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Macular Degeneration: Timeline of Vision Loss Progression

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Macular degeneration, also known as [age-related macular degeneration \(AMD\)](#), is the name for a condition involving a group of long-term (chronic), degenerative eye diseases. AMD is the leading cause of legal blindness in the U.S. and in many other countries around the globe. ^[1]

The condition involves several stages, from the early stage, to the intermediate, and finally, to the late-stage (which often involves vision loss). But not everyone with AMD goes through all of the stages, and many people do not lose their vision; those who do reach the late-stage of the disorder are often able to maintain normal vision for most of their lifetime.

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Loss progression?

 vitamins and supplements for macular degeneration

The Pathology of AMD

AMD impacts part of the [retina](#) called the [macula](#), causing irreversible deterioration, which can result in visual distortions and may eventually cause vision loss. The macula is an oval yellowish area near the center of the retina in the eye; it's the region responsible for clear, straight forward vision.

The retina is a layer of cells that are light sensitive. These cells trigger nerve impulses that pass through the optic nerve to the brain, where visual images are formed.

Macular degeneration is diagnosed by a comprehensive eye exam and other tests such as scans of the retina. Small yellow deposits—called [drusen](#)—are often detected. They are a normal part of aging.

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But when drusen begin to grow larger in size and number, they can lend themselves to the deterioration of the macula and put a person at risk for macular degeneration. ^[2] Once a certain number and size of drusen are detectable by the ophthalmologist, the macular degeneration timeline of vision loss progression may begin.

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Two Forms of AMD

There are two forms of age-related macular degeneration (AMD) including the wet form and the dry form. [Dry AMD](#) involves the presence of drusen, as well as pigment changes that can impact a person's vision over time; usually, dry AMD progresses very slowly.

[Wet AMD](#) involves the abnormal growth of blood vessels under the retina that leak or burst, causing visual distortion, blank spots, and rapid decline in vision. Some people experience severe visual impairment within days or weeks of the onset of wet AMD. ^[3]

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Related: [Wet and Dry Forms of Macular Degeneration](#)

Vision Loss Timeline

You may find conflicting resources regarding the average timeline involved from initial diagnosis of AMD to the point of vision loss. But, according to ophthalmologist Joshua Dunaief, MD, “Fortunately, most patients with AMD can keep good vision for their entire lives, and even those who lose their central vision almost always maintain their side, or peripheral vision.” ^[4]

There are three stages/phases of macular degeneration that are generally recognized—early, intermediate, and late. ^[5]

Early-Stage AMD

Early-stage AMD involves medium-sized drusen deposits seen upon eye examination. No pigment changes are present, and there is usually no vision loss at this stage of the disease. ^[6] Early-stage AMD is usually detected upon a routine eye examination by an [ophthalmologist](#) (eye medical professional) or other healthcare provider.

During this initial stage, an ophthalmologist can detect drusen, long before symptoms occur. The healthcare provider may advise you to have frequent eye exams to monitor for new signs or symptoms that could indicate progression of macular degeneration.

Even if you have no symptoms, it's very important to follow the healthcare provider's advice on the regularity of eye exams once the early stage of AMD has been identified.

Action Steps During the Early Stage

There are several things you can do, in an effort to help stave off the progression of AMD once you are initially diagnosed with stage-one macular degeneration, these include:

If you smoke, [quit smoking](#). Several large studies have indicated that smoking more than doubles a person's risk of AMD. ^[5]

Eat a balanced diet, rich in dark green leafy vegetables (such as romaine lettuce, kale, and spinach), yellow and orange fruits and vegetables (such as cantaloupe, apricots, orange and yellow peppers, sweet potatoes and squash) and omega 6 fatty acids (found in wild-caught, cold-water fish, like salmon).

Visit your ophthalmologist regularly. Follow your healthcare provider's advice on how often to get eye exams.

Start doing self-screenings to check for progression of AMD. The [Amsler chart](#), with horizontal and vertical lines, is the most common home

recommend how often to perform the exam. Some experts advise a weekly screening.^[7]

Get your blood pressure checked regularly, have routine physical exams, and maintain a heart-healthy lifestyle when it comes to diet, exercise, and managing stress. According to the American Macular Degeneration Foundation (AMDF) risk factors for AMD include being overweight or having unchecked heart disease or high blood pressure.^[8]

Avoid long-term exposure to bright sunlight without eye protection.^[8]

Related: [7 Ways to Prevent Macular Degeneration](#)

Timeline of Progression From Early Stage

Age-related macular degeneration usually begins at age 55 or older. There is a very low risk of progression from the early stage to the late stage of AMD (which involves vision loss) within five years after diagnosis.

