



Seeing Past the **Blindspots:**

What You Should Know About Age-Related Vision Loss

When aging patients were asked about quality of life concerns, blindness ranked the highest. There are a number of conditions that can threaten a person's sight as he or she ages. The most common cause of age-related vision loss is the formation of cataracts. With today's advances, cataract surgery and removal of the cataracts can be handled with very little complication and with outstanding outcomes. Other age-related conditions include glaucoma, age-related macular degeneration, retinal detachments and diabetic retinopathy.

Glaucoma

The onset of open-angle glaucoma presents itself without symptoms, similar to high blood pressure. The elevated pressure in the eye can cause progressive damage to the optic nerve, leading to a loss of peripheral vision, and ultimately, presentation of severe tunnel vision. In the late stages, glaucoma can lead to total blindness. Advanced detection systems—including annual examination, field of vision tests, eye pressure checks and computerized laser scanning systems of the optic nerve—have lead to early detection and treatment of glaucoma. Unfortunately, without an examination, the detection of this condition is not possible. Glaucoma does have a genetic basis and is more common in African-Americans.

Age-Related Macular Degeneration

The most common cause of permanent vision loss in the elderly is age-related macular degeneration, especially in Caucasians and more so with increased age. There are two subtypes of age-related macular degeneration: The dry or non-exudative type and wet or exudative/bleeding type. In the early stages, patients do not have any symptoms and may not be able to discern any loss of sight, but during dilated examination, show evidence of yellow deposits, called drusen, underneath the center of vision. However, some symptoms include mild distortion of straight lines, difficulty adapting when going into a dimly lit room from a bright area, and difficulty reading in low light conditions.

In the more advanced stages, new blood vessels can develop underneath the retina, leading to wet age-related macular degeneration, thus causing severe central visual loss. Fortunately, more than 95 percent of these patients can now be treated with the advent of new therapies such as anti-VEGF agents. Typically, if caught early and treated, the disease can be stopped from progression with significant numbers of patients reporting improvement in their vision.

In regards to prevention, anything that leads to heart health will lead to a reduction

in the risk of age-related macular degeneration including quitting smoking, reducing cholesterol levels and staying physically active. A diet with lots of fruits and vegetables as well as fish can be beneficial. For early detection, patients over 60 should be checking their vision one eye at a time at least every week. This will bring out any loss of vision that may potentially be covered by the unaffected eye. For macular degeneration, a piece of graph paper called an Amsler grid or even the horizontal and vertical blinds in the house can be used to detect distortion in the straight lines. Be sure to test one eye at a time. If distortion is noted, immediate attention should be sought after.

Another form of macular degeneration is associated with the loss of cells in your center of vision, called geographic atrophy. The retinal pigment epithelium and the rods and cones in the eye, after a certain age in some patients, will degenerate leaving dead spots in your vision. Although there is no current therapy available, the FDA just approved a phase I clinical trial for stem cell implants for this specific condition. Retina Specialty Institute has been approved for a phase II study using a drug called Anti-Factor D, which may slow and potentially reverse the progression of this severe form of dry macular degeneration. Macular degeneration is becoming a

treatable disease and typically even in the worst case scenario does not lead to blindness. As such, many elderly patients can maintain independent living.

Diabetic Retinopathy


Diabetic retinopathy is also a leading cause of vision loss in the aging population. Patients with diabetes, especially type 2 diabetes, should be checked at the time of diagnosis for diabetic retinal damage. Although potentially devastating, most cases of diabetic retinopathy are treatable and vision can be maintained at almost normal levels if caught early. If treatment is started after the patient has experienced vision loss, many times a complete visual recovery is not achievable. Prevention involves tight blood sugar control and control of a three-month average in hemoglobin A_{1c} below 7.0.

Additionally, annual exams are recommended until diabetic retinopathy is observed by your doctor, at which point patients may need to be followed more closely. The goal is to start treatment for diabetic retinal swelling prior to the patient losing vision.

Retinal Tears & Detachments

Lastly, acute vision loss can be prevented in the elderly by watching for signs and symptoms of retinal tears and retinal detachments. If you experience a sudden onset of flashing lights in your peripheral vision, in association with the onset of floaters, a condition called a vitreous detachment could be the culprit. The vitreous detachment is a normal age-related vitreous degenerative phenomenon, which can lead to a tear in the retina. Unfortunately, you may not be able to detect a tear in the retina when these flashes and floaters start, but a prompt retinal exam should be sought after. The goal is to catch the tear at an early stage so it can be treated in the office with laser therapy, thus preventing retinal detachment. Unfortunately, once fluid penetrates through the tear, or the inner lining of the eye, the retina detaches and the patient starts to lose peripheral vision. Even at this stage, the retina is repairable with either an in-

office procedure and certainly with surgical intervention. Success rates for retinal detachments with one or two surgeries approach 95 percent. If unattended, total vision loss can occur.

Awareness of your underlying diseases, observation for symptoms associated with retinal diseases, and an active lifestyle along with all the new therapies being introduced can keep you seeing and functioning independently long into the future. 

About the author: Dr. Sunil Gupta is a founding physician of Retina Specialty Institute and a nationally recognized retinal surgeon specializing in the treatment of macular degeneration and diabetic retinopathy. For more information on Dr. Gupta and Retina Specialty Institute, please visit retinaspecialty.com.

Amsler Grid

If you need reading glasses, please wear them while you use the Amsler grid. The grid should be at about the same distance from your eyes that any other reading material would be. **You may want to print this page and then take the test.** All lines on this grid should be straight, all intersections should form right angles and all the squares should be the same size.

Cover one eye, then focus on the dot in the center.

- Do you notice any irregularities?
- Do any of the lines look wavy, blurred or distorted?
- Are there any missing areas or dark areas in the grid?
- Can you see all corners and sides of the grid?
- Repeat the test with your other eye.

VERY IMPORTANT: Report any irregularity to your eye doctor immediately. You can mark areas of the chart that you're not seeing properly and bring it with you to your eye exam.

