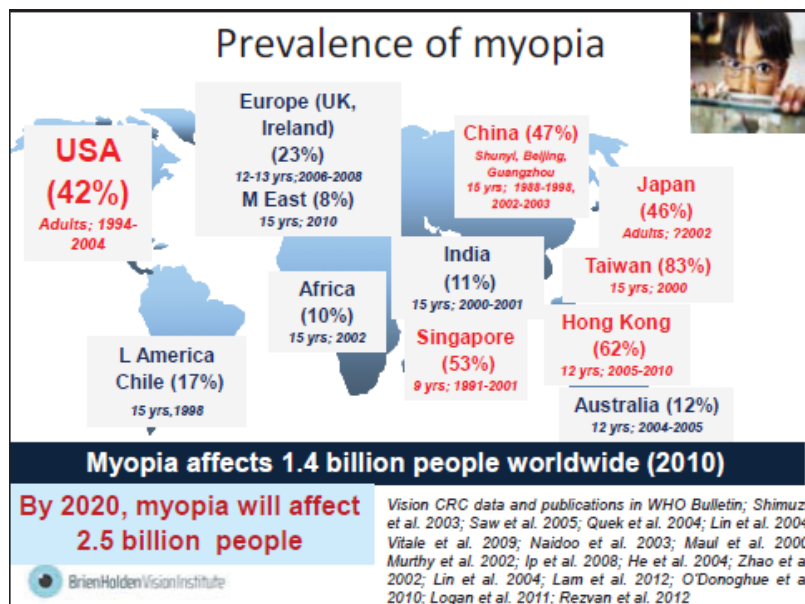


MYOPIA (NEARSIGHTEDNESS)

Myopia is a refractive condition of the eye where light focuses anterior to, or in front of the retina. This results in blurry vision that is worse for distant objects as compared to near objects. Myopia results when the length of the eye, measured from the front of the cornea to the back of the retina, becomes longer. The higher the degree of myopia, the greater the distance vision blur and the closer the point of clear focus becomes for the individual.

The prevalence of myopia is dramatically increasing worldwide. In the United States, the percentage of myopic individuals increased from 25% in 1972 to 46% in 2002. That increase was even more dramatic in other parts of the world.



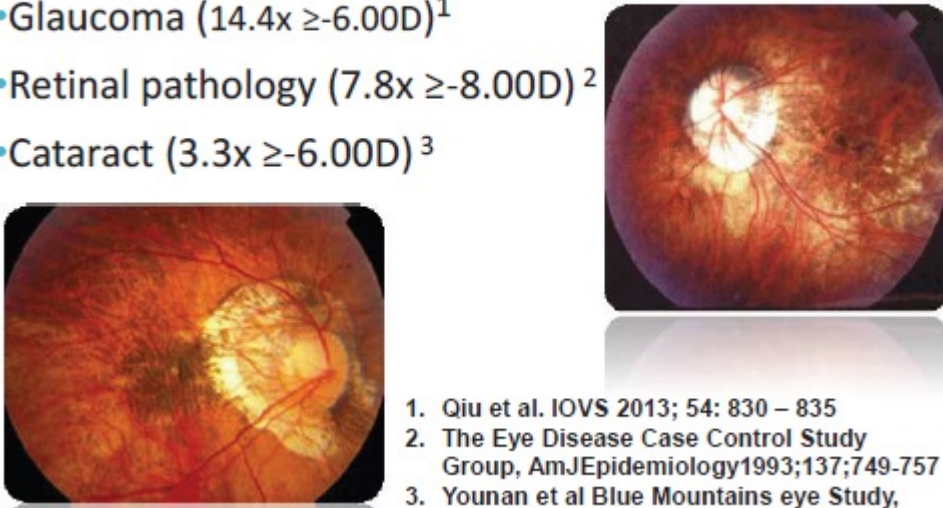
RISKS OF MYOPIA

Myopia has traditionally been considered a simple matter of vision correction with glasses, contact lenses, or laser vision correction. The term “vision correction” is actually a misnomer. We are not correcting vision with these methods, we are “compensating” by various means. The actual axial elongation of myopia is not addressed in any of these methods. Myopia and its associated axial elongation is not a benign condition by any means. There can be serious eye health complications associated with higher degrees of myopia. Beyond the obvious vision issues associated with myopia, individuals with myopia have a higher risk of developing:

- Glaucoma
- Retinal disease
(retinal tears and detachments as well as myopic macular degeneration)
- Cataract

High myopia increases the risk of:

- Glaucoma (14.4x $\geq -6.00D$)¹
- Retinal pathology (7.8x $\geq -8.00D$)²
- Cataract (3.3x $\geq -6.00D$)³



1. Qiu et al. IOVS 2013; 54: 830 – 835
2. The Eye Disease Case Control Study Group, AmJEpidemiology 1993; 137: 749-757
3. Younan et al Blue Mountains eye Study, IOVS 2002; 43: 3625-3632

Risk of myopia associated vision loss is most commonly found with higher degrees of myopia, especially above -6.00 diopters. The functional implications of higher degrees of myopia on everyday life should also be kept in mind.

Outcomes of laser vision correction and other forms of refractive eye surgery are less successful with higher degrees of myopia and are associated with higher rates of complications.

The obvious conclusion is that we need to control the likelihood of developing myopia, especially of higher amounts.

OPTIONS TO CONTROL MYOPIC PROGRESSION

- Corneal Reshaping Therapy (CRT)
- Atropine Eye Drop Therapy
- Multifocal Contact lenses
- Increase ambient light and outdoor activity time (must be done prior to significant myopic development)

*Jones et al. 2007,2011, Rose et al. 2008, Guggenheim et al. 2012

Myopia Control & Blindness Prevention

1. High myopia needs to be prevented as it significantly increases the risk of blindness (*increases the risk of glaucoma, cataract and retinal detachment*)
2. Myopic macular degeneration is becoming a (the?) major cause of world blindness in older people.
3. The rate of increase of myopia can be slowed by optical intervention, drugs, lifestyle changes etc.
4. Every myopic child, young adult and student would benefit from myopia control strategies and therapies.
5. The global awareness of myopia as a major cause of blindness and the need for effective myopia control strategies are important world eye health priorities



Courtesy of the Brien Holden Vision Institute

Myopia is a serious medical condition that needs to be addressed at the early points in its development. We now have technologies that allow us to control progression and “manage” myopia.