Plaza Del Rio Eye Clinic, P.C.

Macular Degeneration

What Is Age-Related Macular Degeneration?

Macular degeneration is the leading cause of severe vision loss in people over age 60. It occurs when the small central portion of the retina, known as the macula, deteriorates. The retina is the light-sensing nerve tissue at the back of the eye. Because the disease develops as a person ages, it is often referred to as age-related macular degeneration (AMD). Although macular degeneration is almost never a totally blinding condition, it can be a source of significant visual disability.

There are two main types of age-related macular degeneration:

- **Dry form.** The "dry" form of macular degeneration is characterized by the presence of yellow deposits, called drusen, in the macula. A few small drusen may not cause changes in vision; however, as they grow in size and increase in number, they may lead to a dimming or distortion of vision that people find most noticeable when they read. In more advanced stages of dry macular degeneration, there is also a thinning of the light-sensitive layer of cells in the macula leading to atrophy, or tissue death. In the atrophic form of dry macular degeneration, patients may have blind spots in the center of their vision. In the advanced stages, patients lose central vision.
- **Wet form.** The "wet" form of macular degeneration is characterized by the growth of abnormal blood vessels from the choroid underneath the macula. This is called choroidal neovascularization. These blood vessels leak blood and fluid into the retina, causing distortion of vision that makes straight lines look wavy, as well as blind spots and loss of central vision. These abnormal blood vessels eventually scar, leading to permanent loss of central vision.

Most patients with macular degeneration have the dry form of the disease. However, the dry form of macular degeneration can lead to the wet form. Although only about 10% of people with macular degeneration develop the wet form, they make up the majority of those who experience serious vision loss from the disease.

It is very important for people with macular degeneration to monitor their eyesight carefully and see their eye doctor on a regular basis.

What Are the Risk Factors for Macular Degeneration?

As the name suggests, age-related macular degeneration is more common in older adults. In fact, it is the leading cause of severe vision loss in adults over age 60.

Macular degeneration may be hereditary, meaning it can be passed on from parents to children. If someone in your family has or had the condition you may be at higher risk for developing macular degeneration. Talk to your eye doctor about your individual risk.

Smoking, high blood pressure, high cholesterol, obesity, and being white are also risk factors for macular degeneration.

What Are the Symptoms of Macular Degeneration?
In its early stages, macular degeneration may not have symptoms and may be unrecognized until it progresses or affects both eyes. The first sign of macular degeneration is usually a dim, blurry spot in the middle of your vision. This spot may get bigger or darker over time.

Symptoms of macular degeneration include:

- Dark, blurry areas in the center of vision
- Diminished or changed color perception

If you experience any of these symptoms, see an eye specialist as soon as possible.

How Is Macular Degeneration Diagnosed?
Age-related macular degeneration can be detected in a routine eye exam. One of the most common early signs of macular degeneration is the presence of drusen -- tiny yellow deposits under the retina. Your doctor can see these when examining your eyes. Your doctor may also ask you to look at an Amsler grid -- a pattern of straight lines that resemble a checkerboard. Some of the straight lines may appear wavy to you, or you may notice that some of the lines are missing. These can be signs of macular degeneration.

If your doctor detects age-related macular degeneration, you may have a procedure called angiography or an OCT. In angiography, a dye is injected into a vein in the arm. Photographs are taken as the dye reaches the eye and flows through the blood vessels of the retina. If there are new vessels or vessels leaking fluid or blood in the macula, the photographs will show their exact location and type. OCT is able to see fluid or blood underneath the retina without using dye.

Early detection of age-related macular degeneration is very important because there are treatments that can delay or reduce the severity of the disease.

What Treatments Are Available for Macular Degeneration?
There is currently no cure for macular degeneration, but treatments may prevent severe vision loss or slow the progression of the disease considerably. Several options are available, including:

- **Anti-angiogenesis drugs.** These medications (Avastin, Eyelea, Lucentis, and Macugen) block the development of new blood vessels and leakage from the abnormal vessels within the eye that cause wet macular degeneration. This treatment has been a major change in the treatment of this condition and many patients have actually regained vision that was lost. The treatment may need to be repeated during follow-up visits.
- **Vitamins.** A large study performed by the National Eye Institute of the National Institutes of Health, called AREDS (Age-Related Eye Disease Study), showed that for certain individuals, vitamins C, E, beta-carotene, zinc and copper can decrease the risk of vision loss in patients with intermediate to advanced dry macular degeneration. Ask your eye doctor if these vitamin supplements will benefit you before taking them.
- **Laser therapy.** High-energy laser light can sometimes be used to destroy actively growing abnormal blood vessels that occur in macular degeneration.

- **Low vision aids.** Devices that have special lenses or electronic systems that produce enlarged images of nearby objects. They help people who have vision loss from macular degeneration make the most of their remaining vision.

What Is the Outlook for People With Macular Degeneration?
People rarely lose all of their vision from age-related macular degeneration. They may have poor central vision, but they are still able to perform many normal daily activities.

The wet form of macular degeneration is a leading cause of irreversible vision loss. When both eyes are affected, you may experience a significant decrease in your quality of life.

The dry form of age-related macular degeneration is much more common and tends to progress more slowly, allowing you to keep most of your vision.

Unfortunately, even after wet macular degeneration treatment, the condition can recur. Because of this, individuals with macular degeneration must test their own vision regularly and follow the recommendations of their ophthalmologist. Successful and timely treatment will slow the rate of vision loss and often improve vision.