

The Eye

Course

Medical
Terminology

Unit XI

The Special
Senses

Essential Question

What medical
terms are
associated with
the Special
Senses?

TEKS

130.203 (c)
(1) (A), (B), (E)
(2)(B)
(4) (A), (B)

Prior Student Learning

None

Estimated time
2 hours

Rationale

Healthcare professionals must have a comprehensive medical vocabulary in order to communicate effectively with other health professionals. They should be able to use terminology of the eye to discuss common conditions and diseases.

Objectives

Upon completion of this lesson, the learner should be able to:

- Define and decipher common terms associated with the eye
- Identify the basic anatomy of the eye
- Analyze unfamiliar terms using the knowledge of word roots, suffixes and prefixes gained in the course
- research diseases and disorders which involve the eye

Engage

Use the website howstuffworksvideos.com to show a video clip of cataract surgery. Explain that they will be learning medical terms associated with the human eye in this lesson.

Key Points

I. Special Senses

- A. Allows the human body to react to the environment
- B. Allows the body to see, hear, taste, smell, touch and to maintain balance
- C. These senses are found in well-defined regions of the body
- D. Senses occur because the body has structures that receive the sensation, nerves that carry the sensory message to the brain, and a brain that can interpret and respond to the message

II. General Senses

- A. Various senses scattered throughout our body in various regions
- B. Heat, cold, pain, nausea, hunger, thirst, and pressure or deep touch

III. Common Sense

- A. Intuition
- B. Just knowing how to do a certain task
- C. What are we born knowing?
- D. Instinct

IV. Eye

- A. Organ that controls the special sense of sight
- B. Receives light rays and transmits the rays to the optic nerve, which carries the rays to the brain where they are interpreted as vision or sight

- V. Vision
 - A. Good Vision
 - 1. Adds to the quality of our life
 - 2. Contributes to one's independence
 - B. Challenged Vision
 - 1. Impacts our sense of well-being and independence
 - 2. More than 11 million Americans have a vision problem that is not improved with corrective lenses
- VI. Protection of the eye
 - A. Partially enclosed in a bony socket of the skull
 - B. Eye lids and lashes help keep out dirt and pathogens
 - C. Lacrimal glands produce tears
- VII. Tears
 - A. Produced by the Lacrimal glands
 - B. Constantly moisten and cleanse the eye
 - C. Tears flow across eye and drain through the Lacrimal duct into the nasal cavity
- VIII. Conjunctiva
 - A. Mucous membrane that protects the eye
 - B. Lines the eyelids and covers the front of the eye
 - C. Provides protection and lubrication
- IX. Sclera
 - A. Outermost layer
 - B. Tough connective tissue
 - C. Frequently referred to as the white of the eye
 - D. Maintains the shape of the eye
 - E. Extrinsic muscles, responsible for moving the eye within the socket are attached to the outside of the sclera
 - F. Contains the cornea: a circular transparent part on the front of the sclera that allows light rays to enter the eye
- X. Choroid coat
 - A. Middle layer of the eye
 - B. Dark blue vascular layer of the eye between the sclera and retina
 - C. Interlaced with many blood vessels that nourish the eyes
 - D. Pupil
 - 1. Hole in the front of the choroid coat
 - 2. Allows light rays to enter the eye
 - E. Iris
 - 1. Special part of the choroid coat
 - 2. Colored portion of the eye
 - 3. It is a muscle that controls the size of the pupil and regulates the amount of light entering the eye
- XI. Retina
 - A. Innermost layer of the eye
 - B. Made of many layers of nerve cells that transmit the light impulses to the optic nerve

