



CHILDREN'S VISION

Electronic Eye Strain



optometrists.ab.ca

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It's important to understand how screen time affects your child's vision.

DID YOU KNOW?

- + **Increased use of screens**—tablets, smartphone, and handheld video games—at home and school is **contributing to a rise in myopia** (nearsightedness, where distant objects appear blurry).
- + By 2050, myopia is projected to affect half the world's population.¹
- + **Myopia increases the risk** of serious long-term eye conditions like glaucoma, cataracts, and retinal detachment.



The Impact of Screen Time on Children

Since children's eyes are still developing, protecting their vision during these formative years is crucial.

Research conducted by the Alberta Association of Optometrists indicates:

Percentage of waking hours on screens



Too much screen time doesn't just affect vision. It can also lead to poor sleep, weight gain, trouble in school, and behaviour challenges. For younger children, it may even delay learning, attention, and social development.

The issue most reported by Alberta parents is poor behaviour, followed by reduced attention span.

60% of parents say their kids spend less time outdoors and more time on screen activities.

Holding devices too close for longer periods is associated with an inward eye turn.



HOW YOU CAN REDUCE SCREEN TIME IMPACTS

Optometrists recommend:

- + Limit the use of handheld devices.
- + Put electronics away 1 to 2 hours before bedtime. Charging devices outside the bedroom can help keep them out of reach at night.
- + Take eye health breaks. Every 20 minutes, look at least 20 feet (6m) away for 20 seconds.
- + If weekday screen time has been high, **unplug for the weekend** or even just one day!
- + Aim for at least 2 hours of outdoor time each day. This helps reduce the risk of developing myopia² and may slow its progression³.
- + When watching a video, use a television screen instead of a phone or tablet.
- + Encourage children to hold books and devices at least a forearm's length.

Parent tip!

- + Book an annual eye exam with your optometrist. Children might not know to speak up about eye strain, eye fatigue, dry eyes, or headaches, so it's important to catch these issues early with regular checkups.



Recommended Screen Time for Children⁴

0–2 YEARS

No screen time is recommended.

Limited live video (e.g. Facetime) chatting with a caring adult, and with parental guidance, is a possible exception.

2–5 YEARS

Limit screen time to one hour per day, focused on educational content.

Parents should co-view, ensure content is age-appropriate, and talk with your child about what they're watching to support learning.

5–18 YEARS

Ideally, recreational screen time should be limited to two hours per day.

While it can be hard to track total screen use (especially with schoolwork), it's important to consider how screen time may affect your child's development and well-being.



How Your Optometrist Can Help

Children who develop myopia almost always experience some progression, especially younger children who tend to progress more quickly. The risk of eye health issues increase as myopia increases. Your optometrist can recommend the best treatment options through **myopia management**, which aims to slow down your child's myopia progression.

Options include:

- + **Specialty eyeglass lenses:** Some reduce eye strain from near work (like screens), while others change how light enters the eye, sending a signal to the eye and brain to slow myopia progression. Your optometrist will help choose the right type.
- + **Multifocal soft contact lenses:** These provide clear central vision and also change the way light enters the eye, to signal slower progression. Your optometrist will assess if your child is a good candidate.
- + **Ortho-K lenses:** Rigid contacts worn overnight that gently reshape the cornea to correct vision temporarily and slow progression. They must be worn nightly to remain effective.
- + **Atropine eye drops:** Used at night, these drops have been shown to slow myopia with minimal side effects at low doses. Your optometrist will determine the right concentration and duration for your child.





Annual Eye Exams

Your child's vision and eye health is developing and can change quickly. Only an eye exam can properly assess their vision and eye health.

- + The earlier an eye health or visual problem is identified, the more likely it can be corrected.
- + Children often assume their vision is normal, even when it's not.
- + Many parents assume they would notice if their child had a vision problem, but these issues can be hard to detect, especially when only one eye is affected.
- + If your child is not seeing properly, it can impact their ability to learn as **80% of learning is visual**.
- + The Alberta Health Care Insurance Plan (AHCIP) provides partial coverage towards annual eye exams for children 0-18 years old.⁵

Your Primary Eye Care Doctor

Optometrists are highly trained eye health professionals, completing at least three years of a Bachelor of Science, followed by a four-year Doctor of Optometry degree from an accredited university. They're your go-to experts for eye health, vision care, and eyewear needs.

DON'T HAVE AN OPTOMETRIST?

Visit **optometrists.ab.ca** and click "Find an Optometrist" to see providers in your area.



For information about many other common eye-related conditions, visit our website.

optometrists.ab.ca

¹ Holden BA, Fricke TR, Wilson DA et al. Global prevalence of myopia and high myopia and temporal trends from 2000 through 2050. *Ophthalmology* 2016; 123: 1036-1042

² <https://onlinelibrary.wiley.com/doi/pdf/10.1111/aos.13403>

³ https://journals.lww.com/optvissci/abstract/2019/04000/effect_of_outdoor_activities_in_myopia_control_6.aspx

⁴ Recommendations of the Canadian Association of Optometrists/Canadian Ophthalmological Society

⁵ Optometrists can charge for insured services that the optometrist deems exceeds the AHCIP benefit and Albertans are responsible for additional costs incurred at the time of treatment. Practitioners are required to discuss fees with their patients before providing the service.