

Common Names for Disorder:  
Blindness, Visually Impaired

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Causes/Etiology:

The major causes of blindness in children vary widely from region to region, being largely determined by socioeconomic development, and the availability of primary health care and eye care services. In high-income countries, lesions of the optic nerve and higher visual pathways predominate as the cause of blindness, while corneal scarring from measles, vitamin A deficiency, the use of harmful traditional eye remedies, ophthalmia neonatorum (a form of bacterial conjunctivitis contracted by newborns during delivery), and rubella cataract are the major causes in low-income countries. Retinopathy of prematurity is an important cause in middle-income countries. Other significant causes in all countries are congenital abnormalities, such as cataract, glaucoma, and hereditary retinal dystrophies.

Incidence:

The prevalence and magnitude ranges from about 3 per 10,000 children in affluent societies to 15 per 10,000 children in the poorest communities. Approximately 500,000 children become blind each year and 75% of the world's blind children live in developing countries.

Diagnostic Category:

IDEA: Classified under Visual Impairment (including blindness). Visual Impairment including blindness means impairment in vision that, even with correction, adversely affects a child's educational performance; this includes both partial and slight blindness.

DSM-IV: Childhood blindness does not have a DSM-IV diagnosis. Diseases of the eye can be diagnosed under Axis III as ICD-9 (General Medical Condition) as cataract (366.9), conjunctiva disorder (372.9), retinal detachment (361.9), glaucoma (365.9), optic neuritis (377.30), nystagmus (379.50), papilledema (377.00) or visual loss (369.9).

Characteristics:

Childhood blindness refers to a group of diseases and conditions occurring in childhood or early adolescence, which, if left untreated, result in blindness or severe visual impairment that are likely to be untreatable later in life. Blindness occurs mainly among children with low birth weight.

Low Vision- visual acuity of 20/70-20/400

Blind- visual acuity worse than 20/400

*Major Causes of Childhood Blindness in the U.S.*

<p><b>Amblyopia</b> (1-2% of childhood population)</p>	<p>Reduced vision in an eye that has not received adequate use during early childhood. Also known as "lazy eye," amblyopia has many causes. Most often it results from either a misalignment of a child's eyes, such as crossed eyes, or a difference in image quality between the two eyes (one eye focusing better than the other.) In both cases, one eye becomes stronger, suppressing the image of the other eye. If this condition persists, the weaker eye may become useless.</p>
<p><b>Strabismus</b> ((1-4% of childhood population)</p>	<p>A deviation of the eyes, used to describe eyes that are not straight or properly aligned. The misalignment results from the failure of the eye muscles to work together. One eye, or sometimes both, may turn in (crossed eyes), turn out (wall eyes), turn up or turn down. Sometimes more than one of the 'turns' are present.</p>
<p><b>Congenital Cataracts</b> (Leading cause of blindness for children under the age of 5, accounting for 16% of all cases)</p>	<p>Involves clouding of the lens of the eye that is present at birth.</p>
<p><b>Cortical Visual Impairment</b> (One of the major causes of visual handicap)</p>	<p>A temporary or permanent visual loss caused by disturbances of the posterior visual pathways and/or occipital lobes.</p>
<p><b>Glaucoma</b> (Infantile glaucoma occurs in 1 out of 10,000 live births)</p>	<p>Involves an elevation in pressure inside the eye that results from a buildup of excess fluid in the eye.</p>
<p><b>Optic Nerve Atrophy</b> (Accounts for 12% of all cases of legal blindness in children)</p>	<p>A permanent visual impairment caused by damage to the optic nerve.</p>
<p><b>Retinopathy of Prematurity</b></p>	<p>Characterized by the abnormal growth of blood vessels in the retina of premature infants.</p>

Deficits and Long-Term Developmental Outcomes:

Early onset blindness adversely affects psychomotor, social, and emotional development. Blind children have a lifetime of blindness ahead, which affects their opportunities for education, employment, and earning potential. Blind children have a higher death rate than their sighted counterparts.

### Assessment Approaches:

Optometrists and ophthalmologists can diagnose a variety of conditions by examining the eye. Blood tests and other eye disease detection equipment can also be used to detect diseases in the eyes that may cause blindness.

When considering educational assessment, the sensorimotor abilities of children with disabilities must be evaluated before administering any test. If a visual disability interferes with the child's ability to take certain subtests, those subtests should not be administered. For example, only the Verbal Scale subtests of the WISC-IV can be administered to children with visual impairment. Referrals of suspected visual impairment should be made to an eye specialist.

### Interventions and Treatment:

More than 90% of children who are considered legally blind have usable vision and should be taught to use any vision they have. Since vision is usually the integrating sense for young children in learning concepts, the presentation, environment and materials may need to be modified daily. Visually impaired children can be taught through alternative methods using touch, sound, and other senses. Orientation and mobility, which teaches children to understand where they are in space and how to move about safely in their environment, is implemented for visually impaired students.

Increasingly, children who are visually impaired learn alongside sighted peers in integrated classroom settings and receive additional services based on their individual needs. For children who are blind or partially sighted, instruction must be provided in Braille unless an appropriate evaluation determines that the child does not need this instruction. Children who have intensive special needs may attend a specialized school or may be educated in smaller classes in their local schools.

### Contributions of the School Psychologist:

- It is important that school psychologists encourage empirically supported interventions.
- The school psychologist (along with the rest of the team) plays an important role in consideration of the child's educational setting that is best suited for them.
- The school psychologist can provide consultation services to teachers and other professionals working with visually impaired students.
- The school psychologist should encourage family involvement.

### Resources

Blind Children's Resource Center- [www.blindchildren.org](http://www.blindchildren.org)

Foundation for Blind Children- [www.the-fbc.org/](http://www.the-fbc.org/)

Blind Children's Center- [www.blindcntr.org/](http://www.blindcntr.org/)