

# MYOPIA MOMENT

WHAT TO MEASURE

This Myopia Minute gives you a brief overview of the measurements to include in an eye examination of a child with myopia or at risk of developing myopia. Please refer to the source references for more details.

## PATIENT HISTORY

A DETAILED PATIENT HISTORY SHOULD INCLUDE THE FOLLOWING:

- Family history of refractive error. (*parents and siblings*)
- Time spent outdoors
- Time spent using digital devices.
- Date of myopia onset if present.
- Any previous treatment for myopia.

## STANDARD PROCEDURE

DISTANCE AND NEAR VISION ASSESSMENT  
Uncorrected and best corrected

- Use age-appropriate chart.
- Record findings for monitoring and follow-up.

OCULAR HEALTH CHECK

- Internal.
- External.
- Intraocular pressure.

REFRACTION  
(subjective and/or objective)

- Children at risk for developing myopia may be identified by comparing their refractive status to the normal refraction for their peer group.

ACCOMMODATIVE AND BINOCULAR VISION (BV) TESTING

- Even before myopia develops, children may show BV disorders.
- Watch out for reduced accommodative response, increased accommodative lag and higher AC/A ratios.

## MYOPIA RELATED MEASUREMENTS

CYCLOPLEGIC REFRACTION INCLUDING DROPS  
(BEST PRACTICE)

### WHY?

For added precision assessing young children who may not be able to verbalise their vision issues.

### HOW?

2 drops of 1% tropicamide or cyclopentolate 5 minutes apart. Refraction 30 to 45 minutes after first drop.

ALTERNATIVE TO CYCLOPLEGIC REFRACTION  
Retinoscopy with accommodation well controlled.

FUNDUS CHECK

### WHY?

To document if there are early features of myopia-related pathology.

### HOW?

Thoroughly examine central and peripheral retina under dilation, and where possible, record observations using OCT and/or fundus photography.

AXIAL LENGTH MEASUREMENT (AL)

### WHY?

To assess risk of developing myopia and to monitor progression.

### HOW?

- Preferably use a non-contact optical biometer
- Risk scenario: AL is >25 mm with growth of 0.2 to 0.3 mm/year

TEAR FILM EVALUATION

### WHY?

To guide clinical decision making on optical interventions, particularly contact lenses, so that they can be worn comfortably and compliantly.

### HOW?

Ask probing questions and use a slit lamp biomicroscopy to examine the anterior eye.