

Instituto Superior de Ciencias Médicas de La Habana

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## GLOSARIO DE OFTALMOLOGIA

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## RESUMEN

Este glosario se confeccionó con el objetivo de brindarles a los estudiantes de Medicina, a los residentes o especialistas de oftalmología, y a los profesionales de la salud en general, información acerca de términos oftalmológicos en idioma Inglés.

Este compila 212 términos en idioma Inglés, ordenados alfabéticamente, con su correspondiente explicación en Inglés.

La utilidad de este glosario es de gran magnitud, ya que no sólo puede servir de referencia a los especialistas de oftalmología, sino también a los estudiantes de Ciencias Médicas y a todo el personal de la salud o a cualquier persona interesada en el tema.

Por la necesidad que constituye el conocimiento de estos términos para el tratamiento de las enfermedades oftalmológicas, recomendamos su generalización en todas las carreras

de Ciencias Médicas tanto en los cursos de pregrado como en los cursos de postgrado que se imparten en el Instituto Superior de Ciencias Médicas.

**Palabra clave:** Oftalmología.

## **INTRODUCCION**

La enseñanza del Inglés con fines específicos en las carreras de Ciencias Médicas ha cobrado gran importancia en los últimos años debido a la necesidad que tienen los profesionales de la salud de incrementar la competencia comunicativa en el idioma.

Debido a la obsolescencia de los libros de texto utilizados y a la carencia de materiales actualizados sobre estos temas, los profesores de Inglés han asumido la responsabilidad de recopilar artículos científicos y confeccionar materiales de apoyo para la docencia con el fin de suplir esta carencia.

El departamento de Inglés de la FCM Dr. Salvador Allende se ha dado a la tarea de colaborar con esta misión y ha elaborado glosarios para la enseñanza de Inglés con fines específicos.

El Glosario que ahora se presenta es de gran utilidad para los estudiantes de Ciencias Médicas, para los especialistas en Oftalmología y para todos los profesionales de la salud interesados en el tema.

Este compila 212 términos que se encuentran en idioma Inglés. Para facilitar su consulta fue ordenado alfabéticamente; con la explicación correspondiente, de modo que sirva como glosario de bolsillo de fácil referencia, ya sea digitalizado o impreso.

## **MATERIAL Y METODO**

**Material:**

El universo de trabajo lo constituyó la recopilación de 212 términos escritos en idioma Inglés, extraídos de Internet y de diccionarios de Inglés procedentes de Estados Unidos y de Gran Bretaña.

**Método:**

Siguiendo el criterio de incluir los términos que aparecen en los artículos científicos estudiados en clase y las de uso más frecuente en los tratamientos a distintos tipos de enfermedades, se realizó una revisión bibliográfica de artículos científicos médicos en idioma Inglés.

Estos fueron ordenados alfabéticamente en forma de glosario, y se les dio la explicación correspondiente a cada término para facilitar su uso.

Se les proporcionó a los estudiantes de 4to. y 5to. de Medicina año en forma digitalizada para probar su aceptación y para contar con un medio de enseñanza más.

Este glosario responde a la carencia de material bibliográfico actualizado contemplado en el banco de problemas del departamento de Inglés.

## **CONCLUSIONES Y RECOMENDACIONES**

La inclusión de los términos contenidos en este glosario en las clases de Inglés con fines específicos en las facultades de Medicina, así como en la de Oftalmología puede contribuir al perfeccionamiento del proceso de enseñanza – aprendizaje en Inglés incrementando los conocimientos de los estudiantes y residentes tanto en el idioma Inglés como en su propia especialidad.

De igual forma, puede contribuir a una mayor formación de los especialistas en cuanto a la competencia comunicativa en el idioma Inglés y en el desempeño profesional garantizando el uso correcto de éstos.

Recomendamos la utilización de este glosario en las clases de Inglés con fines específicos de todas las carreras de Ciencias Médicas, tanto en el pregrado como en los cursos de postgrado, con el fin de lograr un mayor y mejor desarrollo de los profesionales de la salud.

### **ABSTRACT:** Glossary of ophthalmology

This glossary has been made to give medical students, residents, specialists in Ophthalmology as well as health professionals, useful information about ophthalmic terms in the English language.

It is a compilation of 212 ophthalmic terms, written in English, alphabetically ordered, with their corresponding meaning in English.

