

HEALTHY EYESIGHT AND CHILDHOOD DEVELOPMENT: AMBLYOPIA



What is Amblyopia?

Amblyopia (amblē-ōpēā), also known as 'lazy eye,' is a condition of reduced visual acuity (sharpness of eyesight). This usually happens because an eye was not used properly during an important time in childhood development.¹ Normal vision develops with regular and equal use of both eyes during the first years of life. Amblyopia can occur when the brain and eyes do not work together properly. The brain ignores images from the weaker eye and uses only those from the stronger

eye. This leads to poor vision in the otherwise healthy eye.² If untreated, the brain will eventually lose the ability to use information from the weak eye and the condition will become permanent. Amblyopia is the most common cause of eyesight problems in children, but it is preventable or reversible if found and treated early.³

What Causes Amblyopia?

Amblyopia can be caused by any condition that prevents the brain from using both

eyes in a balanced way. The most common causes of amblyopia are misaligned eyes and a difference in each eye's ability to focus.⁴ Other problems with the eyes, such as cataracts, cloudy cornea, droopy eyelid, or an accident that damages the eyes can also lead to amblyopia.⁵ Amblyopia usually develops before six years of age, but it can also happen later in life.⁶ There may be a higher risk for amblyopia if others in your family have amblyopia or misaligned eyes. Low birth weights, premature births, and developmental delays in your family may also indicate an increased chance of childhood amblyopia.⁷



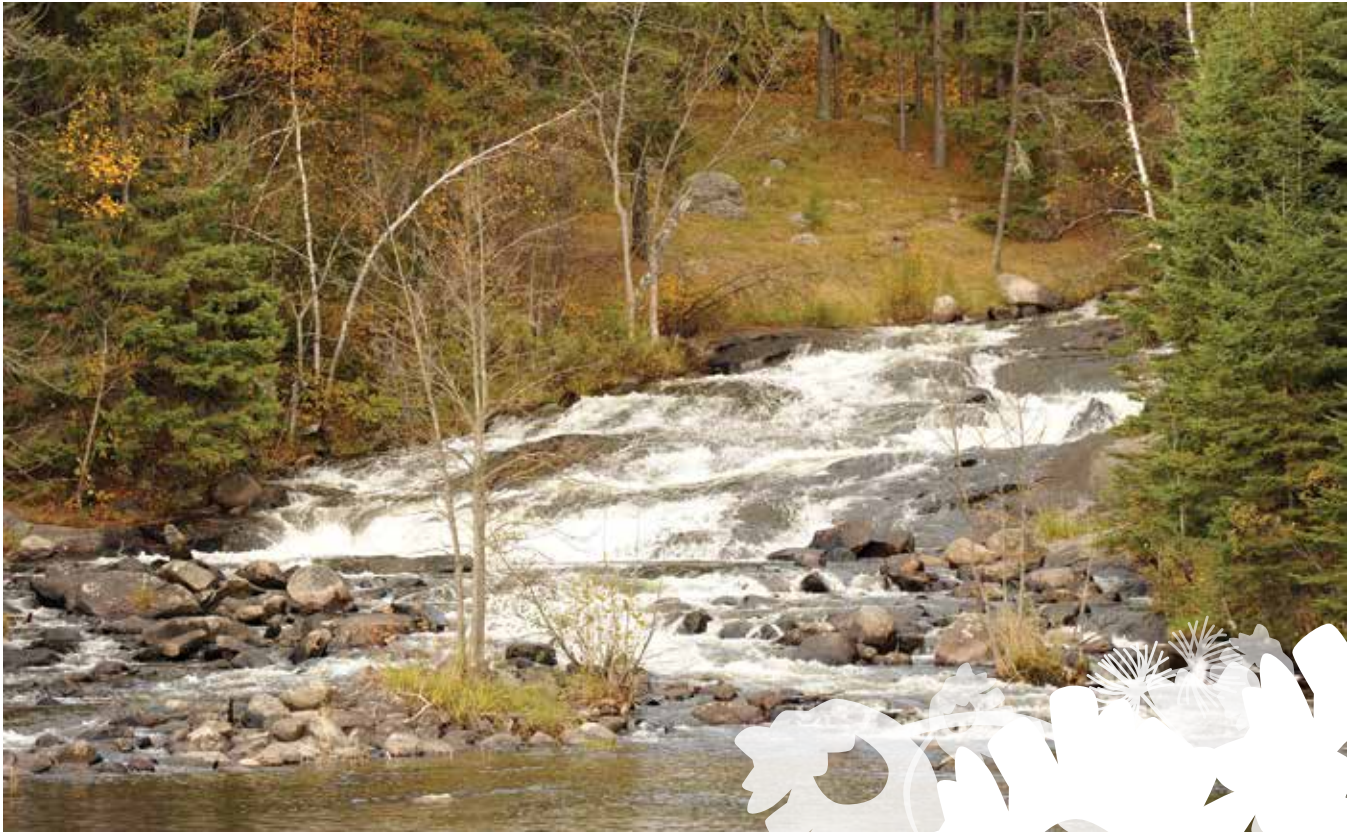
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Symptoms of Amblyopia