- C. It is a delicate membrane, which continues posterior and joins to the optic nerve
 - D. Two special types of light-sensing cells are in the retina; they contain photo pigments, which cause a chemical change when light hits them
 - 1. Cones: used mainly for light vision
 - 2. Are sensitive to color; located in a depression on the back surface of the retina called the fovea centralis, the area of sharpest vision
 - 3. There are about 3 million cones
 - 4. The human eye can see about 7 million shades of color
 - E. Rods
 - 1. Provide black and white images
 - 2. About 100 million rods
- XII. Lens
- A. Circular structure located behind the pupil
 - B. Suspended in position by ligaments
 - C. Refracts or bends light rays so the rays will focus on the retina
- XIII. Aqueous humor
- A. Clear, watery fluid
 - B. Fills the space between the cornea and iris
 - C. Helps maintain the forward curvature of the eyeball
 - D. Bends or refracts light rays
- XIV. Vitreous humor
- A. Jelly-like substance
 - B. Fills the area behind the lens
 - C. Helps maintain the shape of the eyeball
 - D. Also bends or refracts light rays
 - E. Series of muscles located in the eye provide for eye movement
- XV. Refraction of light rays
- A. When light rays enter the eye they pass through a series of parts that bend or refract the rays
 - B. Allows the rays to focus on the retina
 - C. Rays pass through the cornea, the aqueous humor, the pupil, the lens, and the vitreous humor to focus on the retina
 - D. In the retina, the rays or images are picked up by the rods and cones, changed into nerve impulses, and transmitted by the optic nerves to occipital lob of cerebrum, where sight is interpreted
 - E. If rays are not refracted correctly by the various parts, vision can be distorted or blurred

XVI. Vocabulary

Term	Meaning
Accommodation	Normal adjustment of the eye to focus on objects from far to near.
Anterior chamber	Area behind the cornea and in front of the lens and iris.
Aqueous humor	Fluid produced by the ciliary body and found in the anterior chamber
Biconvex	Consisting of two surfaces that are rounded, elevated, and curved evenly, like part of a sphere.
Choroid	Middle, vascular layer of the eye, between the retina and the sclera.
Ciliary body	Structure surrounding the lens that connects the choroid and iris
Cone	Photoreceptor cell in the retina that transforms light energy into a nerve impulse
Conjunctiva	Delicate membrane lining the undersurface of the eyelids and covering the anterior eyeball
Cornea	Fibrous transparent layer of clear tissue that extends over the anterior portion of the eyeball
Fovea centralis	Tiny pit or depression in the retina that is the region of clearest vision.
Fundus of the eye	Posterior, inner part of the eye
Iris	Pigmented (colored) layer that opens and closes to allow more or less light into the eye
Lens	Transparent, biconvex body behind the pupil of the eye
Macula	Yellowish region on the retina, lateral to and slightly below the optic disc; contains the fovea centralis, which is the area of clearest vision
Optic chiasm	Point at which optic nerve fibers cross in the brain
Optic disc	Region at the back of the eye where the optic nerve meets the retina
Optic nerve	Cranial nerve carrying impulses from the retina to the brain
Pupil	Central opening of the eye, surrounded by the iris, through which light rays pass
Refraction	Bending of light rays by the cornea, lens, and fluids of the eye to bring the rays into focus on the retina
Retina	Light-sensitive nerve cell layer of the eye containing photoreceptor cells (rods and cones)

Rod	Photoreceptor cell of the retina essential for vision in dim light and for peripheral vision
Sclera	Tough, white outer coat of the eyeball
Thalamus	Relay center of the brain. Optic nerve fibers pass through the thalamus on their way to the cerebral cortex
Vitreous humor	Soft, jelly-like material behind the lens in the vitreous chamber; helps maintain the shape of the eyeball

XVII. Combining forms

Combining form	Meaning	Example of term
aque/o	Water	Aqueous humor
blephar/o	Eyelid	Blepharitis
conjunctiv/o	Conjunctiva	Conjunctivitis
cor/o	Pupil	Anisocoria
corne/o	Cornea	Corneal abrasion
cycl/o	Ciliary body or muscle of the eye	cycloplegic
dacry/o	Tears, tear duct	Dacryoadenitis
ir/o, irid/o	Iris	Iritis
Kerat/o	Cornea	Keratitis
Lacrim/o	Tears	Lacrimal
Ocul/o	Eye	Intraocular
Ophthalm/o	Eye	Ophthalmologist
Opt/o, optic/o	Eye, vision	Optic
Palpebr/o	Eyelid	Palpebral
Papill/o	Optic disc; nipple-like	Papilledema
Phac/o, phak/o	Lens of the eye	Phacoemulsification
Pupill/o	Pupil	Pupillary
Retin/o	Retina	Retinitis
Sclerao	Sclera; hard	Corneoscleral
Uve/o	Uvea	Uveitis
Vitre/o	Glassy	Vitreous humor

XVIII. Combining forms- conditions

Combining form	Meaning	Example of term
Ambly/o	Dull, dim	Amblyopia
Dipl/o	Double	Diplopia
Glauc/o	Gray	Glaucoma
Mi/o	Smaller, less	Miosis
Mydr/o	Widen, enlarge	Mydriasis
Nyct/o	Night	Nyctalopia

