



Senior Update

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Age Related Macular Degeneration (AMD)

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AMD is the leading cause of irreversible vision loss in adults 50 and over and the leading cause of legal blindness in people over age 65. As many as 15 million older Americans suffer from AMD. The gradual but painless deterioration of the macula, the central portion of the retina, leaves a permanent black hole in your central vision, making reading, driving and many other every-day tasks virtually impossible.

Some vision changes are normal, such as:

Presbyopia – the lens begin to lose elasticity between ages 40-50, making it harder to focus vision up close for activities such as reading.

Lighting – adapting to changing levels of light takes longer, such as when going into a dark theater, or dimly lit restaurant.

Contrast – lens becomes more dense and more yellow, making it harder to distinguish between objects and their background, for example, seeing curbs and steps or telling dark blue from black.

Miosis – the pupil constricts, decreasing the amount of light that can enter the eye.

Often these normal changes can be corrected with new glasses, contacts, medication, better lighting or even cataract surgery. However, some changes can't be corrected by these efforts and the result is a permanent impairment known as "low vision."

There are four main causes of low vision: glaucoma, cataracts, diabetic retinopathy, and macular degeneration.

Glaucoma is a progressive damage to the optic nerve as a result of a build-up of fluid pressure inside the eye. Peripheral (side vision) is lost, narrowing one's field of vision. Glaucoma doesn't have any warning signs until vision is lost. Treatment options available to control the pressure are eye drops, laser treatments or surgery. If detected early, eye drops may control the pressure and prevent the peripheral vision loss from advancing. Routine eye exams and specific glaucoma check-ups and field of vision tests are the key to early detection. Glaucoma is often hereditary, and all older adults, especially African/American and Hispanic/Latino seniors are at a higher risk.

A **cataract**, which is a clouding of the lens of the eye, causes hazy vision (an overall blur), difficulty in distinguishing colors, and increased sensitivity to glare. Bright lights usually make vision worse. There is generally no urgency to remove the cataract unless the doctors says it is hardening and becoming more difficult to remove. Most people decide to have them removed when they impact daily activities or are otherwise bothersome. Cataracts can be removed in a short surgical procedure in which the affected lens is replaced with a plastic one. There is a high success rate for this type of surgery.

Diabetic retinopathy, a complication of advanced or long-term diabetes, is the only disease that affects the lens of the eye, the macular, and the retina. As a result, near vision can be distorted and parts of the field of vision may be blurred or obstructed. It is caused by leaking blood vessels that damage the entire retina, including the macula. In the early stages, laser treatment can often seal the leaking vessels. People with diabetes should have a comprehensive dilated eye exam at least once a year.

Macular degeneration is a deterioration of the macula, at the center of the retina, which is responsible for detail, color, and daylight vision. The loss of the central vision causes difficulty in distinguishing facial features, reading, driving, or watching TV. Color vision may be reduced.

There are two forms of AMD – "wet" or "dry." About 10% of AMD cases are the "wet" form. Abnormal blood vessels form under the macula and rupture, leaking fluid that damages the macula. This causes severe vision loss and a large dark spot appearing in the center of the vision is typical. This loss can be very rapid – within a matter of weeks, even days.

The "dry" variety accounts for the remaining 90% and the damage progresses slowly. In dry AMD, spots of debris, called drusen, collect in the macula, versus the leaking of fluid into the macula in the wet type. One easy way to determine if you have the start of dry AMD is the use of the Amsler's grid (www.macular.org — see Examinations). The site allows you to print the grid

and gives you specific instructions on how to test your eyes for changes over a period of time. It also has a number of examples in time-lapse photography, allowing you to see what others see, or in this case, don't see. Basically, when looking at the Amsler's grid you may notice that straight lines appear crooked or wavy. It is suggested that if the distortion worsens, you should see your ophthalmologist at once.

The New England Journal of Medicine recently reported some success in stalling the progression of wet AMD. In two clinical trials a new drug, *Macugen*, was injected every six weeks into the vitreous part of the eye (the jelly-like substance between the lens and the retina). It appears to block the substance that causes the abnormal blood vessels to grow and leak in the macula. Potentially *Macugen* could benefit patients with all types of the disease.

Macugen has been approved by the FDA and is considered generally safe for long-term use, but as with all drugs, there can be serious side effects.

Gentech, a San Francisco biotech firm, has also announced its experimental drug *Lucentis* for AMD improved or maintained the vision of 95% of those in their study.

Prior to these breakthroughs the standard treatment was photodynamic therapy, which uses a laser to seal the leaking blood vessels. Although this can help prevent new vision loss by stopping the leaking, it cannot restore lost vision, and it is only effective on a small percentage of those with wet MD.

Another study (5,000 patients over a six-year period) by the National Eye Institute showed promising results for those who took antioxidant vitamins and zinc; they lowered the risk of developing more advanced stages of AMD by approximately 25%.

The use of vitamins will not cure macular degeneration or low vision; neither vitamins, nor any other current treatment, have the ability to do that. It does appear that specific vitamins in combination with the mineral zinc, can stabilize and prevent further vision loss from macular degeneration as well as help prevent development of AMD in those who may be at a high risk due to hereditary, age or ethnicity

Note that vitamins need to be taken in moderation and checked against what you may already be taking (such as a multivitamin) to ensure that the formula is not duplicated and safe limits exceeded. Smokers should consult a doctor before taking any vitamins.

Eye Care:

Medical care can be obtained from an *Ophthalmologist* who, as a medical doctor, can diagnose and treat all diseases and disorders of the eye, perform surgery and prescribe glasses and contact lenses. An *Optometrist* is a primary eye care provider who prescribes glasses and contact lenses and can diagnose and treat certain conditions and diseases of the eye. Low vision is a *subspecialty* of both providers and not all of them are trained in this area.

There are also Vision Rehabilitation professionals who are nationally certified to provide training and counseling to people coping with low vision or blindness. They can provide assessment, planning, instruction, and information regarding adaptive devices such as special lights, glasses and telescopes, magnifiers, electronic video magnification systems and head-worn technology. These devices allow you to read, write, and work using your remaining sight.

Last but not least, be an Informed Consumer:

- Schedule regular eye exams (annually if a diabetic or at high risk due to age, ethnicity or heredity).
- Know warning signs as well as lack of them
- Understand how different eye conditions affect the way you see (loss of peripheral or central vision, blurring)
- Discover what can be done if you have low vision
- Be aware of how to get information and help

For additional information, visit any of the resources indicated below:

National Eye Institute (NIH), March 2005.
www.nei.nih.gov. (301) 496-5298

Lighthouse International. 1-800-829-0500
www.lighthouse.org.

American Foundation for the Blind. www.afb.org.
1-800-232-5463

National Assoc. for Visually Handicapped.
www.navh.org. (212) 889-3141

Council of Citizens with Low Vision International.
1-800-733-2258

American Academy of Ophthalmology, 655 Beach Street, S.F. (Can provide speakers) (415-561-8500 x 519)

Health News, www.healthnewswebsite.com

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