

Can additional time outdoors prevent or slow the progression of myopia in children?

Clinical Question

How effective is increasing the time spent outside, in reducing the incidence and progression of myopia in children?

Bottom Line

The results of this review suggest that long-term interventions to increase the time spent outdoors may potentially reduce the development of myopia in children. These interventions may also reduce the progression of myopia, but the low certainty of the evidence obtained makes it difficult to draw conclusions.

The majority of the trials were cluster randomised and school based. They involved the introduction of more breaks during the day with children in the intervention schools encouraged to be outside during these breaks.

Caveat

The majority of the included participants were young school children in their first few years of education. In addition, all the included studies were based in Asia. Asia has the highest prevalence of myopia in the world, and it is unknown if these results are generalisable to countries outside of Asia.

Context

Myopia, or near-sightedness, is a major global health. Observational studies indicate that children who spend more time outdoors have a lower incidence of myopia. However, existing systematic reviews on this topic include various study designs, not exclusively randomized controlled trials (RCTs), which limits the strength of their conclusions.

This review was designed to help standardize findings, enhance generalizability, and inform evidence-based strategies to prevent and manage myopia more effectively.

Cochrane Systematic Review

Kido A, Miyake M, Watanabe N. Interventions to increase time spent outdoors for preventing incidence and progression of myopia in children. Cochrane Database of Systematic Reviews 2024, Issue 6. Art. No.: CD013549. DOI: 10.1002/14651858.CD013549.pub2. This review contains 5 trials which included 10,733 people.

Pearls No. 750, June 2024, written by Assoc Professor Vanessa MB Jordan.

Systematic review link:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD013549.pub2/full>