Phot/o	Light	Photophobia
Presby/o	Old age	Presbyopia
Scot/o	Darkness	Scotoma
Xer/o	Dry	Xerophthalmia

XIX. Suffixes

Suffix	Meaning	Example of term
-opia	Vision	Hyperopia
-opsia	Vision	Hemianopsia
-tropia	To turn	Esotropia

XX. Pathology

Condition	Description
Blepharitis	Inflammation of eyelid, causing redness, crusting and swelling along lid margins
Cataract	Clouding of the lens, causing decreased vision
Chalazion	Small, hard, cystic mass on the eyelid
Dacryocystitis	Blockage, inflammation and infection of a nasolacrimal duct and lacrimal sac, causing redness and swelling in the region between the nose and the lower lid
Diabetic retinopathy	Retinal effects of diabetes mellitus: include microaneurysms, hemorrhages, dilation of retinal veins, and neovascularization
Ectropion	Outward sagging and eversion of the eyelid, leading to improper lacrimation and corneal drying and ulceration
Entropion	Inversion of the eyelid, causing the lashes to rub against the eye; corneal abrasion may result
Glaucoma	Increased intraocular pressure: results in damage to the retina and optic nerve with loss of vision.
Hordeolum (sty)	Localized, purulent, inflammatory staphylococcal infection of a sebaceous gland in the eyelid
Macular degeneration	Progressive damage to the macula of the retina
Nystagmus	Repetitive rhythmic movements of one or both eyes
Ptosis	Dropping of upper lid margin as a result of neuromuscular problems or trauma
Retinal detachment	Two layers of the retina separate from each other
Strabismus	Abnormal deviation of the eye
Xanthelasma	Raised yellowish plaque on eyelid caused by lipid disorder

- XXI. Amblyopia
 - A. Lazy eye
 - B. Commonly occurs in early childhood
 - C. Results in poor vision in one eye caused by the dominance of the other eye
 - D. Treatment:
 - 1. Covering good eye to stimulate development of the lazy eye
 - 2. Exercises that strengthen the weak eye
 - 3. Corrective lenses and surgery
 - E. If not treated before 8-9 years of age, blindness of the affected eye may occur
- XXII. Astigmatism
 - A. Abnormal shape of curvature of the cornea that causes blurred vision
 - B. Corrective lenses correct the condition
- XXIII. Cataract
 - A. Normally clear lens becomes cloudy or opaque
 - B. Occurs gradually and is usually a result of aging, but may be the result of trauma
 - C. Symptoms included
 - 1. Blurred vision and halos around lights
 - 2. Gradual loss of vision
 - 3. Milky white pupil in later stages
 - D. Treatment
 - 1. Surgical removal of the lens
 - 2. Implanting of an intraocular lens or prescribing glasses or contacts lenses corrects the vision and compensates for the removed lens
- XXIV. Conjunctivitis or pink eye
 - A. Contagious inflammation of the conjunctiva
 - B. Usually caused by a bacteria or virus
 - C. Symptoms include redness, swelling, pain and pus formation
 - D. Treatment: antibiotics, frequently as eye ointment
- XXV. Glaucoma
 - A. Condition resulting from an increased intraocular pressure
 - B. Caused by an excess amount of aqueous humor
 - C. Common after age 40 and a leading cause of blindness
 - D. Tonometer, an instrument for measuring intraocular pressure, is usually used during every eye examination to check for this condition
 - E. Symptoms
 - 1. Loss of peripheral vision
 - 2. Halos around lights
 - 3. Limited night vision and mild aching
 - F. Treatment
 - 1. Controlled with medications that decrease amount of

- fluid produced or improve drainage
2. In severe cases, surgery to create an opening for the flow of aqueous humor

XXVI. Errors of Refraction

Term	Description
Astigmatism	Defective curvature of the cornea or lens of the eye
Hyperopia	Farsightedness
Myopia	Nearsightedness
Presbyopia	Impairment of vision as a result of old age

XXVII. Hyperopia or farsightedness

- A. Occurs when light rays are not refracted properly and the image focuses behind the retina
- B. Difficulty seeing things close up
- C. Vision is corrected by the use of convex lenses

XXVIII. Myopia or nearsightedness

- A. Occurs when light rays are refracted too sharply
- B. Difficulty seeing things far off
- C. Vision is corrected by the use of concave lenses
- D. Surgery can also be used to correct myopia

