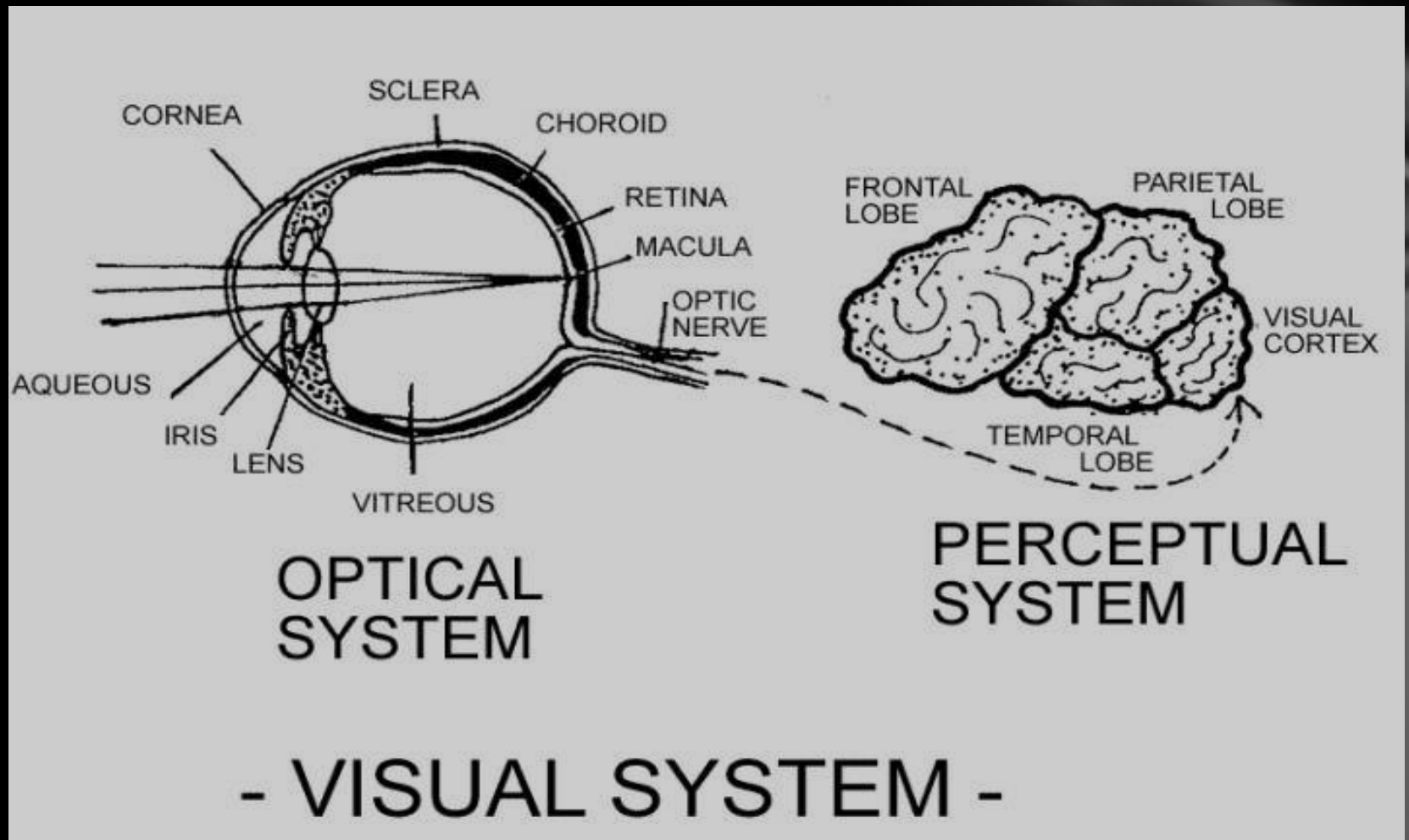


Eye Conditions and the Relation to Development

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Eye conditions can be the result of eye defects, brain defects and/or the communication between the two.



