

# MYOPIA:

## THE BIGGEST EYE HEALTH THREAT OF THE 21<sup>st</sup> CENTURY<sup>1</sup>

### UNDERSTANDING MYOPIA

Myopia is often called nearsightedness, but is so much more. It is a **chronic, progressive disease** that increases the risk of myopic macular degeneration, retinal detachment, glaucoma, and cataracts.<sup>2</sup> Myopia is a **growing epidemic worldwide** and, unchecked, will significantly increase prevalence of visual impairment and blindness.<sup>3</sup>

# 70%

of those with high myopia will develop retinal disease in their lifetime with an increased risk of blindness.<sup>1</sup> But there is no safe level of myopia.<sup>4</sup>

### MYOPIA RISK FACTORS<sup>5</sup>



Limited time spent outdoors



Intensity of near work  
(longer duration & at shorter working distance)



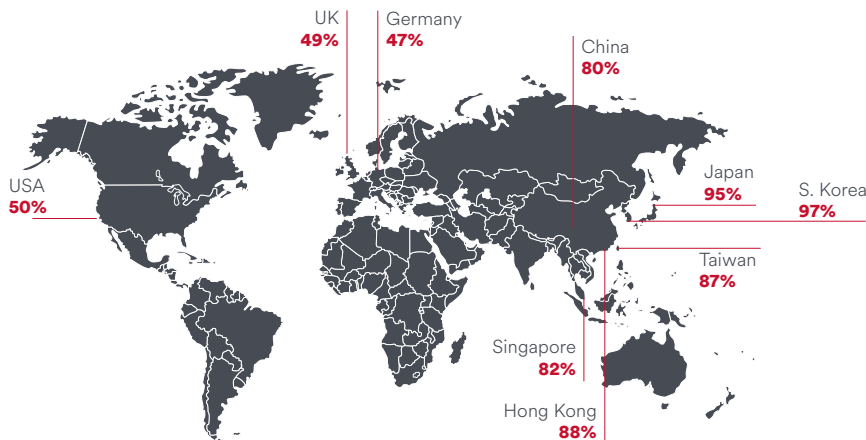
Genetic predisposition



### INCREASING GLOBAL BURDEN OF MYOPIA

By 2050, half of the world's population is projected to be myopic — and nearly 1 billion are expected to have high myopia<sup>6</sup>

#### Myopia Prevalence By Region<sup>1</sup>



## \$328 Billion<sup>7</sup>

The estimated annual direct cost (in USD) of myopia correction for Asian adults.

Globally, costs will be much greater and substantially increase over time.

### Global Impact

Among young adults in urban areas of China, Hong Kong, Japan, Singapore, South Korea and Taiwan, the prevalence of myopia is believed to be **80-97%**.<sup>8</sup>

But the rest of the world is also susceptible, with evidence of **escalating rates globally**<sup>6</sup>, thought principally to be attributable to changing lifestyles.<sup>9</sup>



Myopia in all children should be addressed, but when myopia onset occurs in those less than 12 years of age, it carries an elevated risk of developing high myopia.<sup>10</sup>

### A COMMITMENT TO HALTING THE MYOPIA EPIDEMIC

Johnson & Johnson Vision is committed to changing the trajectory of myopia and supports global strategies to help shape the standard of care. Research partnerships with the Singapore Eye Research Institute, the Singapore National Eye Centre and Queensland University of Technology will help to address the onset, progression and treatment of myopia.



Singapore National  
Eye Centre  
SingHealth



Queensland  
University  
of Technology

Johnson & Johnson VISION

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1 Holy C, Kulkarni K, Brennan NA. Predicting Costs and Disability from the Myopia Epidemic – A Worldwide Economic and Social Model. *Investigative ophthalmology & visual science*. 2019;60(9):5466-5466.  
2 Haarman, A.E. et al. The Complications of Myopia: A Review and Meta-Analysis. *Investigative Ophthalmology & Visual Science*. 2020 Apr 9;61:49  
3 World Health Organization. The impact of myopia and high myopia. World Health Organization, Geneva, Switzerland. 2018.  
4 Filcroff. The complex interactions of retinal, optical and environmental factors in myopia aetiology. *Prog Retin Eye Res*. 2012;31:622;  
5 Morgan, I.G., French, A.N., Ashby, R.S., Guo, X., Ding, X., He, M., Rose, K.A., The epidemics of myopia: Aetiology and prevention. *Progress in Retinal and Eye Research* (2017). doi:10.1016/j.preteyeres.2017.09.004.  
6 Holden BA, Fricke TR, Wilson DA et al. Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 to 2050. *Ophthalmol* 2016;123(5):1036-1042.  
7 Chua S.Y., Foster R.J. The Economic and Societal Impact of Myopia and High Myopia. In *Updates on Myopia 2020* (pp. 53-63). Springer, Singapore.  
8 Ding BY, Shih YF, Lin LLK, et al Myopia among schoolchildren in East Asia and Singapore. *Surv Ophthalmol*. 2017 62(5):677-697  
9 Morgan I.G., Rose K.A. Myopia and international educational performance. *Ophthalmic Physiol Opt*. 2013 May;33(3):329-38  
10 Hu, Yin, et al. "Association of age at myopia onset with risk of high myopia in adulthood in a 12-year follow-up of a Chinese cohort." *JAMA ophthalmology* 138.11 (2020): 1129-1134