We decided to carry out this work because there is a lack of bibliography on this topic. In order to do this, we consulted EFL papers and medical dictionaries, as well as web sites containing information about this topic.

We suggest this glossary to be used in all the medical careers, as well as in courses on this specialty, due to the need of mastering the meaning of these terms for the treatment of different diseases.

**Key Words:** Ophthalmic.

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## **Glossary**

### **A**

**Accommodation:** The ability of the eye to focus. An ocular adjustment for the sharp focusing of objects viewed at different distances.

**Accommodative esotropia:** Farsightedness associated with crossing of the eyes.

**Albinism:** Hereditary deficiency in the pimentosa epithelium of the retina, the iris and the choroids.

**Allergic conjunctivitis:** It represents the single most common form of ocular allergic disease. It is the response seen in sensitized individuals after exposure to a particular allergen or sensitizing agent.

**Amaurosis fugax:** Transitory loss of vision.

**Amblyopia:** Unilateral or bilateral partial loss of sight without any ophthalmoscopic sign. Sometimes called "lazy eye," it is the reduction or dimming of vision in an eye that appears to be normal.

**Amsler grid:** A test featuring horizontal and vertical lines, usually white on black background, used to test central visual field defects like Macular Degeneration. A chart featuring horizontal and vertical lines used to test vision.

**Aniseikonia:** Condition in which the image seen by one eye defines the size and the shape seen by the other eye.

**Anisometropia:** A great difference in the refraction of both eyes.

**Anophthalmos:** Absence of a real ocular eye.

**Anopia:** Defection or lack of the power of seeing.

**Anorthopia:** A distortion of vision which causes straight lines to appear as curves or angles; there is also diminished perception of symmetry.

**Anterior chamber:** The front section of the eye's interior where aqueous humor flows in and out of providing nourishment to the eye and surrounding tissues.

**Anterior Uveitis:** An inflammation of the middle layer of the eye, which includes the iris (coloured part of the eye) and adjacent tissue, known as the ciliary's body. If untreated, it can cause permanent damage and loss of vision from the development of glaucoma, cataract or retinal edema. It usually responds well to treatment; however, there may be a tendency for the condition to recur.

**Antioxidants:** They are micronutrients, which destroy or neutralize free radicals, molecules, which have been implicated as one causative factor in the stimulation of abnormal cellular reproduction (cancer) and cellular destruction (aging).

**Aphakia:** Absence of crystallines.

**Aphacic eye:** An eye in which the crystalline lens is absent.

**Artificial eye:** A glass or plastic shell to resemble a normal eye.

**Age Related Macular Degeneration:** An age related breakdown of the macula that causes a loss of central vision and even blindness in advanced cases.

**Aqueous:** A clear watery fluid that bathes the inside of the front part of the eye, providing nutrition to the cornea and the lens.

**Arcus senilis:** White ring around the edge of the cornea.

**Asthenopia:** The symptoms produced by ocular muscle fatigue due to errors of refraction, upset of accommodation or muscle imbalance. Also called *eyestrain*.

**Astigmatism:** A condition wherein the refraction varies in the different meridians of the eye. A vision problem that results in blurred images.

## **B**

**Bacterial keratitis:** Generally presented with a unilateral, acutely painful, photophobic, intensely injected eye. Visual acuity is usually reduced, and profuse tearing is common. There will be a focal stromal infiltrate with an overlying area of epithelial excavation. Often, there will be a history of contact lens wear, which is the most common precipitating condition. Corneal trauma or pre-existing keratopathy are also common precipitating conditions.

**Basal cells carcinoma:** Malignant tumour of basal cells.

**Binocular indirect ophthalmoscope:** An instrument to examine the peripheral portion of the internal eye to diagnose conditions such as retinal detachment

**Binocular vision:** The ability to use both eyes at once, the simultaneous use of the two eyes. Normal binocular vision yields a stereoscopic image and parallax-induced depth perception.

**Blepharitis:** Inflammation of the eyelids. Inflammation of the eyelids can cause chronic eye irritation, tearing, foreign body sensation and crusty debris.

**Blepharospasm:** Closing of the eyelids by pressure.

**Blind spot, physiological blind spot:** A small white oval shaped area on the retina of the eye from which the optic nerve emerges; the spot is insensitive to light because it lacks nerve endings that are responsive to light, which can be seen through an



ophthalmoscope. It is not noticed in binocular vision because a sensitive area in the other covers the blind spot in the visual field of one eye.