Congenital Eye Conditions

Albinism

It is a group of genetic conditions causing a lack of pigmentation. It can affect only the eyes (ocular albinism), or both the eyes and skin (oculocutaneous albinism). Visually it causes abnormal development of the retina and affects formation of the ocular-cerebral nerve pathways resulting in decreased visual acuity that cannot be corrected to 20/20.

Symptoms:

Decreased sharpness in vision (visual acuity)

Involuntary, irregular and rapid movement of the eye (Nystagmus)

Sensitivity to bright lights or glare (Photophobia)

Lazy eye (Amblyopia)

Functional blindness

Amblyopia

Vision development disorder in which an eye fails to achieve normal visual acuity. Also known as “lazy eye” and generally begins in infancy or early childhood.

Symptoms:

Eyes that turn in or out

Eyes that do not appear to work together

Inability to judge depth correctly

Poor vision in one eye

Cataracts

Eye condition signified by clouding of the lens of the eye preventing the light that comes into the eye from focusing correctly on the retina.

Symptoms:

Gray or white cloudiness of the pupil

Infant doesn't seem to be able to see (if cataracts are in both eyes)

Unusual rapid eye movements (Nystagmus)

"Red eye" glow of the pupil is missing in photos, or is different between the two eyes

No symptoms may be present if the cataract occurs only on one side or is not severe

Cortical Visual Impairment (CVI)

Eye condition resulting from a problem with the brain rather than the eye.
The degree of vision impairment can range from severe visual impairment to total blindness.

Symptoms:

Vision appears to be variable

May use peripheral vision more effectively than their central vision

Poor depth perception

Field of view may be limited

Problems with visual clutter or contrast

Glaucoma

A condition caused by incorrect development of the eye drainage system before birth. This causes pressure to build in the eye and damage the optic nerve.

Symptoms:

Unusually large eyes

Excessive tearing

Cloudy eyes

Light sensitivity

Vision loss

Myopia

A refractive error in which the eye does not bend or refract light correctly to a single focus to form a clear image. It is not an eye disease, but rather a focusing disorder where the individual can see objects near clearly, but they are blurred at a distance.

Symptoms:

Eye strain

Headaches

Difficulty seeing objects far away

Squinting to see properly

Nystagmus

An involuntary repetitive movement of the eyes. The movement can be horizontal, vertical or in a circular motion. It usually involves both eyes and can be slow or fast.

Symptoms:

Eye movement

Sensitivity to light

Dizziness

Difficulty seeing in darkness

Vision problems

Holding the head in a turned or tilted position

Retinitis Pigmentosa

Inherited eye disease that causes damage to the retina. It is usually diagnosed in childhood.

Symptoms:

Decreased vision at night or in low light

Loss of side (peripheral) vision, causing "tunnel vision"

Loss of central vision (in advanced cases)

Retinoblastoma

Cancer of the retina that can spread to other parts of the body if left untreated. It generally affects young children and can occur in one or both eyes.

Symptoms:

A white color in the center circle of the eye (pupil) when light is shone in the eye, such as when taking a flash photograph

Eyes that appear to be looking in different directions

Eye redness

Eye swelling

Acquired Eye Conditions

Cytomegaloviral Infection (CMV)

Infection that can be transmitted during pregnancy, after birth (through breastmilk) or acquired later generally by children or adults with compromised immune systems.

Symptoms (when affected at birth):

Yellow skin and eyes (jaundice)

Small size at birth (or low birth weight)

Enlarged and poorly functioning liver

Seizures

Retinopathy of Prematurity (ROP)

Eye disease that occurs in a small percentage of premature babies where abnormal blood vessels grow on the retina which may shrink and go away without treatment. In other cases, the vessels may continue to develop causing serious eye and vision problems.

Symptoms:

Myopia (nearsightedness)

Detachment of the retina

Amblyopia (lazy eye)

Strabismus (misaligned eyes)

Glaucoma (increased eye pressure)

Vision loss or blindness

Toxoplasmosis

Disease resulting from parasitic infection. Only a small number of babies who have toxoplasmosis show signs of the disease at birth. Without treatment, they may develop problems later in life.

