

Flight Surgeon Notes #5

Age-Related Eye Diseases

With aging, there is a universal tendency for both men and women to become more sedentary. This translates into more time spent reading, watching television and enjoying conversation with friends, associates and loved ones. All of these activities require vision. With advancing age, our appreciation of the local environment and perception of the world is primarily determined by vision. I have always been an obsessive-compulsive reader. My quality of life would be severely reduced by loss of vision. Hearing loss with age is a separate topic, but most of the time this may be corrected by hearing aids. Visual problems are a bit more complicated and deserve special consideration.

The following is a list of the most common visual problems that occur with age.

Presbyopia is loss of ability to see close objects or to read small print. Symptoms usually begin after age 40. It is commonly noted by requiring you to hold the printed page farther and farther away to bring the print into focus. Occasionally, it is accompanied by headaches or “tired eyes” while reading or while performing other close work. This can *usually be corrected by reading glasses*. Since the condition is due to age-related hardening of the lens, it may ultimately terminate in **cataracts** after many years.

Floaters are tiny spots or specks that “float” across the field of vision. They may be noticed in well-lit rooms or outdoors on a bright day. Most of the time floaters are of no clinical significance and of little concern. However, if they are accompanied by flashes of light or an increase in number, consult your eye doctor promptly. This could be an early sign of **retinal detachment**.

Dry Eyes occur when tear glands do not produce enough tears. Dry eyes may be uncomfortable, causing burning, itching and may progress to corneal ulceration with loss of vision. Your Eye Doctor may suggest artificial tears or use of a humidifier in your home. “Sicca” is the Greek term for a condition that causes dryness of eyes and mouth. Consult a rheumatologist if these symptoms occur. **Excess tearing** may indicate a blocked tear duct or infection. Consult your Eye Doctor if there are any questions on this issue.

Cataracts are cloudy areas that develop in the lens of the eye. The lens is normally clear to the passage of light. There are varying degrees of cloudiness that interfere with vision. If there is significant impairment of vision, surgery can be performed using eye drops for anesthesia. The cloudy lens is removed and a clear plastic lens is inserted. This is a miracle of modern medicine. I had this surgery performed 10 years ago in both eyes. Prior to this, I had worn glasses since age 12 for near-sightedness. Now at age 81, after surgery I have 20/20 vision.

Glaucoma is usually related to increased pressure within the eye. Heredity is a significant risk factor for glaucoma. Other risk factors are age, race, diabetes and some medications. **Glaucoma** may result in blindness. There are frequently no symptoms of this disease. Since it initially impairs peripheral vision, it may go undetected since a person will subconsciously tend to look more directly at objects. This disease justifies regular evaluation by an Eye Doctor to measure the pressure and visual fields. There are a number of different treatments.

Retinal Disorders are a leading cause of blindness in this country as well as in other developed countries. The retina is a thin layer of cells on the back of the eye that receive images and pass them on to the brain for interpretation. **Retinal disorders** interrupt this transfer of images. Common retinal disorders include **age-related macular degeneration, diabetic retinopathy** and **retinal detachment**.

- **Age-related macular degeneration (AMD)**. The macula is the small central area in the center of the retina that contains millions of cone cells that account for detailed vision, such as that required for facial recognition and reading. **AMD** is characterized by loss of cells in this region, and results in blurred

central vision, without progressing to total blindness. There is no specific cure, but in the early stages, there may be benefit from nutritional supplements.

- **Diabetic Retinopathy.** This disorder is a complication of diabetes. It is a complicated disease process that requires expert attention from both eye-doctors and diabetic specialists. Anyone with diabetes should have an eye exam.
- **Retinal Detachment.** Retinal detachment is a serious problem. This occurs when the inner and outer layers of the retina become separated. Symptoms of retinal detachment include: sudden appearance of spots or flashes of light, wavy vision, as if you are under water, and/or a dark shadow in the field of vision. Laser therapy is remarkably effective in treating this problem.

Conjunctivitis or “pink-eye/red-eye” causes redness, itching, burning and tearing. It resembles the sensation of having a foreign body in the eye. This occurs in all ages and can be caused by infection, allergies or exposure to chemicals and irritants. Treatment usually consists of medicated eye drops. Rarely is it serious.

Corneal Problems are common in persons who wear contact lenses. Symptoms are much the same as **Conjunctivitis** and may require an exam by an eye doctor to differentiate between the two problems.

Eyelid Problems frequently relate to drooping eyelids that develop with age. Occasionally, surgery is required to “cinch” them up.

With age, it is prudent to have regular eye examinations by an eye specialist!

Types of Eye Physicians:

1. **Ophthalmologist** is a *medical or osteopathic doctor* who specializes in eye and vision care. *Ophthalmologists differ from optometrists and opticians in their levels of training and in what they can diagnose and treat.* An Ophthalmologist is a medical doctor who has completed college and at least eight years of additional medical training; an **ophthalmologist is licensed to practice medicine and surgery**. An ophthalmologist diagnoses and treats all eye diseases, performs eye surgery and prescribes and fits eyeglasses and contact lenses to correct vision problems. Many ophthalmologists are also involved in scientific research on the causes and cures for eye diseases and vision disorders.
2. **Optometrists** are healthcare professionals who provide primary vision care ranging from sight testing and correction to the diagnosis, treatment, and management of vision changes. **An optometrist is not a medical doctor.** An optometrist receives a doctor of optometry (OD) degree after completing four years of optometry school, preceded by three years or more years of college. *They are licensed to practice optometry, which primarily involves performing eye exams and vision tests, prescribing and dispensing corrective lenses, detecting certain eye abnormalities, and prescribing medications for certain eye diseases.*
3. **Opticians** are *technicians trained to design, verify and fit eyeglass lenses and frames, contact lenses, and other devices to correct eyesight.* They use prescriptions supplied by ophthalmologists or optometrists, but do not test vision or write prescriptions for visual correction. **Opticians are not permitted to diagnose or treat eye diseases.**

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