**Blindness:** Absence of sight; loss of vision due to a variety of causes.

**Buckling;** Invagination of the retina.

**Buphthalmos:** A large size of the eyeball in childhood glaucoma.

## C

**Cataract:** A cloudy or opaque area in the natural lens of the eye. As the opacity thickens, it prevents the light rays from passing through the lens and being focused on the retina, a change in the structure of the crystalline lens that causes blurred vision.

**Chalazion:** Swelling and congestion of a tarsal gland of the eyelid, with retention of the secretion.

**Childhood glaucoma:** A rare form of glaucoma that often develops in infancy, early childhood, or adolescence. Prompt medical treatment is important in preventing blindness.

**Chlamydial & Gonococcal Conjunctivitis:** It typically affects sexually active teens and young adults and is the most frequent infectious cause of neonatal conjunctivitis. It is one of the major sexually transmitted pathogens. Women seem to be more susceptible than men. The incidence of infection seems to be directly related to sexual activity and geography, with urban populations having higher incidences.

**Choroid:** The thin, blood-rich membrane that covers the white of the eyeball; responsible for supplying blood to the retina.

**Chronic glaucoma:** (primary open-angle glaucoma or POAG) is often called "the silent thief of sight" because there is no warning sign, no hint that anything is wrong. Glaucoma gradually reduces the peripheral vision, but by the time permanent damage has already occurred.

**Ciliary body:** The part of the eye that produces aqueous humor .

**Colour blindness:** Anomalies of colour perception and blindness to certain colours. It could be congenital or acquired.

**Colour vision:** The ability to perceive differences in colour, including hue, saturation and brightness.

**Colour vision deficiency:** It means that the ability to distinguish some colours and shades is less than normal. It occurs when the colour-sensitive cone cells in the eyes do not properly pick up or send the proper colour signals to your

brain. About eight percent of men and one percent of women are colour deficient.

**Conjunctiva:** A clear membrane that is the tough, leathery outer coat of the eye. The membrane which lines the exposed eyeball and the inside of the eyelid.

**Conjunctival concretions:** (Lithiasis) are seen as small, white to yellow nodules superficially buried within and beneath the palpebral conjunctiva. They may occur in either the upper or lower lid; when inferior, they often appear adjacent to or underlying fluid-filled conjunctival cysts. These small, round, calculi appear to be a side effect of an aging palpebral conjunctiva, or a sequela of recurrent episodes of chronic conjunctivitis. They have been associated with chronic atopic keratoconjunctivitis and Herbert's pits following post-trachomatous degeneration. However, they frequently occur idiopathically.

**Conjunctival laceration:** Ocular trauma and complain of mild pain or a scratchy, foreign-body sensation in the affected eye. There may be some tearing and photophobia; vision is rarely impaired. The adjacent vessels will be dilated, and there will often be a subconjunctival hemorrhage.

**Conjunctival lymphomas** : They represent a mass lesion of the superficial ocular surface. They are classically described as "salmon-colored patches," and may present bilaterally in as many as 20% of patients. The lesions are fleshy and may grow rapidly. Often, they appear to arise from within the fornix and extend toward the cornea.

**Conjunctival neoplasm:** It includes squamous cell carcinoma and, to a much lesser extent, malignant melanoma. With both these conditions, the typical patient tends to be older (50-plus) and white, often with a significant history of chronic sun exposure.

**Conjunctivitis:** It is commonly known as "pink eye", is an inflammation of the membrane (conjunctiva) that covers the eye and lines the inner surface of the eyelid.

**Contact lenses:** They are worn directly on the cornea of the eye. Like eyeglasses, contact lenses help to correct refractive errors and perform this function by adding or subtracting focusing power to the eye's cornea and lens.

**Convergence/ Divergence:** The turning of the eyes inwards/ outwards so that they are both "aimed" towards the object being viewed.

**Cornea:** The curved transparent front surface of the eye. It is a tough, five-layered membrane that focuses light. The clear, dome-shaped surface that covers the front of the eye.

**Corneal abrasion** : Scratch on the surface of the eye. It may present acute pain, photophobia, lacrimation, blepharospasm, foreign-body sensation, blurry vision and a history of contact lens wear or being struck in the eye.

**Corneal curvature:** The shape of the front surface of the eye.

**Cortical cataract** : It forms in the lens cortex, gradually extends its spokes from the outside of the lens to the center. Many diabetics develop cortical cataracts.

