

Does your Child have a Vision Problem?

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Introduction

Good vision and eye health are a critical part of child's learning and development. As vision continues to develop up until the age of 8 or 9 years old, it's important to have your child's eyes checked so that any issues can be detected early enough to treat.

There is a difference between a vision screening, which can be done at your child's primary care provider, and a comprehensive eye exam, which is typically conducted by an optometrist or ophthalmologist. Moreover, it's important for parents to keep an eye out for warning signs of vision problems that can develop in between those screenings and exams [1]. Many parents and caregivers believe the screening performed by the child's pediatrician or other primary care physician or school nurse is sufficient to rule out all significant visual disorders. However, these screenings are limited and were not intended to replace a comprehensive eye examination [2]. Health education of parents and guardians on the need for frequent eye examination and necessary treatment is an important WHO strategy in developing countries where a good number of people have poor knowledge of the importance of eye examination and treatment, hence neglecting eye care for their children [3].

Blindness in children can be avoidable with preventive measures and when eye examination and treatment is early and frequent. In the developed world, children are required to undergo eye examination at birth and as early as six months. By six months an average child has attained a number of developmental milestones and so can undergo a full eye examination. Afterwards, a comprehensive eye examination is necessary at the preschool age and frequently during the school age [4].

Magnitude of the Problem

About 5% to 10% of preschoolers have vision problems. About 10% of school-aged children have vision problems. Without proper screening, vision problems may not be detected, and permanent loss of vision may occur [5]. Children rarely complain when they have vision problems because they do not know that their vision is not normal. They think that everyone sees the world the way

they do. So, parents and teachers have important responsibility to recognize the signs of vision problems in order to identify children who need a complete eye examination [6].

Children Who May be at Risk for Vision Problems

If there were health problems during pregnancy (such as measles, infections, toxemia, drugs or alcohol), they were born prematurely, there were complications at birth (such as long labour, lack of oxygen), they had certain childhood illnesses (such as high fever, viruses), there is a family history of vision problems (such as lazy eye, crossed eyes, or wearing strong glasses) or they have certain health conditions or developmental disabilities (such as cerebral palsy, Down syndrome, hearing loss, developmental delay, Autism) [6].

Alarming Signs that may be a Red Flag of Vision Problems

- a. Physical symptoms: constant eye rubbing, extreme light sensitivity, poor focusing, poor visual tracking (following an object), abnormal alignment or movement of the eyes (after 6 months of age), chronic redness of the eyes, chronic tearing of the eye, a white or cloudy pupil instead of black, bulging eyes, droopy eyelids, blink more than normal, have blurred vision, have frequent headache, double vision [1, 5, 6].
- b. Changes in behavior: If your child is doing something differently than he used to do, it could be a sign that he is experiencing a vision problem. For instance, he used to sit far away from the TV and is now sitting close. He is having difficulty copying from the board, when she was able to do it before. He has a difficulty in seeing something. All of these signs can be red flags that your child might need glasses and should be referred for a comprehensive eye exam if there is a problem [6].
- c. A suspected developmental delay: If you feel that your child is having difficulty recognizing her colors or learning letters or numbers [6].

d. Eye Trauma: If your child suffers a traumatic injury involving the eye, you have to go directly to the emergency room or an urgent care setting depending on the severity.

Common Eye Problems

Amblyopia ("lazy eye") is poor vision in an eye that may appear to be normal. Two common causes are crossed eyes and a difference in the refractive error between the two eyes. If untreated, amblyopia can cause irreversible visual loss in the affected eye. Amblyopia is associated with suboptimal vision, despite best spectacle correction in the absence of any other ocular and neural abnormality. Failure to diagnose and manage amblyopia before the age of 8 years can result in life-long visual impairment [7]. There is a lifetime risk of visual impairment in the good eye of 1:50 in boys and 1:100 in girls and this should be emphasized to parents [8].

Strabismus is a misalignment of the eyes; they may turn in, out, up, or down. If the same eye is chronically misaligned, amblyopia may also develop in that eye. If lifted untreated, may result in loss of binocularity and depth perception [7]. However, with early detection, vision can be restored by patching the properly aligned eye, which forces the misaligned one to work. Surgery or specially designed glasses also may help the eyes to align. Amblyopia and strabismus are two common pediatric eye conditions with functional and cosmetic consequences. Overall, global estimates of the prevalence of amblyopia and strabismus in children and teenagers range from 0.20% to 6.2% and 0.13% to 4.7%, respectively [8].

Refractive errors mean that the shape of the eye doesn't refract (bend) light properly, so images appear blurred. Refractive errors also can cause amblyopia. Nearsightedness is the most common refractive error in school-age children; others include farsightedness and astigmatism which are usually treated with glasses or contacts. Refractive errors are the most common ocular problem affecting all age groups. They are considered a public health challenge. Recent studies and WHO reports indicate that refractive errors are the first cause of visual impairment and the second cause of visual loss worldwide as 43% of visual impairment is attributed to refractive errors [9].

Other eye conditions need immediate attention, such as retinopathy of prematurity (a disease that affects the eyes of premature babies) and those associated with a family history, including: retinoblastoma, infantile cataracts, congenital glaucoma, genetic or metabolic diseases of the eyes [10].

Conclusion

Since many eye problems occur at an early age, it is important that your child receives proper eye care (eye examinations and visual screening tests). Vision problems can lead to developmental problems, learning disabilities and possibly permanent loss of vision. Monitoring your child's ability to see is an important part of the health of your growing child. Parents and teachers have important responsibility to recognize the signs of vision problems in order to identify children who need a complete eye examination.

Acknowledgment

None.

Conflicts of Interest

No conflict of interest.

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