

Playing outdoors looks good for children's eyesight

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British children who spend more time outdoors are less likely to become short-sighted according to new research from the Children of the 90s study at the University of Bristol.

Short-sightedness ([myopia](#)) can affect 25-50 per cent of young people in the West and up to 80 per cent of young people in parts of south-east Asia. More than a third of [adults](#) need to wear glasses for the condition, in order to see distant objects clearly – a figure that has doubled over the last 30 years.

Research in Australia and the United States has previously suggested a link between the amount of [time](#) children spend in active outdoor pursuits and their chances of needing glasses later in life but it was unclear whether this was due to [physical activity](#), or to simply being

outside.

To address this question, Drs Cathy Williams (Bristol) and Jez Guggenheim (Cardiff) and their colleagues at the University of Bristol have followed the occurrence of short-sightedness in over 7,000 boys and girls in the Children of the 90s study at ages 7, 10, 11, 12 and 15 and compared it to the amount of time they spent outside at age 9 and how much physical activity they did at age 11. The time spent outdoors was measured by a questionnaire filled in by the children's parents and their physical activity was recorded objectively using an activity monitor they wore for a week at age 11.

The researchers found that children who spent more time outdoors at age 8-9 were only about half as likely to become short-sighted by the age of 15.

Other recent research has shown that 80-90 per cent of children in Asia are short sighted, which is thought to be due in large part to the amount of time they spend indoors. This UK study now provides the first direct evidence, based on longitudinal data from a large number of contemporary children and teenagers in south-west England, that spending more time outdoors is associated with less myopia by age 15.

The [protective effect](#) of being outside for longer is unrelated to whether the children's parents were short-sighted or how much time the children spent reading.

Dr Cathy Williams, in the University's School of Social and Community Medicine, said: "We're still not sure why being outdoors is good for children's eyes, but given the other health benefits that we know about we would encourage children to spend plenty of time outside, although of course parents will still need to follow advice regarding UV exposure.

"There is now a need to carry out further studies investigating how much time outside is needed to protect against short-sightedness, what age the protective effect of spending time outside is most marked and how the protective effect actually works, so that we can try and reduce the number of [children](#) who become short-sighted."

Dr Peter Allen, College of Optometrists council member and Principal Lecturer and Director of Clinics at Anglia Ruskin University, added: "As a College we always welcome research that improves our understanding of eye health. Myopia, or short-sightedness, affects a significant number of people in UK so any findings that can help shed more light on why some people develop this and others don't is hugely valuable. This research is particularly exciting because it's the first to identify that simply spending time outside (regardless of what outdoor activities you're engaged in) reduces the risk of becoming short sighted."

More information: Time outdoors and physical activity as predictors of incident myopia in childhood: A prospective cohort study by Jeremy Guggenheim et al was recently published in the journal *Investigative Ophthalmology & Visual Science* (IOVS), [doi:10.1167/iovs.11-9091](https://doi.org/10.1167/iovs.11-9091)

Provided by University of Bristol

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