**Crystalline Lens:** A transparent, biconvex, a vascular structure. It is located directly

behind the iris and pupil, which focuses light onto the retina. It has the ability to vary its power to accommodate and focus light from objects at all distances.

**Current prescription check:** An evaluation of the current eyeglass prescription

**Cyclophotocoagulation:** A procedure that uses a laser beam to freeze selected areas of the ciliary's body - the part of the eye that produces aqueous humor - to reduce the production of fluid.

## D

**Dacryocystitis:** Inflammation of the lachrymal sac.

**Dacryoma:** A tear-filled cyst caused by obstruction of a duct of the lachrymal gland.

**Dacryorrhea:** An excessive flow of tears.

**Depth perception:** The ability of the visual system to perceive the relative positions of objects in the visual field. The ability to distinguish objects in a visual field.

**Deuteranopia:** A form of partial colour blindness of the dichromatic type in which the green colour of the spectrum is not perceived.

**Diabetic Retinopathy:** Diabetes causes retinal degradation that can be sight-threatening.

**Dilated Fundus Examination:** Dilation of the pupils with drops to allow a more thorough health evaluation of the back of the eye. A dilated retinal examination using the slit lamp biomicroscope and special lenses allows checking for retinal and optic nerve disease or abnormalities and evidence of systemic diseases such as diabetes and high blood pressure.

**Diplopia:** A condition in which a single object is perceived as two; it is also called double vision.

**Dry Eye :** Occurs when there is not enough moisture in the eye, causing it to feel dry, hot, sandy, and gritty. It may be caused by low humidity, smoke, aging, certain diseases, and certain medications (i.e., antihistamines, decongestants).

## **E**

**Ectropion:** Lid falling away from the eye, exposing the palpebral conjunctiva.

**Emmetropia:** It is the medical term used for Normal vision.

**Entropion:** Lid turning inwards.

**Epiphora:** Watering eyes.

**Episcleritis:** It is presented as relatively asymptomatic acute onset redness in one or both eyes. It is observed a sectoral injection of the episcleral and overlying conjunctival vessels, although the redness may be diffuse throughout these tissues.

**Esotropia:** Manifest convergent strabismus.

**Eye coordination:** The ability of both eyes to work together as a team. Each of the eyes sees a slightly different image and the brain, by a process called fusion, blends these two images into one three-dimensional picture. Good eye coordination keeps the eyes in proper alignment. Eye coordination is a skill that must be developed. Poor eye coordination results from a lack of adequate vision development or improperly developed eye muscle control. Although rare, an injury or disease can cause poor eye coordination.

**Eye cup:** A small curved glass vessel used for ocular bathing.

**Eyeglasses:** (also called spectacles) The most common form of eyewear used to correct or improve many types of vision problems, are a frame that holds two pieces of glass or plastic, which have been ground into lenses to correct refractive errors.

**Exophthalmos:** An abnormal protrusion of the eyeball.

**Exophoria:** A tendency of one or both eyes to divergent strabismus.

## F

**Far-Sightedness:** The person who suffers from far-sightedness cannot see from a close distance. Therefore, bifocal eyeglasses are needed.

**Floater :** They appear as spots, dots, or lines and affect or interrupt vision. They are usually caused by bits of debris in the vitreous humor .

**Floppy eyelid syndrome:** It is a relatively uncommon ocular condition characterized by flaccid, easily everted upper lids. It is usually seen in overweight, middle-aged males, although it may occasionally be seen in women and non-obese individuals. Some patients also suffer from obstructive sleep apnea, a disorder marked by partial collapse of the pharynx during inspiration, resulting in loud snoring and gasping for air.

**Focusing ability:** Test to measure eyes' ability to change focus.

## G

**Giant papillary conjunctivitis:** A common condition frequently seen in soft contact lens patients, patients with exposed suture knots, and patients with prostheses. Patients with asthma, hay fever or animal allergies may be at greater risk.

**Glaucoma:** A symptomatic condition of the eye in which the intraocular pressure exceeds the tolerance of the affected eye resulting in optic nerve damage and irreversible visual field defects. An Increased intraocular pressure that can result in optic nerve damage and loss of sight.

