

Expanding Interventions for Myopic Progression Control – Spectacle-Based Options

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Course Description:

Proactive management of myopia with spectacle-based options is becoming more critical for younger aged children, as we continue to see the prevalence of myopia increase around the world at alarming rates.

Course Outline:

I. Myopia is a refractive condition (generally) caused by progressive elongation of the eye

A. Definition of a disease

II. Professional Organizational stance on myopia

A. AOA

B. AAO

C. Ophthalmology (AAO, AAPOS)

D. WCO

III. Age of onset for myopia

A. This is a key factor for long term progression

B. The earlier a child becomes myopic, the more likely they are to be a high myope

C. Impact of Ethnicity

IV. Predicting which children will become myopic

A. Refractive error

B. Axial length

C. Risk factors

Age

Ethnicity

Parental Myopia

Amount of time spent indoors/outdoors

Amount of near work

Digital devices

V. Systematic Reviews and META analyses of various interventions

A. Cochrane review (2020) by Walline et al

B. What is “normal” for myopic progression?

C. Setting a treatment target

VI. Spectacle-based interventions options and results

A. Undercorrection – NO !!

B. Single vision spectacles (SVS)

1. Impact of negative spherical aberration?

2. No evidence that SVS cause increased myopia, but certainly no evidence that they do anything to slow it down

C. Multifocal lens options

1. How to determine add power

A. Binocular vision implications

B. Working distance implications of digital devices

C. Highest adds possible?

2. Executive style bifocals (with or without prism)

2. Progressive addition lenses

3. Defocused segments in the periphery

4. Aspheric lenslets in the periphery

D. Decreased peripheral contrast options

E. Active stimulation of the peripheral retina options

F. What about children in Contact Lenses or using Atropine for myopic progression?

G. Blue light implications and use of filters

1. Impact of wavelength on myopia progression

VII. Who benefits from these treatments?

A. Proportional analysis

B. Frequency distribution

VII. When to stop treatment?