	Understanding Myopia and Its Long-Term Effects Myopia: Beyond Vision Correction - Addressing the Disease	
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	Disclosure Statement	
	I am a paid consultant for:	
	• Alcon • Eyenovia	
	Bruno Vision CooperVision Dopavision EssilorLuxottica Euclid Vision Sydnexis Vyluma Genentech Johnson Kubota Vision Sydnexis Vyluma	
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	Why Myopia?	
	Why Now?	
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Medical Optometrist, Ocular Disease Expert and Industry Consultant/A...
1mo - Edited - **⑤**



I don't mean to bash. I understand and appreciate that progressive myopia affects quality of life in children (and adults). But can we please stop treating it as an existential threat to mankind? It's a refractive error that we've been managing for hundreds of years, and in 99.99% of cases our traditional management strategies

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Why Myopia? Why Now?

- Increasing prevalence
- Better understanding of role in visual impairment
- Ability to do something about it

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Three long-term benefits of lowering young patient's ultimate level of myopia:

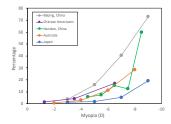
- Better vision when uncorrected and corrected
- Better options for, and outcomes from, surgical myopia correction
- · Reduced risk of visual impairment associated with higher levels of myopia

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Prevalence of Myopic Maculopathy

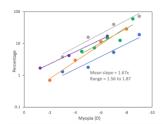




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Prevalence of Myopic Maculopathy

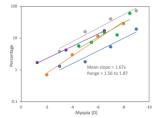




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Prevalence of Myopic Maculopathy

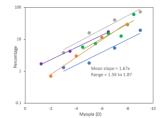
Each additional diopter increases risk by 67% (= 1.67 - 1)



Prevalence of Myopic Maculopathy

Each additional diopter increases risk by 67% (= 1.67 - 1)

Each diopter less, reduces risk by 40% $(= 1 - \frac{1}{1.67})$



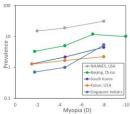
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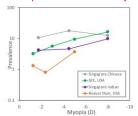
Prevalence of Open-Angle Glaucoma

Each diopter increases risk by 20%



Prevalence of Posterior Subcapsular Cataract

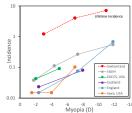
Each diopter increases risk by 21%



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Incidence of Retinal Detachment

Each diopter increases risk by 30%



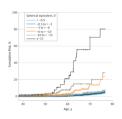
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Visual Impairment and Myopia

- Population-based data
 - Rotterdam Study I (1990–3),
 II (2000–2), and III (2006–8)
 - Erasmus Rucphen Family Study (2002 to 2005)
 - Myopia case-control Study (2010 to 2012)
- 15,404 individuals with spherical equivalent data
- 9,074 individuals with axial length data



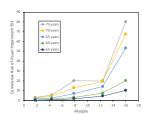
Visual Impairment and Myopia





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Visual Impairment and Myopia

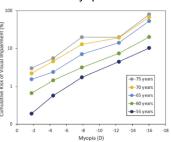


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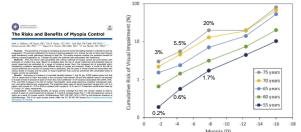
Visual Impairment and Myopia

Each diopter increases visual impairment by 30% (= 1.30 - 1)

Each diopter less, reduces visual impairment by 25% $(= 1 - \frac{1}{1.30})$

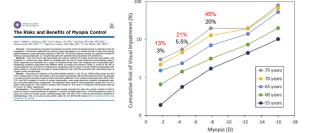


Relative Risk vs. Absolute Risk (6/20 or worse)



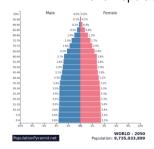
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Relative Risk vs. Absolute Risk (6/12 or worse)



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World Population in 2050





Global Visual Impairment and Myopia in 2050

12 million

- · Myopia Prevalence
- 50% · Total Visual Impairment 307 million
- 109 million · Attributable to Myopia (35%)

Prevented by 1 D of control:

- −6 D or worse
- 27 million • −3 D or worse 44 million • −1D or worse
- scientific reports The underestimated role of myopia in uncorrectable visual impairment in the United States

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Summary

- One third of all visual impairment attributable to myopia
- Each diopter increases risk of myopic maculopathy by 60%
- Each diopter increases risk of glaucoma by 20%
- Each diopter increases risk of visual impairment by 30%
- Would take less than a diopter of control to prevent one million cases of visual impairment in US
- · Benefits of myopia control far outweigh risks

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Summary

- · Myopia is a major contributor to global visual impairment
- · We should continue our efforts to prevent myopia and slow its progression
- "although higher degrees of myopia carry a greater risk of visual impairment to the individual, the population-based burden of lower degrees of myopia remains considerab

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Reducing the Global Burden of Myopia by Delaying the Onset of Myopia and Reducing Myopic Progression in Children			
The Academy's Task Force of	m Myopia		
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