XXIX. Presbyopia

- A. Farsightedness caused by a loss of elasticity in lens
- B. Occurs as a result of the normal aging process
- C. Treated with corrective lenses or “reading glasses”

XXX. Strabismus

- A. Condition in which eyes do not move or focus together
- B. Eyes may move inward (cross-eyed), outward, or up or down
- C. Caused by muscle weakness in one or both eyes
- D. Treatment includes eye exercises, covering the good eye, corrective lenses, and surgery on muscles moving the eye

XXXI. Abbreviations

Abbreviation	Definition
AMD	Age-related macular degeneration
HEENT	Head, eyes, ears, nose, and throat
IOL	Intraocular lens
IOP	Intraocular pressure
LASIK	Laser in situ keratomileusis
OD	Right eye
OS	Left eye
OU	Both eyes
PERRLA	Pupils equal, round, reactive to light and accommodation

POAG	Primary open-angle glaucoma
PRK	Photorefractive keratectomy (A laser beam flattens the cornea to correct myopia)
VA	Visual acuity
VF	Visual field

XXXII. Diagnostic procedures

Procedure	Description
Fluorescein angiography	Intravenous injection of fluorescein followed by serial photographs of the retina through dilated pupils
Ophthalmoscopy	Visual examination of the interior of the eye
Slit lamp microscopy	Examination of anterior ocular structures under microscopic magnification
Visual acuity test	Clarity of vision is assessed (usually with a Snellen chart at 20 feet)
Visual field test	Measurement of the area within which objects are seen when the eyes are fixed, looking straight ahead without movement of the head

XXXIII. Treatment procedures

Procedure	Description
Enucleation	Removal of the entire eyeball
Keratoplasty	Surgical repair of the cornea
Laser photocoagulation	Intense, precisely focused light beam creates an inflammatory reaction that seals retinal tears and leaky retinal blood vessels
LASIK	Use of an excimer laser to correct errors of refraction (myopia, hyperopia and astigmatism)
Phacoemulsification	Ultrasonic vibrations break up the lens, which then is aspirated through the ultrasonic probe
Sclera buckle	Suture of a silicone band to the sclera over a detached portion of the retina
Vitrectomy	Removal of the vitreous humor

Activity

- I. Make flash cards of ear terms and practice putting the terms together with prefixes and suffixes to make new terms
- II. Complete the Eye Terms Worksheet
- III. Complete the Eye Vocabulary Worksheet
- IV. Review media terms with the students using review games such as the “Fly Swatter Game” or the “Flash Card Drill” (see the Medical Terminology

Activity Lesson Plan --

http://texashste.com/documents/curriculum/principles/medical_terminology_activities.pdf)

V. Research and report on diseases and disorders of the Eye

Assessment

Successful completion of the activities

Materials

Medical Terminology book

List of Eye terms

Index cards

Markers

Accommodations for Learning Differences

For reinforcement, the student will practice terms using flash cards of the ear.

For enrichment, the student will research and report on the schooling necessary to become an optometrist and an ophthalmologist.

National and State Education Standards

National Healthcare Foundation Standards and Accountability Criteria:

Foundation Standard 2: Communications

2.21 Use roots, prefixes, and suffixes to communicate information

2.22 Use medical abbreviations to communicate information

TEKS

130.203 (c) (1) The student recognizes the terminology related to the health science industry. The student is expected to:

- (A) identify abbreviations, acronyms, and symbols;
- (B) identify the basic structure of medical words;
- (E) recall directional terms and anatomical planes related to the body structure

130.203 (c) (2) (B) employ increasingly precise language to communicate

130.203 (c) (4) The student interprets medical abbreviations. The student is expected to:

- (A) distinguish medical abbreviations used throughout the health science industry; and
- (B) translate medical abbreviations in simulated technical material such as physician progress notes, radiological reports, and laboratory reports

Texas College and Career Readiness Standards

English and Language Arts,

Understand new vocabulary and concepts and use them accurately in reading, speaking, and writing.

1. Identify new words and concepts acquired through study of their relationships

to other words and concepts.

