Myopia control treatment overview[1-8]

	Under-correction[2]	Outdoor lifestyle change[1,8]	Atriopine[1,3]	Pirenzepine	Ortho K	Hard contact lenses	Peripheral defocus modifying contact lens (soft contacts)	Progressive addition and peripheral defocus modifying spectacle lenses	7-methylxanthine (7-mx)[4]	Atropine plus multifocal spectacles[4]	Atropine plus Ortho K[5-6]	Defocus Incorporated Multiple Segments (DIMS) spectacle lenses[7]
Effect Summary	**Ineffective**	A **weak effect** on refractive error and axial length change	A **strong effect** on both refractive error and axial length change	A **moderate effect** on **refractive error change** but a **weak effect** on **axial length change**	A **moderate effect** on axial length change (May temporarily normalize vision)	A **weak effect** on refractive error change and **ineffective** on axial length change.	A **moderate effect** on **axial length** change and a **weak** on **refractive error change**	A **weak effect** on refractive error and axial length change	A **weak effect** on refractive error and axial length change	A **strong effect** on both refractive error and axial length change	A **strong effect** on axial length change (combined)	A **moderated effect** on **axial length** change and a **weak effect** on **refractive error change**
How to use	Daily wear (under-correction of -0.5 to -0.75 D)	11-15 hr/wk outdoor activities	One drop per day	Twice a day	Overnight wear	Daily wear during the day (supplement by single vision lenses)	Daily wear during the day (supplement by single vision lenses)	Daily wear during the day	Oral tablet once a day	One drop per day and daily wear	One drop per day and overnight wear	Daily wear during the day
Axial length change (Negative values present slower progression)	0.03 mm/yr	-0.05 mm/yr	0.5-1%: -0.21 mm/yr 0.1%: -0.21 mm/yr 0.01-0.05 %: -0.05 to -0.21 mm/yr	-0.09 mm/yr	-0.15 mm/yr	-0.02 mm/yr	-0.11 mm/yr	-0.04 to -0.05 mm/yr	-0.03 mm/yr (Y1: -0.03 to -0.06 in Triers et al 2008)	M18:-0.37mm (0.25 mm/yr)	Additional -0.09 to 0.11 mm / yr to OK[5-6]	-0.34 mm over 2 yr (-0.17 mm/yr)
Refractive error change (Positive values present slower progression)	-0.11 D/yr	0.12 – 0.14 D/year	0.5-1%: 0.68 D/yr 0.1%: 0.53 D/yr 0.01%-0.05%: 0.22 to 0.54 D/yr	0.29 D/yr	Not available (Vision temporarily normalized)	0.04 D/yr	0.21 to 0.24 D/yr	0.12 to 0.14 D/yr	0.07 D/yr (Y1: 0.09 to 0.11 D in Triers e al 2008)	M18: 0.99 D/yr (0.66 D/yr)	Not available (Vision temporarily normalized)	0.44 D over 2 yr (0.22 D/yr)
Concerns	Under-correction of human myopia is myopigenic	UV exposure	Photophobia and blurred vision	Flu like symptom and blurred vision	Discomfort and handling of contact lenses by kids	Handling of contact lenses by kids	Handling of contact lenses by kids			Photophobia		
Note			Need compounding	Not available in the US	Only certified HCP could fit				Not available in the US			No approved in the US

Ineffective - RE: ≤0 D/yr; AL:≥0 mm/yr; Weak effect - RE: 0 to 0.25 D/yr; AL:0 to -0.09 mm/yr; Moderate effect - RE: 0.25 to 0.50 D/yr; AL: -0.09 to -0.18 mm/yr; Strong effect - RE: ≥0.50 D/yr; AL: ≤-0.18 mm/yr

1. Huang J, Wen D, Wang Q, et al. Efficacy Comparison of 16 Interventions for Myopia Control in Children: A Network Meta-analysis. *Ophthalmology*. 2016;123(4):697-708.; 2. Chuck, Roy S et al. "Refractive Errors & Refractive Surgery Preferred Practice Pattern®." *Ophthalmology* vol. 125,1 (2018): P1-P104.; 3. Yam, Jason C et al. "Three-Year Clinical Trial of Low-Concentration Atropine for Myopia Progression (LAMP) Study: Continued Versus Washout: Phase 3 Report." *Ophthalmology* vol. 129,3 (2022): 308-321.; 4. Walline, Jeffrey J et al. "Interventions to slow progression of myopia in children." *The Cochrane database of systematic reviews* vol. 1,1 CD004916. 13 Jan. 2020; 5. Kinoshita N, Konno Y, Hamada N, et al. Additive effects of orthokeratology and atropine 0.01% ophthalmic solution in slowing axial elongation in children with myopia: First year results. Jpn J Ophthalmol 2018;62:544–553.; 6. Tan Q, Ng AL, Choy BN, et al. One-year results of 0.01% atropine with orthokeratology (AOK) study: A randomised clinical trial. Ophthalmic Physiol Opt 2020;40:557–566.; 7. Lam, Carly Siu Yin et al. "Defocus Incorporated Multiple Segments (DIMS) spectacle lenses slow myopia progression: a 2-year randomised clinical trial." *The British journal of ophthalmology* vol. 104,3 (2020): 363-368.; 8. Wu, Pei-Chang et al. "Myopia Prevention and Outdoor Light Intensity in a School-Based Cluster Randomized Trial." *Ophthalmology* vol. 125,8 (2018): 1239-1250.