**Gomoscropy:** Exam technique of the angle of the anterior chamber using a corneal contact lens .

## H

**Halos :** rainbows around lights

**Hemianopia:** Loss of half the vision in each eye

**Hyaloid canal:** A narrow passageway that allows blood to flow through the eye.

**Hyperopia or Farsightedness:** An error of refraction wherein parallel rays of light come to a focus behind the retina. A hyperopic person will have no problem seeing objects in the distance, but there will be difficulty in focusing clearly on near objects.

**Hypermetropia:** The eye perceives the image farther away from the retina, making the closer objects seem confused.

## I

**Immune stromal keratitis:** It is presented with pain, photophobia, lacrimation, and blepharospasm. Vision is typically reduced in the acute, active phase. It may be either unilateral or bilateral. There will often be a history of ocular infection or systemic disease. It may be the initial manifestation of an unknown underlying systemic disease. Occasionally, it is idiopathic. It runs a chronic, indolent course and may persist for many months.

**Intraocular Pressure:** The fluid pressure within the eye created by the continual production and drainage of aqueous fluid in the anterior chamber is known as the Intraocular Pressure.

**Iridotomy:** In this procedure, the surgeon uses the laser to make a small hole in the iris - the colored part of the eye - to allow fluid to flow more freely in the eye.

**Iris:** The pigmented structure that gives our eyes their colour. (the colored part of the eye). The iris is partly responsible for regulating the amount of light permitted to enter the eye.

**Iritis :** A n inflammation of the iris of the eye.

## **J**

**Jaeger Test:** Test to measure the near vision using lines of different sizes.

## **K**

**Kemtoconus:** Deformity of the cornea with a cones shape.

**Keratitis:** It is the inflammation of the cornea.



**Keratoconus:** Special contact lenses that can help people with thinning, bulging corneas to see better.

**Klieg eye:** Conjunctivitis caused by exposure to arc lamps (Klieg lights). Also called *cinema eye* .

## L

**Lagophthalmia:** A condition in which the eye does not close during sleep. Also called *Hare eye*

**Laser surgery:** Often used to treat macular edema and proliferative retinopathy; involves shrinking the abnormal blood vessels, or sealing the leaking ones.

**Lens:** (Also called crystalline lens) the transparent structure inside the eye that focuses light rays onto the retina.

**Limbal dermoids:** Also known as epibulbar or conjunctival dermoids are generally seen as well-circumscribed oval mass lesions of the ocular surface. They arise from the bulbar conjunctiva and virtually always protrude across the limbus onto the cornea.

**Limbus:** Juncture of the cornea and the sclera.

## M

**Monovision:** A situation where one eye (usually the dominant eye) is corrected for distance and the other eye is corrected for reading.

**Myopia:** The dioptric condition of the eye in which parallel rays of light from infinity come into focus in front of the retina. A Myopic person can see clearly objects upclose, but everything in the distance is blurred.

**Macula:** The portion of the eye that allows us to see fine details clearly.

**Macular degeneration:** Degeneration in the macular region of the retina that results in decreased central vision and sometimes, in blindness.

**Macular dystrophy:** A group of disorders involving predominantly the posterior portion of the ocular fundus, due to degeneration in the sensory layer of the retina, retinal pigment epithelium. Bruch membrane, choroids, or a combination of these tissues.

**Maculopathy:** Any pathological condition of the macula lutea.

**Megalocornea:** Cornea bigger than normal.

**Microcornea:** Cornea shorter than normal.

**Microsthalmus:** Little anomaly of the eyeball.

**Miosis:** Constriction of the pupil.

**Mydriasis:** Dilation of the pupil.

**Myopia:** Nearsightedness.

**Nebula:** A slight corneal opacity.

**Neovascularization:** The formation of new blood vessels, often fragile and inappropriate for the location.

**Near point of accommodation:** The closest point in front of the eyes that an object may be clearly focused.

**Near point of convergence:** The maximum extent the two eyes can be turned inward.

**Nuclear cataract:** It is most commonly seen as it forms. This cataract forms in the nucleus, the center of the lens, and is due to natural aging changes.

**Nystagmus:** A rhythmic fine oscillation of the eyes.

## O

**Ocular Hypertension:** The elevated fluid pressure. The normal pressure is about 10 to 20mmHg, with the majority of people falling between 13 and 19. Over 20 is considered “suspicious”, over 24 “cautiously concerned” and warranting immediate investigation, and over 30 is considered to be “urgent” and a potential emergency situation.

