



MYOPIA MANAGEMENT PROGRAM

Myopia has become increasingly prevalent over the past century. As the eye becomes more myopic, the axial length (size) of the eye increases - the most rapid change is seen from childhood into the teenage years.

The goal of myopia management is to slow the progression of myopia and slow axial length increase.

BENEFITS OF MYOPIA MANAGEMENT

- Lifestyle - less dependence on glasses and contact lenses, stable prescription
- Long-term Ocular Health - high myopes are more likely to be diagnosed with retinal breaks and detachments, glaucoma, and myopic macular changes

WORLDWIDE MYOPIA NUMBERS

Year 2000

- 22% of the world population myopic (1.34 billion people)
- 2% of the population being classified as high myopia. (>-5.00D)

Year 2050 (estimated from current rates of increase)

- 49% of the population (49 billion people) myopic
- 9.7% of the population with high myopia

The theories behind why we are seeing such a dramatic increase in prevalence and severity of myopia is multi-factorial; family history, ethnicity, diet, time outdoors, near work, and current vision correcting options have been shown to contribute. At this time it is believed that the cause of myopia ~70% genetic and ~30% environmental.

MODIFIABLE ENVIRONMENTAL FACTORS

Time outdoors

- 2 hours/day outdoors
- Children that spend more time outdoors (exposed to entire visible spectrum of light) are less likely to become more myopic, and myopic children progress less rapidly with more time outdoors

Near work

- less than 1.5 hours/day of near work is recommended (outside of school hours)
- while doing near work, a working distance of 30-40 cm should be maintained

Peripheral Defocus

Visual Correction Options to control the way light is focused at the back of the eye



Our Approach

Our goal at Family Focus Eyecare is to select a treatment option specific to each patient that is going to best slow or stop their progression of myopia, correct their vision and offer the best quality of life in regards to that patient's needs. A Myopia Management Assessment is performed prior to initiation of treatment. This initial assessment allows us to take detailed measurements of the eye to determine baselines and the opportunity to discuss current behaviors and habits and assess risk factors. This allows us to make a personalized, treatment recommendation for your child. Myopia Management at Family Focus Eyecare is not simply a single treatment recommendation, but a management plan that encompasses regular monitoring (every 3-6 months) and an evolving strategy based on treatment success and guided by the most recent scientific research and clinical guidelines. Our optometrists are dedicated to bringing the most up-to-date treatment options to our Saskatoon patients and continued involvement in the international Myopia Management community.

Frequently Asked Questions

Is myopia reversible?

Unfortunately at this time, no.

Can it be prevented?

The best prevention strategies involve lifestyle modifications to delay the onset of myopia:

- 2 hours+ of outdoor time a day
- Less than 1.5 hours of near work (outside of school hours)
- Proper working distance at near (~40 cm)

The earlier myopia starts in a child, the more quickly and more years it will progress. Even with the best lifestyle modifications, a child may still become myopic. ~30% of the cause of myopia is environmental and ~70% is genetic.

How much does treatment cost?

This will vary depending on the treatment recommended and chosen for your child. Approximate treatment cost for 2 years:

- Orthokeratology - ~\$2100-\$2500 (for first 2 years), ~\$1400-\$1700 (for every 2 years after)
- Soft Multifocal Contact Lenses - \$2000
- Atropine Drops - ~\$1600-\$1700
- Glasses - ~\$500 for specialty lenses + frame cost

How often do I have follow-up appointments?

Initially your child will be seen every 3-6 months, and then at minimum every 6 months. Depending on the treatment option chosen for your child and the success of treatment, follow-ups may be scheduled more often.

Are there other treatment options? What about under-correcting the prescription or not wearing glasses at all?

At this time, no other treatment options have been scientifically shown to be effective. Studies have shown that under-correction can speed progression.

What age or prescription should we start treatment?

This will depend on each patient's specific risk factors. Some treatment options can start at a young age and treatment options that are recommended must be suitable for that child's age and maturity.

Is this covered by my insurance?

Orthokeratology lenses, soft multi-focal lenses, glasses, and contact lens fitting fees fall under your "vision care" insurance. Atropine drops would fall under your "medication" insurance. Because it is a compounded drop (a unique concentration), we recommend checking with your insurance provider to ensure they cover compounded medications. Any amounts that exceed your "vision care" or "medication" insurance can be applied towards health spending accounts and used for income tax deductions.

Why have I not heard about this before?

Clinically, Myopia Management is relatively new (the last ~5 years). However, research into options to slow progression have been studied intensively for the past ~20+ years. Optometry is ideally positioned as the primary health care providers that routinely monitor children's vision and eye health. Awareness of myopia and the importance of slowing its onset and progression is increasing across healthcare professionals as practical treatment options have been shown to be effective. Advocacy groups are currently attempting to increase public and healthcare awareness in this area.

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What are the risks/side effects of treatment?

The benefits and risks of each treatment option will be considered for every patient. For contact lens wear, there is a small risk of bacterial infection. Children/parents must demonstrate that they are able to properly care for, insert and remove contact lenses and display a level of maturity if this option is chosen. Comprehensive training is provided, regular follow-up care and office/doctor contact information is provided to minimize this risk.

Atropine drops can result in loss of accommodation (focusing at near) and light sensitivity, dependent on the strength of drop needed. Anti-cholinergic medications (ie. Atropine) can have systemic side effects in high enough doses. However, topical drops have very little systemic absorption.

What if I choose to do nothing?

We cannot say for sure. Your child may stop progressing, they may progress at a slower/faster rate, or continue to progress at the same rate. We cannot predict with 100% certainty when each child will stabilize. We use a patient's history, risk factors and average population data to best predict what rate and for how long a child will progress.

How long do we continue treatment for? When do we stop?

On average, children progress more rapidly when young, slowing in progression over time and eventually reaching a plateau.

Average progression stats based on the age of myopia onset:

- Early Onset (Age ~6) - refraction stabilizes by ~age 24
- Typical Onset (Age ~8-10) - refraction stabilizes by ~age 15
- Late Onset (Age ~14) - refraction stabilizes by ~age 16/17

Your child will be monitored at minimum every 6 months.

At these visits their refraction and axial length will be measured - when their refraction is stable, or their axial length is changing at an acceptable rate, the recommendation may be made to stop treatment.

What are the main health risks?

Retinal Detachment, Myopic Macular Degeneration, Glaucoma, Cataracts

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