Myopia

FAST FACTS

75%

of children with myopia are diagnosed between the ages of 3 and 12

~50%

of the world's population will become myopic by 2050

WHEN TO REFER

Refer to a pediatric ophthalmologist or optometrist if any red flags are present. Encourage parent to act promptly if the child is less than 5 years old with high myopia (>5D measured on screening device).

Parents can call Cincinnati Children's Pediatric Ophthalmology at **513-636-4751** to schedule an eye exam with an ophthalmologist or optometrist. Physicians may call this number with non-urgent questions.

Myopia (nearsightedness) is a common vision problem that causes blurred distance vision. The incidence of myopia is on the rise globally, especially in children. It is a progressive condition that typically worsens into the early 20s.

Myopia cannot be reversed or cured, but it can be managed. Glasses or contact lenses typically correct the visual symptoms associated with myopia. The treatment goal is to slow myopia progression and limit the overall lifetime level of myopia. Anatomic changes in the eyes of patients with myopia are associated with a greater risk of eye disease and vision impairment in adulthood.

Screening for myopia is important, since children and parents are not always aware of vision problems, especially when children are young.

ASSESSMENT

Obtain accurate history of vision-related problems, including a discussion of risk factors (see algorithm).

Perform annual vision screenings, including cover test. Evaluate eye, pupil, red reflex and motility. Additionally:

- At 12 months to 3 years, perform instrument-based screening (e.g., photoscreening). Continue annually until patient can participate in recognition visual acuity testing.
- At 3 to 4 years, perform recognition visual acuity testing instead. By this age, children typically can participate in visual acuity testing with age-appropriate shapes and symbols (optotypes). Use an adhesive monocular patch for testing. If the child is already wearing glasses, glasses should be worn for testing. Instrument-based screening is adequate if the child is unable to do visual acuity testing.

Consider performing instrument-based screening up to 6 years when cooperation is limited.

HISTORY AND PHYSICAL EXAM REASONS TO REFER

- Failed vision screening
- Symptoms of myopia:
  - Complaints about blurry vision (e.g., not being able to see the board in school)
  - Frequent eye rubbing
  - Headaches (especially at the end of the school day)
  - Squinting or straining to see
- See risk factors listed on the algorithm

MANAGEMENT/TREATMENT

Myopia requires specialized care from a pediatric ophthalmologist or optometrist.

For urgent issues or to speak with a pediatric ophthalmologist on call 24/7, call the Physician Priority Link® at 1-888-987-7997.

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children's.

Myopia

Patient Presents

Assessment

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- Perform annual vision screenings, including cover test.
- Evaluate eye, pupil, red reflex and motility.

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Risk factors for developing myopia:
- Asian ethnicity
- Child has a connective tissue disorder such as Marfan, Stickler, Ehlers-Danlos or Weill-Marchesani syndrome
- Family history of myopia. The risk of myopia is two times greater if one parent is myopic, five times greater if both parents are myopic.
- Increased near-work
- Limited outdoor time
- Personal history of prematurity, especially if retinopathy of prematurity
- Screen time > three hours per day outside of school
- Strabismus (specifically esophoria and intermittent exotropia)

Any Risk Factors?

Yes

Refer to a pediatric ophthalmologist or optometrist.

Encourage parent to act promptly if the child is less than 5 years old with high myopia (>5D measured on screening device).

No

Continue to perform annual vision screenings.

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