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Binocular Vision Disorders

A Guide for Parents and Educators

What is a binocular vision disorder?

A binocular vision impairment is any visual condition in which binocular vision skills are inadequately developed. This may include problems with:

- **Tracking**—the ability to move the eyes across a sheet of paper
- **Fusion**—the ability to use both eyes together at the same time
- **Stereopsis**—binocular depth perception
- **Convergence**—the ability of the eyes to work as a team
- **Visual Motor Integration**—the ability to transform images from a vertical to a horizontal plane

When a student struggles to develop early reading skills, often there are a variety of causes. Parents and teachers must work together to identify those causes and consider the possibility of a binocular vision impairment. Because students may not demonstrate difficulty seeing, or may have passed a vision screening, problems with the eyes are often overlooked. Reading requires the integration of several functions of the eyes, and students identified with a reading deficit should have further evaluation by a qualified eye professional. The American Optometric Association recommends a comprehensive eye exam for students not reading on grade level.



*As many as 1 in 5 American school-aged children has an undiagnosed binocular vision impairment. Educators, families, and health care providers must be aware that sometimes reading and other learning problems are **vision problems**. Pediatric vision care that includes a comprehensive eye exam is essential for any student who struggles with early literacy.*

- David S. McBride, Executive Director, Nebraska Optometric Association

Understanding the facts

According to Prevent Blindness America, vision plays a critical role in the physical, cognitive, and social development of children. Vision problems that go uncorrected can impair development, interfere with learning, and even lead to permanent vision loss. The National Center for Children's Vision and Eye Health, in partnership with Prevent Blindness, have provided a compilation of current research and survey data that underscore the need for increased awareness.

- **20% of Kindergarten students** have vision problems.
- Only **24% of adolescents** with correctable refractive error have adequate correction.
- By **high school graduation, 30-40%** of students have a vision problem.
- **60% of individuals enrolled in literacy programs** have a vision problem.



Resources

Nebraska Foundation for Children's Vision

If a child cannot see, a child cannot read, and if a child cannot read, a child cannot learn. NFCA heightens awareness of pediatric vision care among consumers, educators, and healthcare providers. <https://nebraska.aoa.org/consumers/public-service-programs-for-vision-care/nebraska-foundation-for-childrens-vision>

See to Learn

See to Learn Optometrics provides free vision assessment for any 3-year-old in Nebraska, regardless of income. <http://seetolearn.com/>

Nebraska Optometric Association

NOA has been dedicated to protecting and advancing the profession of optometry in Nebraska for over 100 years. <https://nebraska.aoa.org/>



Early warning signs

Classroom teachers and other educators are often the first to identify potential vision problems. The following are some of the signs and symptoms:

- ✓ Squinting
- ✓ Holding reading materials close to the face
- ✓ Sitting close to the front of the room
- ✓ Poor spelling
- ✓ Complaints of blurred, cloudy, or double vision
- ✓ Complaints of headache or dizziness
- ✓ Covering one eye while reading
- ✓ Low attention span and/or reading comprehension