

Vision Concerns in Children with Hearing Loss

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Objectives

This session will:

- ➔ Define terms legally blind, low vision, and deaf-blind
- ➔ Identify the effects of cortical visual impairment
- ➔ List selected strategies to increase functional vision use
- ➔ Identify selected causes of and interventions for combined vision and hearing losses



Urgent Need for Vision Screening and Referral

- ➔ No universal newborn vision screening
- ➔ Vision provides a major avenue for learning
- ➔ Children with disabilities more at risk for VI than children without disabilities
- ➔ Vision provides significant access to information for children with hearing loss
- ➔ (See Fact Sheet on Visual Assessment)



High Risk Signs of Possible Visual Problem

- ➔ Eye structure or appearance
- ➔ Eye movements
- ➔ Head posture
- ➔ Response to visual stimuli
- ➔ Other



Unusual Responses to Visual Stimuli

- ➔ Reduced
- ➔ Absent
- ➔ Hypersensitive
- ➔ Self-stimulatory and repetitive



Causes of Hearing Loss & Visual Impairment

- ➔ TORCH
- ➔ Syndromes (Down, CHARGE, Usher)
- ➔ Multiple congenital anomalies
- ➔ Prematurity
- ➔ Post-natal causes





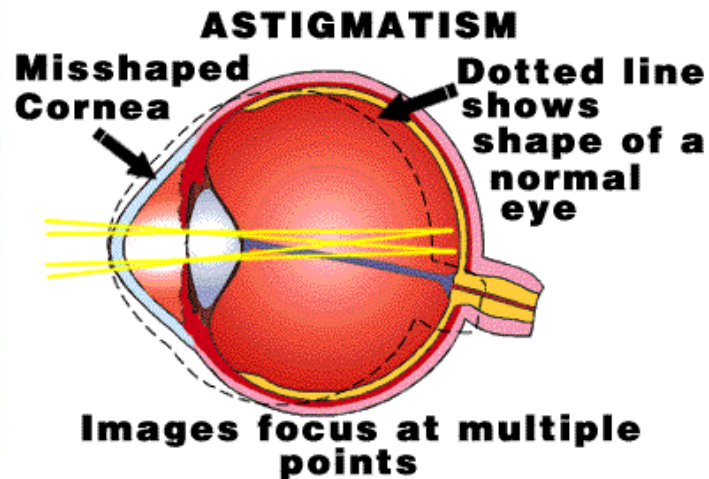
Definitions

- ➔ Legal blindness: visual acuity of 20/200 or less in better eye with correction or visual field of 20 degrees or less in better eye
- ➔ Low vision: visual acuity of 20/70 or less in better eye with correction
- ➔ Deaf-blind: combined visual impairment and hearing loss

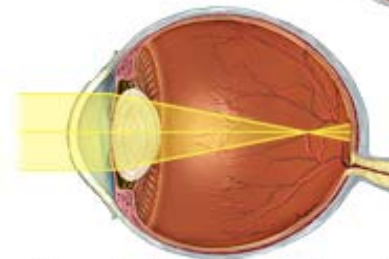
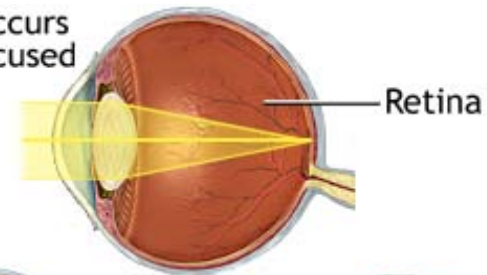
<https://nationaldb.org/library/list/8>

Refractive Errors

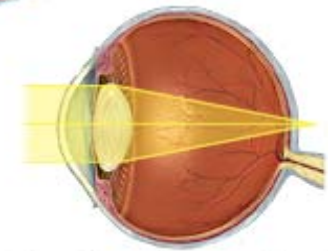
- Myopia (near sightedness)
- Hyperopia (far sightedness)
- Astigmatism



Normal vision occurs when light is focused directly on the retina rather than in front or behind it




Nearsightedness: visual image is focused in front of the retina



Farsightedness: visual image is focused behind the retina


ADAM.



Cortical Visual Impairment (CVI)

- ➔ Decreased visual response due to neurological problem in visual part of brain
- ➔ Normal eye exam or eye condition that cannot account for abnormal visual behavior

(American Association for Pediatric Ophthalmology and Strabismus)



Behavioral Characteristics of CVI

- ➔ Visual attention to color, movement, shiny/reflective materials
- ➔ Vision may vary from time to time
- ➔ Delayed response
- ➔ Difficulty with complexity
- ➔ Differences in visual field
- ➔ Difficulty with visual novelty
- ➔ Difficulty with listening and looking at the same time
- ➔ Difficulty with visually directed reach

Strategies

- ➔ Use color, movement, and reflective material
- ➔ Provide time to look and see
- ➔ Present target at different angles
- ➔ Use familiar targets
- ➔ Decrease visual complexity/clutter
- ➔ Avoid over stimulation
- ➔ Allow looking then reaching
- ➔ Use touch or sound to attract visual attention

(See Fact Sheet on CVI)



Influence of Combined Vision & Hearing Losses

- ➔ Social-emotional
- ➔ Communication, language and literacy
- ➔ Imitation and incidental learning
- ➔ Interaction with environment
- ➔ Orientation & mobility





Selected Interventions

- ➔ Sensitive and responsive caregiving
- ➔ Contingent experiences
- ➔ Communication input and output
- ➔ Tactile strategies

<http://www.projectsalute.net/Learned/Learnedhtml/Learnedmain.html#Articles>

- ➔ Routines-based interventions





Selected Resources

Pennsylvania Deaf-Blind Project

<http://www.pattan.net/category/Educational%20Initiatives/Deaf-Blind>

National Center on Deaf-Blindness

<https://nationaldb.org/>

FamilyConnect for parents of children with visual impairments

<http://www.familyconnect.org/parentsitehome.aspx>