It can be difficult for parents and caregivers to notice signs of amblyopia.⁸ This is because usually only one eye is affected. Symptoms to watch for are:

- Rubbing the eyes
- Excessive blinking
- Covering or closing one eye
- Problems with depth perception
- Eyes that do not seem to work together
- Eyes that turn in or out
- Crying or complaining when one eye is covered
- Squinting
- Tilting the head
- Droopy upper eyelid
- Drifting eye when the child is sick, tired, or in bright sunlight.⁹

Health Impacts

People with amblyopia have reduced: sharpness of eyesight, depth perception, and sensitivity to contrast.¹⁰ These can reduce your ability to do daily activities such as reading, catching a ball, or driving at night. Amblyopia can affect your child's success in school, sports, and other activities. For adults, amblyopia can limit career options and increases the risk for total blindness if the healthy eye becomes damaged.¹¹

Prevalence

Approximately 2-4% of children under age six have amblyopia.¹² The condition is not more common in boys or girls or a particular racial group,¹³ but it is more common in families with lower income.

Children from disadvantaged households have a higher risk of vision defects and are less likely to be diagnosed and treated.¹⁴ Factors that affect vision health in children include being from a family with low income and lower education, lack of access to care, and lack of culturally appropriate care.¹⁵ Aboriginal peoples have generally poorer health compared to the non-Aboriginal population. They may also have higher rates of vision problems. One survey found that 11% of off-reserve First Nations and Métis children between six and 14 years of age suffer from vision problems.¹⁶

Vision Screening

Vision screening is a fast and efficient way to check a large number of people to identify possible eyesight problems. If a potential problem is found, you are referred to an eye doctor for diagnosis



and possible treatment. Screening does not provide a diagnosis and does not tell you if glasses or other treatment is needed. Only an eye doctor makes a diagnosis and recommends treatment.¹⁷ What is done during screening depends on your age, the people available to do the screening, and the tests used.¹⁸ Screening children early can help reduce the risk of amblyopia, especially if children are screened before the age of three.^{19,20}

Treatment for Amblyopia

Vision loss from amblyopia is preventable or reversible if diagnosis and treatment occur early. Amblyopia can be difficult to correct after the age of nine because that is when vision has fully developed.²¹

Treatment involves training the brain to use the weak eye. This helps to

strengthen the connection between the weak eye and the brain so that vision can develop normally.²² This can be done in several ways:

- Putting an eye patch on the stronger eye (occlusion).
- Using eye drops or glasses to blur the vision in the stronger eye.
- Surgery may be required if amblyopia is caused by a problem like cataracts.²³
- Glasses or contact lenses may be used if amblyopia is caused by a difference in each eye's ability to focus.

For More Information

- BC Association of Optometrists
- Canadian National Institute for the Blind
- Canadian Ophthalmological Society
- Canadian Paediatric Society

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DE LA SANTÉ AUTOCHTONE

FOR MORE INFORMATION:
UNIVERSITY OF NORTHERN BRITISH COLUMBIA
3333 UNIVERSITY WAY, PRINCE GEORGE, BC V2N 4Z9

1 250 960 5250
NCCAHA@UNBC.CA
WWW.NCCAHA-CCNSA.CA