

Ophthalmology Terms

Astigmatism: A condition in which the cornea is more elliptical than spherical. Astigmatism causes blurred vision which can be corrected with glasses, contact lenses, or surgery.

Cataract: A clouding of the lens of the eye that usually occurs gradually over the years. In significant cases, cataract surgery is necessary to restore vision.

Conjunctiva: The mucous membrane that covers the white of the eye (sclera). This is the layer that becomes infected in “pink eye.”

Conjunctivitis: An infection of the conjunctiva that is usually caused by a virus but sometimes by bacteria. It can also be due to allergies. It can be highly contagious.

Cornea: The clear window that covers the iris and pupil. Irregular corneas cause astigmatism. The cornea can be scratched (corneal abrasion) or infected (corneal ulcers). Scarring of the cornea can lead to permanent blurring of the vision.

Dilated fundus exam: In a complete eye exam, the pupils are dilated to allow the doctor to see into the back of the eye to evaluate the lens, vitreous, optic nerve, retina, and retinal blood vessels.

Floaters: Opacities in the gel of the eye (vitreous humor) that occur when the gel detaches from the optic nerve and retina. This is a normal aging process. No treatment is available for floaters except surgery which is only done in very unusual cases. Sudden onset of floaters or flashing lights can be a sign of a retinal tear or detachment. Patients with the sudden onset of such symptoms should call their ophthalmologist right away.

Hyperopia (far-sightedness): People with this condition see worse at near than distance without glasses.

Iris: The blue or the brown part of the eye. The iris regulates the amount of light that enters the eye and dilates in dark conditions and constricts in light conditions. The hole in the middle of the iris is called the pupil.

Lens: The part of the eye that becomes cloudy and leads to cataracts. The lens is able to change shape until the age of 40 to allow for reading vision without glasses.

Macular Degeneration (AMD): A common cause of vision loss that occurs later in life. This disease causes degeneration of the center of the retina, the macula, Central vision is affected in significant cases. Dry macular degeneration is slowly progressive and no treatment exists except for AREDS2 vitamins. Wet macular degeneration occurs in 10% of people with dry degeneration and develops when bleeding or swelling of the retina suddenly occur in the area of degeneration. Wet AMD makes straight lines look wavy. Conversion to wet AMD can be detected early in some cases by monitoring with an Amsler grid.

Myopia (near-sightedness): A person with myopia can see clearly at near but needs glasses for distance. Myopia can be corrected with glasses, contacts or laser surgery.

Narrow Angle Glaucoma: A disease that results in a sudden increase in the intraocular pressure. The drainage angle of the eye is blocked by the iris and the aqueous humor can no longer exit the eye. The eye keeps producing the aqueous humor and it builds up to very high levels. This condition is an ocular emergency as loss permanent loss of vision can quickly develop. Symptoms include eye pain, redness, headache, blurred vision, seeing multi-colored halos around lights, and nausea/vomiting. Patients with such symptoms should call their ophthalmologist right away. Treatment includes medication, laser iridotomy, and possibly surgery.

Optic nerve: The optic nerve is the cable that transmits the vision from the eye to the brain. Diseases that affect the optic nerve include glaucoma, vascular disease, multiple sclerosis, and rarely tumors.

Presbyopia: Occurs after the age of 40 when the lens can no longer become more spherical to allow near vision without glasses. Presbyopia can be corrected with bifocal or progressive glasses or multifocal contact lenses.

Primary Open Angle Glaucoma (POAG): A disease that leads to damage of the optic nerve and progressive loss of peripheral vision. The vision loss is permanent and treatment is provided to prevent any further damage. Glaucoma is usually related to high eye pressure (intraocular pressure or IOP) but not always. The disease becomes more common with aging. POAG is asymptomatic until the later stages, and regular exams are needed for early detection. Vision

loss is permanent and treatment is provided to try to prevent any further damage. Treatment modalities include drops, laser or surgery.

Retina: The retina is the nervous tissue that lines the inside of the back wall of the eye. It captures visual stimuli and sends them to the brain via the optic nerve. The macula is the center of the retina and is necessary for fine vision. Diseases that affect the retina include macular degeneration, diabetic eye disease, retinal detachment and retinal vascular blockages associated with hypertension and atherosclerosis.