**Optic Nerve, Optic Nerve Head:** A bundle of nerve fibers that connects the eye to the brain. It is a part of the visual pathway. The optic nerve carries the impulses formed by the retina to the brain, which interprets them as images.

**Ophthalmologist:** A medical doctor or an osteopathic physician who specializes in comprehensive eye care and provides examinations, diagnosis, and treatment for a variety of eye disorders. Ophthalmologists are skilled in all facets of eye care, from

prescribing eyeglasses or contact lenses to performing intricate eye surgery. Many also choose to specialize in one particular disease or portion of the eye (i.e., glaucoma specialist or cornea specialist).

**Ophthalmoscope:** Lighted instrument used to closely inspect eye structures and the inner back region of the eye.

**Ophthalmoscopy:** Examination of the internal structures of the eye using an illumination and magnification system.

**Ocular hypertension :** High (greater than 21 mm Hg) intraocular pressure.

Ocularist: A technician who makes ophthalmic prosthesis.

**Optic nerve:** Bundle of more than one million nerve fibres that connects the retina with the brain. The optic nerve is responsible for interpreting the impulses it receives into images.

Optician: A technician who fits, adjusts, and fills the prescriptions for eyeglasses and contact lenses.

Optometrist: A doctor of optometry but not a medical doctor. Optometrists can examine, diagnose and manage many visual problems and eye disease, and are specially trained to test vision in order to prescribe eyeglasses or contact lenses.

**Orthokeratology:** A non-surgical procedure using contact lenses to alter the shape of the cornea to effect a change in the refractive error. The use of contact lenses to change the shape of the cornea in order to correct refractive error.

**Orthoptic assessment:** To assess the movements of the eyes

## P

**Parakinesis:** Irregularity of action of one of the ocular muscles.

**Phlyctenular keratoconjunctivitis:** A nodular inflammation of the perilimbal tissues that occurs secondary to an allergic hypersensitivity response of the cornea. The disease has a worldwide distribution and is most often seen in women living in crowded or impoverished quarters.

**Phoropter:** It enables your eye doctor easily to switch lenses around to see which ones work best to correct your eyesight while you watch an eye chart positioned about 20 feet away.

**Photophobia:** Sensitivity to light.

**Photorefractive keratectomy (PRK) :** Surgical procedure using an excimer laser to change the shape of the cornea.

**Pigmentary glaucoma:** It often exhibits no symptoms at all. Some pain and blurry vision may be noticed after exercise. It affects mostly white males in their mid-30s to mid-40s.

**Pinguecula :** irritation caused by the degeneration of the conjunctiva. It is characterized by yellowish, slightly raised, interpalpebral lipid-like deposits in the nasal and temporal limbal conjunctiva. They are found frequently in individuals who are middle-aged and who experience chronic exposure to the sun. There is no predilection for sex or race.

**Pink eye:** Colloquial way to refer to acute conjunctivitis

**Posterior chamber:** The back section of the eye's interior.

**Posterior optical segment** : Portion of the eye located behind the crystalline lens, and including vitreous, choroids retina, and optic nerve.

**Posterior vitreous detachment (PVD)**: The separation of the vitreous from the retina.

**Presbyopia**: A form of farsightedness in which it is difficult to focus on close objects or to read. It is also known as the aging eye is the condition when one starts to experience difficulty in reading and focusing on things close up, it is usually noticed first around the age of 45 and is a progressive condition.

**Primary glaucoma**: Both open-angle and angle-closure glaucoma can be classified as primary or secondary. Primary glaucoma cannot be contributed to any known cause or risk factor.

**Pterigion**: (Outgrowth). A raised, whitish, triangular wedge of fibrovascular tissue, whose base lies within the interpalpebral conjunctiva and whose apex encroaches the cornea. The leading edge of this tissue often displays a fine, reddish-brown iron deposition line (Stocker's line).

**Ptosis**: Drooping of the upper eyelid

**Pupil**: The dark center in the middle of the iris through which light passes to the back of the eye.

**Pupil dilation**: The pupil is widened with eye drops to allow a close-up examination of the eye's retina.

**Pupillary response**: The constriction or dilation of the pupil as stimulated by light.

## R

**Radial keratotomy:** A surgical procedure in which incisions are made into the epithelium of the cornea to correct refractive error.

**Refraction:** Determination of the optical refractive errors of the eye. It is a test for eyes' ability to focus light rays exactly on the retina at distance and close-up.