2. Apply knowledge of roots and affixes to infer the meanings of new words.

3. Use reference guides to confirm the meanings of new words or concepts.

Cross-Disciplinary Standards,

I. Key Cognitive Skills D. Academic Behavior: 1. Self monitor learning needs and seek assistance when needed, 3. Strive for accuracy and precision, 4. Persevere to complete and master task. E. Work habits: 1. Work independently, 2. Work collaboratively

II. Foundation Skills A. 2. Use a variety of strategies to understand the meaning of new words. 4. Identify the key information and supporting details.

Vocabulary – The Eye

In the right column, write the meaning of the term

Term	Meaning
Accommodation	
Anterior chamber	
Aqueous humor	
Biconvex	
Choroid	
Ciliary body	
Cone	
Conjunctiva	
Cornea	
Fovea centralis	
Fundus of the eye	
Iris	
Lens	
Macula	
Optic chiasm	
Optic disc	
Optic nerve	
Pupil	
Refraction	
Retina	
Rod	
Sclera	
Thalamus	
Vitreous humor	

Combining Forms

Write the meaning of the term in the center column and give an example of a term using the combining form

Combining form	Meaning	Example of term
aque/o		
blephar/o		
conjunctiv/o		
cor/o		
corne/o		
cycl/o		
dacry/o		
ir/o, irid/o		
Kerat/o		

Lacrim/o		
Ocul/o		
Ophthalm/o		
Opt/o, optic/o		
Palpebr/o		
Papill/o		
Phac/o, phak/o		
Pupill/o		
Retin/o		
Sclerao		
Uve/o		
Vitre/o		

Combining Forms: Conditions

Write the meaning of the term in the center column;
give an example of a term using the combining form

Combining form	Meaning	Example of term
Ambly/o		
Dipl/o		
Glauc/o		
Mi/o		
Mydr/o		
Nyct/o		
Phot/o		
Presby/o		
Scot/o		
Xer/o		

Suffixes

Write the meaning of the suffix in the center column;
give an example of a term using the suffix

Suffix	Meaning	Example of term
-opia		
-opsia		
-tropia		

Abbreviations

Write the meaning of the abbreviation in the right column

Abbreviation	Definition
AMD	
HEENT	
IOL	
IOP	
LASIK	
OD	
OS	
OU	
PERRLA	
POAG	
PRK	
VA	
VF	

Errors of Refraction

Write the meaning of the abbreviation in the right column

Term	Description
Astigmatism	
Hyperopia	
Myopia	
Presbyopia	

Pathology of the Eye and Eyelid Abnormalities

Write the description of the condition in the right column

Condition	Description
Blepharitis	
Cataract	
Chalazion	
Dacryocystitis	
Diabetic retinopathy	
Ectropion	
Entropion	

Glaucoma	
Hordeolum (sty)	
Macular degeneration	
Nystagmus	
Ptosis	
Retinal detachment	
Strabismus	
Xanthelasma	

Diagnostic Procedures

Write the description of the procedure in the right column

Procedure	Description
Fluorescein angiography	
Ophthalmoscopy	
Slit lamp microscopy	
Visual acuity test	
Visual field test	

Treatment Procedures

Write the description of the procedure in the right column

Procedure	Description
Enucleation	
Keratoplasty	
Laser photocoagulation	
LASIK	
Phacoemulsification	
Sclera buckle	
Vitrectomy	

Vocabulary – The Eye

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Ciliary body	Structure surrounding the lens that connects the choroid and iris
Cone	Photoreceptor cell in the retina that transforms light energy into a nerve impulse
Conjunctiva	Delicate membrane lining the undersurface of the eyelids and covering the anterior eyeball
Cornea	Fibrous transparent layer of clear tissue that extends over the anterior portion of the eyeball
Fovea centralis	Tiny pit or depression in the retina that is the region of clearest vision
Fundus of the eye	Posterior, inner part of the eye
Iris	Pigmented (colored) layer that opens and closes to allow more or less light into the eye
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Optic disc	Region at the back of the eye where the optic nerve meets the retina
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Sclera	Tough, white outer coat of the eyeball
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cycl/o	Ciliary body or muscle of the eye	Cycloplegic
dacry/o	Tears, tear duct	Dacryoadenitis
ir/o, irid/o	Iris	Iritis
Kerat/o	Cornea	Keratitis
Lacrim/o	Tears	Lacrimonal
Ocul/o	Eye	Intraocular
Ophthalm/o	Eye	Ophthalmologist
Opt/o, optic/o	Eye, vision	Optic
Palpebr/o	Eyelid	Palpebral
Papill/o	Optic disc; nipple-like	Papilledema
Phac/o, phak/o	Lens of the eye	Phacoemulsification
Pupill/o	Pupil	Pupillary
Retin/o	Retina	Retinitis
Sclerao	Sclera; hard	Corneoscleral
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VA	Visual acuity
VF	Visual field

