

# Are our schools damaging children's eyes?

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Shockingly, research has shown a dramatic increase in the number of students leaving secondary school with short-sightedness, or myopia, and a new study published in the *Journal Perspectives in Public Health*, published by SAGE, suggests lighting in schools could be a factor.

Over the last 30 years, short sight, or myopia, has become a global health problem. The most dramatic rise has been in Singapore, Taiwan, China's cities and elsewhere in East Asia. Rates can be as high as 80-90 per cent among children leaving secondary schools in the region. As many as a fifth of them have severe myopia and so are at high risk of eye problems in later life. In Western countries rates are increasing; although not as rapidly as in East Asia.

## The Myopia Mystery

The cause of myopia, and the means to prevent it, are unclear despite more than 150 years of scientific research. Many theories have been put forward to explain why children's eyesight gets worse as they go through school. Too much close work is one of the more popular ones, while heredity is another. Both have been hotly debated down the years.

## Is Myopia Like Rickets?

The new study compares the history of school myopia with the bone disease rickets. During the 17th century, rickets was common among children in England and then reached epidemic levels through northern Europe and North America. In some cities, 80 per cent of children were

affected. The remedy proved elusive until the 1920s, when scientists found that a lack of sunlight, resulting in vitamin D deficiency, was the cause of rickets. Myopia, like rickets, is a seasonal condition which seems to get worse in the winter. Recent research on myopia has revived an old theory from the 1890s, that [school children](#) who spend more time outdoors have lower levels of myopia. However, unlike rickets, low ambient light levels rather than low vitamin D levels seem to be the deciding factor in myopia.

## Daylight in Schools

A century ago, it was widely believed that high daylight levels in schools could prevent myopia. Education departments built classrooms with large windows to try to stop children becoming short-sighted. Then in 1960s, medical thinking changed. Myopia was thought to be an inherited condition; so less was done to prevent it. Today, it is known that children's education has a far greater impact on their sight than genetic factors. Evidence that daylight in classrooms prevents myopia is lacking. 'It has not been investigated properly since the connection was first made in the 1860s,' said the author of this study Dr. Richard Hobday. 'But, given the rapid increase in [myopia](#) among school [children](#) worldwide, this should be revisited.'

**More information:** Read the full paper here:  
[rsh.sagepub.com/content/early/.../13915576679.abstract](http://rsh.sagepub.com/content/early/.../13915576679.abstract)

Provided by SAGE Publications

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