**Refractive error:** The degree to which light reaches the back of the eye. The degree, to which images received by the eyes are not focused on the retina, e.g.: Myopia, Hyperopia and Astigmatism.

**Retina:** The light-sensitive nerve layer that lines the back of the eye. The retina sense light and creates impulses that are sent through the optic nerve to the brain. The innermost layer of the eyeball. It is the tissue that transforms light into electrical impulses that are transmitted to the brain to create our sense of vision.

**Retinal Detachment:** The separation of the retina from its normal location covering the inner surface of the back portion of the eye. Separation of the retina from the epithelium layer and from blood supply.

**Retinitis Pimentosa:** The name given to a group of hereditary eye disorders. These disorders affect the retina, which is the light-sensitive tissue lining the back of the eye, in which the first stages of seeing take place. In RP, sight loss is gradual and progressive. It is unusual for people with RP to become totally blind as most retain some useful vision well into old age.

## S

**Secondary glaucoma:** Both open-angle and angle-closure glaucoma can be classified as primary or secondary. Secondary glaucoma develops as a complication of another medical condition or injury. In rare cases, secondary glaucoma is a complication following another type of eye surgery.

**Sensitivity to form:** Visual sharpness (far and near) view field.

**Sensitivity to light:** Adaptation to the light and darkness.

**Sensitivity to colour:** Perception of the colours.

**Sclera:** The white visible portion of the eyeball. The muscles that move the eyeball are attached to the sclera.

**Scleritis:** It is presented with severe, boring ocular pain which may also involve the adjacent head and facial regions. The scleral vessels are significantly dilated, as are the overlying vessels of the episclera and bulbar conjunctiva. The affected eye may be so injected in some cases that the eye takes on a deep red, almost purple, hue.

**Scotoma:** An area of partial or complete loss of vision surrounded by an area of normal vision.

**Slit lamp:** A microscope with attached lighting for the examination of outer and inner eye structures

**Snellen eye chart:** Chart used to measure visual acuity. A series of letters are arranged in lines. The bottom of the chart typically begins with a line of very small letters that grow in size with each line until, finally, the standard "big E" can be seen at the top of the chart. Variations of the Snellen eye chart can include letter E's facing in different directions.

**Spots:** (often called floaters) are small, semi-transparent or cloudy specks or particles within the vitreous, the clear, jelly-like fluid that fills the inside of the eyes. They appear as specks of various shapes and sizes, threadlike strands or cobwebs. Since they are within your eyes, they move as your eyes move and seem to dart away when you try to look at them directly.

**Stereopsis:** Ability to perceive three-dimensional depth.



**Stereoscopic vision:** The vision process involved in the use of a stereoscope, which presents an image from two slightly different angles so that the eyes can merge them into a single image in three dimensions.

**Strabismus:** Strabismus is the medical term relating to a misalignment of the eyes. It is a lack of coordinated muscle movement or focusing ability between the eyes, causing the eyes to point in different directions. Also known as *squint* or *crossed eye*

**Styes: Inflammation of one of Zeis's glands due to a staphylococcus infection, causing a small pustule inside the eyelid. Infection in a lash hair follicle. Styes required an antibiostic treatment.**

**Subcapsular cataract:** It begins at the back of the lens. People with diabetes, high [farsightedness](#), [retinitis pigmentosa](#) or those taking high doses of steroids may develop a subcapsular cataract.

**Suspensory ligament of lens:** a series of fibers that connect the ciliary body of the eye with the lens, holding it in place.

## T

**Tonometer:** A device used to measure eye pressure

**Tonometry:** A test to measure intraocular pressure for glaucoma.

**Toxic conjunctivitis:** It is a syndrome that results when the palpebral and bulbar conjunctiva have been chronically exposed to any number or combinations of foreign substances. The process may occur unilaterally or bilaterally, depending upon exposure. It includes the presentation of ocular itching, burning and tearing, injection of the bulbar and palpebral conjunctivae, chemosis, along with inferior and or superior eyelid follicle and papillae formation, and an absence of preauricular lymphadenopathy.

**Trabeculoplasty:** In this, most common type of laser surgery to treat open-angle glaucoma, a laser is used to place "spot welds" in the drainage area of the eye (known as the trabecular meshwork) which allows fluid to drain more freely.