Errors of Refraction

Term	Description
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Hyperopia	Farsightedness
Myopia	Nearsightedness
Presbyopia	Impairment of vision as a result of old age

Pathology of the Eye and Eyelid Abnormalities

Condition	Description
Blepharitis	Inflammation of eyelid: causes redness, crusting and swelling along lid margins
Cataract	Clouding of the lens, causing decreased vision
Chalazion	Small, hard, cystic mass on the eyelid
Dacryocystitis	Blockage, inflammation and infection of a nasolacrimal duct and lacrimal sac, causing redness and swelling in the region between the nose and the lower lid
Diabetic retinopathy	Retinal effects of diabetes mellitus: include microaneurysms, hemorrhages, dilation of retinal veins, and neovascularization
Ectropion	Outward sagging and eversion of the eyelid, leading to improper lacrimation and corneal drying and ulceration

Entropion	Inversion of the eyelid, causing the lashes to rub against the eye; corneal abrasion may result
Glaucoma	Increased intraocular pressure results in damage to the retina and optic nerve with loss of vision
Hordeolum (sty)	Localized, purulent, inflammatory staphylococcal infection of a sebaceous gland in the eyelid
Macular degeneration	Progressive damage to the macula of the retina
Nystagmus	Repetitive rhythmic movements of one or both eyes
Ptosis	Dropping of upper lid margin as a result of neuromuscular problems or trauma
Retinal detachment	Two layers of the retina separate from each other
Strabismus	Abnormal deviation of the eye
Xanthelasma	Raised yellowish plaque on eyelid caused by lipid disorder

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Procedure	Description
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Visual field test	Measurement of the area within which objects are seen when the eyes are fixed, looking straight ahead, without movement of the head.

Treatment Procedures

Procedure	Description
Enucleation	Removal of the entire eyeball
Keratoplasty	Surgical repair of the cornea
Laser photocoagulation	Intense, precisely focused light beam creates an inflammatory reaction that seals retinal tears and leaky retinal blood vessels
LASIK	Use of an excimer laser to correct errors of refraction (myopia, hyperopia and astigmatism)
Phacoemulsification	Ultrasonic vibrations break up the lens, which then is aspirated through the ultrasonic probe
Sclera buckle	Suture of a silicone band to the sclera over a detached portion of the retina
Vitrectomy	Removal of the vitreous humor

Vision Terminology Worksheet

Write the meaning in the right column

Term	Meaning
blephar/o-	eyelid
blepharitis	
blepharoplasty	
blepharoplegia	
blepharoptosis	
blepharospasm	
blepharotomy	
blepharopyorrhea	
blepharadenitis, blepharoadenitis	
blepharectomy	
blepharedema	
blepharoadenoma	
blepharoatheroma	
palpebr/a-	Eyelid
palpebritis	
palpebral	
lacrim/o-	tear
lacrimal ducts	
lacrimal glands	
lacrimation	
dacry/o-	Tear
dacryoadenitis	
dacryocystorhinostenosis	
dacryadenalgia	
dacryoadenectomy	
dacryoma	
conjunctiv/o- conjunctiva	
conjunctivitis	
conjunctivoma	
conjunctivoplasty	
scler/o-	hard, "white of the eye" = sclera
sclerotomy	
scleroderma	
scleritis	
scleromalacia	

scleroplasty	
sclerotome	
corne/o-	cornea = transparent anterior coat of eye
corneitis	
corneal transplant	
kerat/o-	horny/cornea (transparent sclera)
keratitis	
keratomalacia	
keratometer	
keratometry	
keratomycosis	
keratoplasty	
keratotome	
keratopathy	
keratorrhesis	
keratoscope	
keratalgia	
keratectasis	
phak/o-	crystalline lens
phakitis	
phakolysis	
phakoma	
aphakia	
retin/o-	retina (internal coat of eyeball)
retinoscope	
retinoblastoma	
retinitis	
retinopathy, diabetic	
choroid-	choroid = vascular middle coat of eye
choroiditis	
choroidopathy	
uvea	second coat of eyeball
uveitis	
uveoplasty	
irid/o-	ir/o- iris (colored circle)
iridectomy	
iridemia	
iralgia, iridalgia	
iritis	
iridotomy	