In fact, one study discovered that only 15% of those with small drusen at diagnosis, continued on to develop large drusen. (which are often noticeable during the intermediate or late-stages of AMD).^[9]

Intermediate-Stage AMD

Intermediate-stage AMD involves large drusen, or multiple medium-sized drusen and/or pigment changes are present in one or both eyes, upon examination by the ophthalmologist. Pigment changes, also called retinal pigment epithelium (RPE) disturbances, can lead to vision loss.

The RPE is the pigmented layer of the cells (located between the retina and the layer of blood vessels, called the [choroid layer](#)). Studies suggest that the RPE is where macular degeneration starts to occur.^[10] The function of the RPE is to absorb light and transport nutrients to the retinal cells.^[10]

Symptoms that commonly occur during the intermediate stage could include subtle changes in vision, but for many people, there are no symptoms yet. Some people begin to see black or gray spots in the center of

Action Steps During the Intermediate Stage

There are a couple of things you can do at this stage:

Special vitamins called [AREDS2 vitamins](#) may be prescribed to help slow down the progression of AMD during the intermediate stage, if your ophthalmologist has not already done so.

Follow your ophthalmologist's recommendations about eye exams and self/home screenings. Those with intermediate AMD are at a much higher risk of developing late-stage AMD (with vision loss). ^[11]

Timeline From Intermediate to the Late Stage

If a person in the intermediate-stage of AMD has large drusen in one eye, there is a 6.3% chance of developing late-stage AMD (with vision loss) within five years of diagnosis. But if the large drusen is present in both eyes, the likeliness of developing late-stage AMD increases to 26%.

In a study, approximately 37% of those in the intermediate-stage of AMD with medium drusen in one eye, went on to develop large drusen and 71% of those who had medium drusen at baseline, developed large drusen at the 10-year follow-up. ^[12]

Late-stage AMD involves either the wet form of AMD or dry AMD; in the late-stage either form of AMD causes distortion of vision and/or vision loss. The wet form of AMD progresses much faster than the dry form, and wet AMD is much more likely to cause vision loss.

When central vision loss begins, objects may appear distorted or blurry at first, but in the late-stage of the disease, objects in the middle of your line of vision cannot be seen at all, although in the peripheral field (side vision) objects are usually still visible, but it may be difficult to decipher what they are. ^[6]

In the late-stage of the disease, a person may no longer be able to recognize faces and although they may still have peripheral (side) vision, they may be considered [legally blind](#). ^[6]

Action Steps for Late-Stage AMD

There are several treatment options for late-stage AMD (including treatment for wet or dry AMD). Important steps to take after a diagnosis of late-stage AMD include:

Talk to your ophthalmologist about treatment options, there are many options, and new treatment is always on the horizon.

Discuss with your healthcare provider the option of surgery to implant a lens that can magnify your view of images and enable the functional portions of your eye take over from the damaged parts. The surgery doesn't work for everyone, but it's a viable option for some people with late-stage AMD.

If surgery isn't an option for you, discuss options for working with an occupational therapist. A therapist can help people with low vision learn how to use many types of [adaptive equipment](#) (such as audible clocks and computer programs that read web pages out loud) to help you function better.

If you've been diagnosed with wet AMD, talk to your ophthalmologist about treatment options, the launch of new treatment such as [anti-VEGF therapy](#) is touted to have revolutionized the treatment of wet AMD. ^[13]

Discuss any symptoms of anxiety or depression with your healthcare provider and be open to various types of available treatment (such as

to the many losses and challenges involved in having low vision. ^[14]

Timeline for Late-Stage AMD

There are several factors which influence how long it takes for AMD to reach the late-stage, where vision loss occurs.

According to a study published by the National Center for Biotechnological Information, approximately 1 to 3 people out of 100 with small drusen have vision loss within the first five years of diagnosis and 50% of those with larger drusen experience late-stage vision loss within five years. ^[6]

It's important to note that in a small percentage of cases, dry AMD can progress to wet AMD. In fact, according to the American Macular Degeneration Foundation, about 10% of all cases of age-related macular degeneration become wet AMD (typically a person has dry AMD first and progresses toward wet). ^[15]

Wet AMD usually progresses quickly and vision loss can occur within days if left untreated. That is the reason it's so important to have your eyes checked frequently and to perform home-screenings (such as the Amsler Chart) as instructed by your ophthalmologist.

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