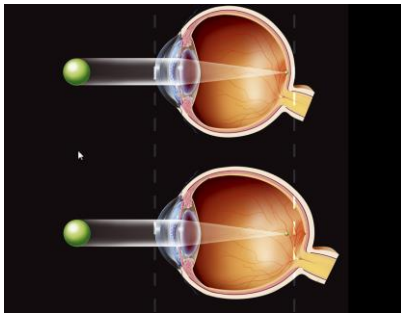


## Myopia (Short-Sightedness)

**In myopia, the light focuses in front of, instead of on, the retina. Close objects can still be seen normally, but distant objects become blurred. There has been a steep increase in the condition in younger generations – in some Asian countries an estimated 90% of teenagers are affected. Myopia increases the risk for more severe condition such as retinal detachment.**



Picture 1: In the healthy eye the light focuses on the retina (above). In myopia, the eye bulb is too long - the light focuses in front of the retina<sup>1</sup>



Picture 2: near-sighted vision with blurry objects in the distance

Myopia is a leading cause behind the need for vision aids (glasses or contact lenses). It is estimated to affect 22% of the population globally, with rates having steadily increased since the 1950s.

The underlying cause of the condition is believed to be a combination of genetic and environmental factors, resulting in an increase in the axial length of the eye as the lead cause of myopia. The retina of myopic patients can become thin and might develop holes, detachment and peripheral degeneration.

There is tentative evidence that exposure to natural light and outside exercise can help to prevent the condition in younger children.

Researchers and clinicians at the Institute of Molecular and Clinical Ophthalmology Basel have chosen myopia as a priority focus area and aim to better understand the mechanisms of eye bulb growth. This knowledge may then help in efforts to develop new preventive or therapeutic approaches.

<sup>1</sup> Picture sourced from: Loughheed T. (2014): Myopia. The Evidence for Environmental Factors. Environmental Health Perspectives 122: A 12-A19