iridopathy	
iridoplegia	
cor/- core/o-	pupil = opening of the iris
corectasia	
corectopia	
coreometer	
coreometry	
coreoplasty	
pupill/o-	pupil
pupillometer	
pupillometry	
pupilloplegia	
pupilloscopy	
ocul/o- o	eye
oculomycosis	
oculus dexter	
oculus uterque	
oculus sinister	
ophthalm/o-	eye
ophthalmic	
ophthalmologist	
ophthalmectomy	
ophthalmoneuritis	
ophthalmomalacia	
ophthalmoptosis	
ophthalmology	
ophthalmoscope	
ophthalmostat	
ophthalmoplasty	
ophthalmometer	
ophthalmoplegia	
ophthalmagra	
ophthalmoblennorrhea	
ophthalmomycosis	
ophthalmiatrics	
orb/-	circle (eyeball)
orbit	
orbital	
opt/o- optic/o-	eye/vision
optic, optical	

optesthesia	
optician	
optometrist	
optomyometer	
-opia	sight
diplopia	
nyctalopia	
hyperopia	
myopia	
phot/o-	Light
photophobia	
photalgia	
photopathy	
photodysphoria	
RELATED TERMS:	
sty	
Meibomian glands	
chalazion	
arcus	
anterior chamber	
aqueous humor	
glaucoma	
refraction	
cataract	
accommodation	
rods	
cones	
fovea	
astigmatism	
optic disk	

Vision Terminology-**Key**

Term	Meaning
blephar/o-	eyelid
blepharitis	Inflammation of hair follicles along the eyelids
blepharoplasty	Plastic surgery upon the eyelid
blepharoplegia	Paralysis of an upper lid
blepharoptosis	Drooping of the upper lid
blepharospasm	Twitching or spasmodic contraction of the orbicularis oculi
blepharotomy	Surgical incision of the eyelid
blepharopyorrhea	Purulent discharge from the eyelid
blepharadenitis, blepharoadenitis	Inflammation of the Meibomian glands
blepharectomy	Surgical incision of all or part of eyelid
blepharedema	Swelling of the eyelids
blepharoadenoma	Glandular tumor of the eyelids
blepharoatheroma	Sebaceous cyst of the eyelid
palpebr/a-	Eyelid
palpebritis	Inflammation of the eyelid
palpebral	Concerning an eyelid
lacrim/o-	tear
lacrimal ducts	Tear tucks (tubes)
lacrimal glands	Gland that secretes tears
lacrimation	Secretion and discharge of tears
dacry/o-	Tear
dacryoadenitis	Inflammation of the lacrimal gland
dacryocystorhinostenosis	Narrowing of the canal connection a lacrimal sac
dacryadenalgia	Pain in the lacrimal gland
dacryoadenectomy	Surgical removal of the lacrimal gland
dacryoma	Tumor of the lacrimal gland
conjunctiv/o- conjunctiva	Mucous membrane that lines eyelids
conjunctivitis	Inflammation of conjunctiva
conjunctivoma	Tumor of the conjunctiva
conjunctivoplasty	Removal of parts of the cornea, but replacing with flaps from the conjunctiva
scler/o-	hard, "white of the eye" = sclera
sclerotomy	Surgical incision of sclera
scleroderma	A condition, usually following an extreme infection, characterized by edema and induration of the skin
scleritis	Inflammation of the sclera
scleromalacia	A softening of the sclera

