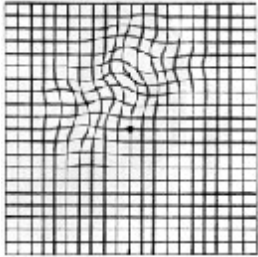


## How is it Diagnosed?

Most patients will notice a gradual loss of focusing ability, but many have no symptoms in the early stages of the disease.



Amsler grid distortion

Occasionally, visual changes such as distortion of straight lines, missing areas of the central vision or fuzzy areas may be seen. Since these symptoms may also occur in conditions such as

cataract or retinal diseases, a comprehensive examination of your eyes is usually necessary. In the wet form of the condition, a dramatic change in the vision occurs very rapidly with reading becoming virtually impossible in the affected eye.

The diagnosis is made by one of our Optometric Physicians after examining your eyes following dilation of the pupils. The macula undergoes characteristic changes in appearance that lead to the diagnosis of macular degeneration. The examination will also allow us to determine whether you have the dry or wet type. Photographs and/or retinal scans are often used to monitor progression through time.

## How is it Treated?

The treatment for macular degeneration depends on whether the condition is wet or dry and if wet, how long it has been wet. There is a tremendous amount of research on-going for treating both forms of the disease, and the most current ideas are outlined in the following paragraphs.

For the dry type of macular degeneration, most of the research is in the field of nutritional supplements. Vitamins, minerals and compounds that are considered antioxidant or carotenoid are felt to be beneficial in slowing the progression of dry macular degeneration. There is a long-term study funded by the U.S. government to fully evaluate this. The preliminary results indicate that some patients may benefit from vitamin supplements. There is currently no proven surgery, laser procedure or medication for the dry type of the disease.

In wet macular degeneration, laser surgery and photodynamic light therapy are the only approved treatments at this time. Experimental procedures including radioactive plaques, injected drugs, retinal translocation surgery and retinal tissue transplantation are being evaluated across the



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# Macular Degeneration

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## What is Macular Degeneration?

Macular degeneration is associated with aging, and it affects more than 10 million Americans including one in three people over the age of 75. Macular degeneration causes a loss of function of the portion of the retina used for central vision (the macula) for activities such as reading and driving. The macula is a highly specialized area of the retina which is 100 times more sensitive to detail than the rest of the retina and is responsible for color discrimination. Even in its most severe form, macular degeneration will not cause total blindness as it does not affect the peripheral (side) vision, so people can lead independent lives in familiar environments.



Vision in dry type

## What are the types of Macular Degeneration?

Macular degeneration has two basic forms: wet and dry. The dry form is much more common (approximately 90% of those with macular degeneration) and typically causes a gradual decrease in vision most noticeable when reading. It almost always occurs in both eyes, but may be worse in one eye. Once a patient has been diagnosed with dry macular degeneration, it



Vision in wet type

may remain dry or can undergo a sudden change to the wet form. Wet macular degeneration occurs when blood (or fluid from blood vessels) enters the macula and damages the sensitive retinal tissue. The blood comes through Bruch's membrane which is a barrier layer behind the retina that breaks down as a result of the process of macular degeneration. Exactly why some eyes convert to wet macular degeneration is not known; however, there is often a subtle change in the vision that may serve as a warning sign.

## What are the Risk Factors?

Age is the biggest risk factor for macular degeneration. It is very unlikely in people under the age of 50, while it is the leading cause of blindness in Americans over the age of 55.

Racial differences also play a large role in the likelihood of macular degeneration. The condition is far more likely to occur in Caucasians while it is rare in African-Americans, Asians and Hispanics. The amount of pigment in the retina varies as does the amount of pigment in the skin, and apparently is a factor in macular degeneration.

Long-term exposure to ultraviolet light from the sun's rays seems to be an important risk factor as well. The effects of UV exposure seem to be cumulative over the years, so high quality sunglasses with UV coating is recommended.

Other factors that predispose people to macular degeneration include smoking and hypertension.