**Trachoma:** Serious infectious Keratoconjunctivitis.

**Trial frame and lens:** A device which provides precise vision correction.

**Trichiasis:** Inversion of the eyelids in a way that the cornea is touched.

## U

**Ultraviolet Radiation:** During the 19<sup>th</sup> century, scientists discovered that beyond the violet end of the spectrum radiation could be detected that was invisible to the human eye but that had marked photochemical action.

**Uvea:** It includes the iris; the ciliary's body and the choroids.

**Uveitis:** Inflammation of the uvea. It can be painful and may cause light sensitivity, floaters, and blurred vision.

## V

**Vernal Keratoconjunctivitis:** It is a chronic, bilateral inflammation of the superior and limbal palpebral conjunctiva. The warmer the climate, the greater its prevalence. Onset typically occurs between ages 3 and 25 years. Males typically are affected more than females.

**Viral conjunctivitis:** It is caused by airborne respiratory droplets or direct transfer from one's fingers to the conjunctival surface of the eyelids. After an incubation period of five to 12 days, the disease enters the acute phase, causing watery discharge, conjunctival hyperemia and follicle formation. Lymphoid follicles are elevated, with avascular lesions ranging from 0.2 to 2mm in size. They have lymphoid germinal centers that have responded to an infectious agent.

**Vision:** The process by which light is perceived. When the rod and cone cells of the retina are exposed to light, ranging in wavelengths from violet, about 4000 angstrom units, to nearly 7500 angstrom units, a chemical reaction takes place, causing discharge of a nervous impulse. This impulse reaches the brain, and creates in the conscious mind, the sensation of light.

**Visual acuity:** The clearness of vision, which depends upon the sharpness of the retinal image. Also called *eyesight*

**Visual acuity test:** The common eye chart test (see right), which measures vision ability at various distances.

**Visual Coordination:** A test for eye coordination and muscle control.

**Visual Field:** The area or extent of space visible to an eye in a given position of gaze. There is central visual field that is directly in front of us, the target at which we are looking and a peripheral visual field, which we perceive as our “side vision”. The fields of each eye partly overlap. We do not perceive the blind spot from each eye because the area that is missing in one eye is present in the other.

**Visual impairment:** Blindness or partial sight. It is when the distance visual acuity is reduced to 3/60 or less, or 6/60 or less.

**Vitrectomy:** A type of procedure that involves removing the cloudy vitreous (the clear, jelly-like substance that fills the center of the eye) and replacing it with a salt solution. It is particularly effective in persons with insulin-dependent diabetes, who may be at a greater risk of blindness due to a hemorrhage in the eye.

**Vitreous:** The gel like transparent fluid substance filling the posterior four fifths of the globe between the crystalline lens and retina.

**Vitreous body:** A clear, jelly-like substance that fills the center of the eye.

## W

**Wachendorf membrane:** Pupillary membrane; cell membrane.

**Wall-eye:** Exotropia. Absence of colour in the iris, or leukemia of the cornea.

**Wernicke reaction:** A reaction due to damage of the optic tract, consisting In loss of pupillary constriction when the light is directed to the blind side of the retina; pupillary constriction is maintained when light stimulates the normal side.

**Westphal pupillary reflex:** Eye-closure pupil reaction.

**Whiplash retinopathy:** An injury to the retina caused by a sudden acceleration/deceleration injury.

**White limbal girdle of Vogt:** Symmetric arcuate yellow-white deposits in the peripheral cornea often seen in patients over age forty.

**Wink reflex:** General term for reflex closure of eyelids caused by any stimulus.

## X

**Xanthelasma:** Fatty deposits in the skin at the inner aspect of the eye.

**Xanthomatosis bulbi:** Ulcerative fatty degeneration of the cornea after injury.

**Xerophthalmia:** Excessive dryness of the conjunctiva and cornea, which lose their luster and become keratinized; may be due to local disease or to a systemic deficiency of vitamin A. Also called *Xeroma* .

## Z

**Zone ophthalmic:** Herpes Zoster in the distribution of the ophthalmic nerve.

**Zonular cataract:** Lamellar cataract.

**Zonular spaces:** The spaces between the fibers of the ciliary zonule at the equator of the lens of the eye.

**Zonule:** Wound of the thinner tissues which are extended from the ciliary's processes to the crystallines.

**Zonulitis:** Inflammation of the zonule of Zinn, or suspensory ligament of the lens of the eye.

**Zonulolysis:** Destruction of the zonule with substances like chymotrypsin to facilitate the extraction of the crystalline in cataract surgery.