scleroplasty	Plastic surgery of the sclera
sclerotome	Knife used in incision of the sclera
corne/o-	cornea = transparent anterior coat of eye
corneitis	Inflammation of the cornea
corneal transplant	Implantation of the cornea
kerat/o-	horny/cornea (transparent sclera)
keratitis	Inflammation of the cornea
keratomalacia	Softening of the cornea
keratometer	Used for measuring the curves of the cornea
keratometry	Measurements of the cornea
keratomycosis	Fungal infection of the cornea
keratoplasty	Corneal grafting
keratotome	Knife for incising the cornea
keratopathy	Any disease of the cornea
keratorrhesis	Corneal rupture
keratoscope	Used for examining the cornea
keratalgia	Pain in the cornea
keratectasis	Conical protrusion of the cornea
phak/o-	crystalline lens
phakitis	Inflammation of the crystal lens
phakolysis	Disintegration or removal of the crystalline lens
phakoma	Microscopic grey white tumor in the retina
aphakia	Absence of the crystalline lens of the eye
retin/o-	retina (internal coat of eyeball)
retinoscope	Instrument used to perform retinoscopy
retinoblastoma	Malignant glioma of the retina
retinitis	Inflammation of the retina
retinopathy, diabetic	Any disorder of the retina
choroid-	choroid = vascular middle coat of eye
choroiditis	Inflammation of the choroid
choroidopathy	Any disease of the choroid
uvea	second coat of eyeball
uveitis	Intraocular inflammatory disorder
uveoplasty	Reparative operation of the uvea
irid/o-	ir/o- iris (colored circle)
iridectomy	Surgical removal of a part of the iris
iridemia	Bleeding from the iris
iralgia, iridalgia	Pain felt in the iris
iritis	Inflammation of the iris
iridotomy	Incision of the iris without incising a portion

iridopathy	Disease of the iris
iridoplegia	Paralysis of the stricture of the iris
cor/- core/o-	pupil = opening of the iris
corectasia	Dilation of the pupil resulting from disease
corectopia	Having the pupil to one side of the iris
coreometer	Instrument for measurement of the pupil
coreometry	Measurement of the pupil
coreoplasty	Operation for artificial formation of pupil
pupill/o-	pupil
pupillometer	Device for measurement of the pupil
pupillometry	Measurement of the diameter of the pupil
pupilloplegia	Slow reaction of the pupil of the eye
pupilloscopy	Measurement of eye refraction by effect of light and shadow on the retina
ocul/o- o	eye
oculomycosis	Any disease of the eye caused by fungus
oculus dexter	OD The right eye
oculus uterque	OU Each eye
oculus sinister	OS Left eye
ophthalm/o-	eye
ophthalmic	Pertaining to the eye
ophthalmologist	Physician specializing in the eye
ophthalmectomy	Surgical excision of an eye
ophthalmoneuritis	Inflamed condition of the optic nerve
ophthalmomalacia	Abnormal shrinkage or softening of the eye
ophthalmoptosis	Protrusion of the eyeball
ophthalmology	The science dealing with the eye and disease
ophthalmoscope	Instrument for examining interior of the eye
ophthalmostat	Instrument used to hold the eye still during surgery
ophthalmoplasty	Ocular plastic surgery
ophthalmometer	Instrument for measuring error of refraction
ophthalmoplegia	Paralysis of ocular muscles
ophthalmagra	Sudden development of eye pain
ophthalmoblennorrhea	Purulent inflammation of the eye or conjunctiva
ophthalmomycosis	Any fungus disease of the eye
ophthalmiatrics	The treatment of eye disease
orb/-	circle (eyeball)
orbit	The bony pyramid-shape cavity of the skull that contains and protects the eye
orbital	Concerning the orbit

opt/o- optic/o-	eye/vision
optic, optical	To the eye or sight, to vision the eye or optics
optesthesia	Visual sensibility, perception of visual stimuli
optician	One who is a specialist in the making of optical apparatus
optometrist	A person trained and licensed to examine eyes
optomyometer	Instrument for determining strength of the eye muscles
-opia	sight
diplopia	Double vision
nyctalopia	A condition which the person can't see in faint light or at night
hyperopia	Farsightedness
myopia	Defect in vision in which parallel rays come to a front of the retina
phot/o-	Light
photophobia	Unusual intolerance of light
photalgia	Pain produced by light
photopathy	Pathologic effect caused by light
photodysphoria	Photophobia, unusual intolerance to light
RELATED TERMS:	
sty	Inflammatory swelling of one or more glands of the eyelid
Meibomian glands	Sebaceous glands between the tarsi and conjunctiva of eyelids
chalazion	A small, hard tumor of the eyelid
arcus	Arch
anterior chamber	Area of eye between lens and cornea
aqueous humor	Transparent liquid in eyes
glaucoma	A group of eye diseases characterized by increased intraocular pressure
refraction	Deflection from a straight path
cataract	An opacity of the lens
accommodation	Adjustment or adaption
rods	One of the sensory receptors that detects light
cones	One of the sensory receptors that detects light, receiving color stimuli
fovea	A pit or cuplike depression
astigmatism	Form of imperfect focus, in which refraction is spread over an area of retina instead of sharp focus
optic disk	To the eye or to sight