Symptoms (in babies):

Seizures

An enlarged liver and spleen

Yellowing of the skin and whites of the eyes (jaundice)

Severe eye infections

Traumatic Brain Injury (TBI)

An acquired brain injury caused by sudden trauma. Causes of TBI can include falls, vehicle-related collisions, violence (shaken baby syndrome), sports injuries, explosive blasts and other combative injuries.

Symptoms (in children):

Change in eating or nursing habits

Persistent crying and inability to be consoled

Loss of interest in favorite toys or activities

Change in ability to pay attention

Change in sleep habits

Unusual or easy irritability

Resources

Books:

Pogrud, R.L., & Fazzi, D.L. (2002). *Early Focus: Working with Young Children Who Are Blind or Visually Impaired and Their Families*. New York, NY: AFB Press

Images

<http://www.mamc.amedd.army.mil/ophthalmology/images/visual-system.jpg>

Statistics

<http://www.dars.state.tx.us/ecis/reports/index.shtml>

<http://www.lighthouse.org/research/statistics-on-vision-impairment/prevalence-of-vision-impairment/#national>

General Information

<http://www.tsbvi.edu/curriculum-a-publications/1051-infants-and-toddlers-with-visual-impairments-by-virginia-bishop>

<http://blindbabies.org/learn/diagnoses-and-strategies/>

<http://www.tsbvi.edu/infants/3293-the-impact-of-visual-impairment-on-develop>

<http://www.pediatricservices.com/prof/prof-49.htm>

Albinism

<http://www.albinism.org/>

<http://www.medindia.net/patients/patientinfo/what-are-the-symptoms-of-albinism.htm>

Resources

Amblyopia

<http://www.allaboutvision.com/conditions/amblyopia.htm>

<http://www.nlm.nih.gov/medlineplus/ency/article/001014.htm>

Cataracts

<http://www.nlm.nih.gov/medlineplus/ency/article/001615.htm>

<http://www.lighthouse.org/about-low-vision-blindness/childrens-vision/pediatric-eye-disorders/congenital-cataracts/>

Cortical Visual Impairment (CVI)

<http://www.tsbvi.edu/seehear/fall98/cortical.htm>

http://en.wikipedia.org/wiki/Cortical_visual_impairment

Cytomegaloviral Infection (CMV)

<http://www.mayoclinic.com/health/cmV/DS00938>

<http://emedicine.medscape.com/article/963090-overview>

Glaucoma

<http://www.glaucoma.org/glaucoma/childhood-glaucoma-1.php>

<http://www.chop.edu/healthinfo/childhood-glaucoma.html>

Myopia

<http://www.geteyesmart.org/eyesmart/diseases/myopia.cfm>

Nystagmus

<http://www.geteyesmart.org/eyesmart/diseases/nystagmus.cfm>

<http://www.aapos.org/terms/conditions/8o>

Resources

Retinitis Pigmentosa

<http://www.allaboutvision.com/conditions/retinapigment.htm>

<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002024/>

Retinoblastoma

<http://www.mayoclinic.com/health/retinoblastoma/DS00786>

<http://www.cancer.org/cancer/retinoblastoma/detailedguide/index>

<http://www.ncbi.nlm.nih.gov/pubmed/11177067>

Retinopathy of Prematurity

<http://www.geteyesmart.org/eyesmart/diseases/retinopathy-prematurity.cfm>

http://www.lowvision.org/retinopathy_of_prematurityxx.htm

<http://www.webmd.com/parenting/baby/recognizing-developmental-delays-birth-age-2?page=2>

Toxoplasmosis

<http://www.mayoclinic.com/health/toxoplasmosis/DS00510>

http://www.marchofdimes.com/pregnancy/complications_toxoplasmosis.html

Traumatic Brain Injury

<http://www.mayoclinic.com/health/traumatic-brain-injury/DS00552/DSECTION=causes>

<http://www.cdc.gov/traumaticbraininjury/>

<http://www.ninds.nih.gov/disorders/tbi/tbi.htm>

<http://www.24-7pressrelease.com/press-release/childhood-tbis-can-cause-serious-developmental-delays-265503.php>