherence tomography (OCT): This non-invasive imaging test creates detailed cross-sectional images of the retina, helping to identify fluid or abnormal blood vessels.

Treatment Options

While there is no cure for AMD, there are treatments available that can help manage the condition and prevent further vision loss.

For Dry AMD:

- Lifestyle changes: A healthy diet rich in leafy greens, fish (especially oily fish with omega-3s), and foods with antioxidants like vitamins C and E can slow progression.
- AREDS Supplements: The Age-Related Eye Disease Study (AREDS) found that certain high-dose vitamins (vitamin C, vitamin E, beta-carotene, zinc, and copper) can slow the progression of dry AMD in some individuals.
- Monitoring: Regular eye exams and self-monitoring at home (such as using the Amsler grid) are important to detect changes early.

For Wet AMD:

- Anti-VEGF Injections: Medications like Lucentis (ranibizumab), Eylea (aflibercept), and Avastin (bevacizumab) can inhibit the growth of abnormal blood vessels and reduce fluid leakage. These injections are typically given into the eye.
- Photodynamic therapy (PDT): This involves injecting a light-sensitive dye into the bloodstream and using a laser to activate the dye, which helps destroy abnormal blood vessels.
- Laser therapy: A high-energy laser can be used to destroy abnormal blood vessels in some cases, although this is less commonly used now with the advent of anti-VEGF treatments.

Prevention and Management

- Stop smoking: Smoking accelerates the progression of AMD.
- Eat a healthy diet: A diet high in antioxidants (vitamins C, E, and zinc) and omega-3 fatty acids can help protect retinal health.
- Regular eye exams: Early detection is key to managing AMD and preventing severe vision loss.
- Wear sunglasses: Protect your eyes from UV light, which may contribute to AMD.

Conclusion

Although AMD doesn't cause total blindness, it can significantly impact the quality of life, especially when it affects central vision. Early diagnosis and treatment are essential for slowing the progression of the disease and preserving as much vision as possible. If you're over 50, have a family history of AMD, or experience changes in your vision, it's important to get regular eye exams.