



## EVIDENCE-BASED CLINICAL PRACTICE GUIDELINE

# MYOPIA MANAGEMENT

Effective June 18, 2025



ALBERTA college  
of OPTOMETRISTS

# Myopia Management

## Clinical Practice Guideline

The objective of this Clinical Practice Guideline (CPG) is to provide guidance to Doctors of Optometry on the assessment, diagnosis, treatment, co-management, independent management and referral of pediatric patients who are at risk for or are currently diagnosed with myopia. This CPG is based on the best available and most current optometric and medical clinical evidence and research. It is not intended to replace professional discretion and judgement; nor is it intended to be used as an all-encompassing clinical manual. Clinicians must base their assessment, diagnostic, management and treatment regimens on the specific needs of the patient at that point in time.

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Myopia, or nearsightedness, is a refractive condition in which light focuses in front of the retina causing distance blur, and is categorized as axial, refractive, or secondary. Myopia typically presents as low (spherical equivalent (SE)  $>-0.50D$  and  $<-6.00D$ ) and may progress to high (SE  $>-6.00D$ ) over time. The number of people affected by myopia is rising at an alarming rate. In 2010 it was estimated that 28% of the global population was myopic, and that number is expected to exceed 50% by 2050. The rates are even higher in areas such as East Asia where it is estimated that up to 90% of the population is affected by myopia.

Myopia Management has two components:

1. Myopia Prevention
  - Educating and counseling parents and children on lifestyle and other factors to prevent or delay the onset of myopia.
2. Myopia Control
  - Educating children and their parents on available options to potentially slow the progression of myopia. This may translate to improved quality of life and mitigated future ophthalmic diseases and disorders.

### Goals

**It is the goal of every optometrist to:**

1. **Identify those patients who are at risk for developing myopia, and to diagnose and treat myopia appropriately and in a timely manner.**
2. **Collaborate and communicate with patients, legal guardians and/or other health care practitioners in order to:**
  - a. **Increase access to competent vision care services,**
  - b. **Maximize a patient's visual status and quality of life,**
  - c. **Improve patient compliance and outcomes,**
  - d. **Reduce the possibility of duplication of tests and services, and,**
  - e. **Provide vision care services in the most efficient and effective manner.**

3. **Educate patients, parents and/or legal guardians on:**
  - a. **Available treatment options and associated risks,**
  - b. **Estimated duration of treatment and associated costs,**
  - c. **Risks of not undergoing treatment when indicated,**
  - d. **Referral to an optometrist providing myopia management,**
  - e. **Recommended follow-up frequency based on severity.**

The practitioner must balance the discussion and treatment recommendations with the statistical risk of not treating, along with other considerations such as affordability, access, and the philosophy or preferences of the patient's legal guardians.

### **Myopia Management Specific Guidelines**

A patient at risk of myopic progression should be educated about management options, considering the following history and procedures:

1. **Historical Analysis**
  - a. Parental myopia; notably if either have high myopia
  - b. Approximate age of onset
  - c. Relative rate of progression
2. **Specific Measurements**
  - a. Refractive Error (objective and/or subjective)
  - b. Axial Length, if available
3. **Management Options**
  - a. Spectacles and/or contact lenses for myopia control
  - b. Managing binocular vision disorders
  - c. Orthokeratology
  - d. Atropine therapy
  - e. Lifestyle/behaviour counselling in mitigating myopia
  - f. Any combination of the above or emerging evidence-based treatments

### **On-Going Management Guideline**

Myopia management and frequency of follow-ups will be unique to each patient depending on the treatment option(s) chosen, as well as the methodology of the myopia management practitioner. It should also take into consideration the individual needs of the patient, and the preferences and philosophy of the parents or legal guardians.