

Children aren't active enough in winter, say researchers

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Credit: David Robert Bliwas

Children should be given more support to enable them to be more active during the winter, particularly at weekends, say researchers from the University of Cambridge. Their call comes in response to their findings that children are less active and spend more time sitting in autumn and winter compared to other times of the year.

Public health guidelines state that [children](#) should accumulate at least an hour per day of moderate to vigorous intensity [physical activity](#), which might include [brisk walking](#) or running, active participation in sports or exercising. At the same time, children should minimise the amount of time they spend sitting for extended periods.

To examine the [seasonal variation](#) in children's behaviour, researchers at the Medical Research Council (MRC) Epidemiology Unit and Centre for Diet and Activity Research (CEDAR) at the University of Cambridge used data from the UK Millennium Cohort Study, which measured levels of physical activity in more than 700 seven year old children across a calendar year using accelerometers. Using the data, they also modelled the relationship between levels of activity

and variables such as gender, weight and [family income](#). The results of their study are published in the journal *Medicine & Science in Exercise & Sport*.

The researchers found that physical activity was lower in autumn and winter compared to spring; average activity levels across the group peaked in April at 65.3 min/day and reached their lowest levels in February at 47.8 min/day. Physical activity was at its lowest at weekends during winter. Children were at their most active during early summer, particularly at weekends.

The models suggested that boys' activity levels changed more than girls' throughout the year, but remained higher than girls' at all times. Although on average, boys achieved the recommended minimum activity even at winter, girls only tended to reach recommended levels during the summer.

"Physical activity is important for children's health and development, but many do not get enough exercise," says the study's first author Dr Andrew Atkin, from the MRC Epidemiology Unit and CEDAR. "During spring and summer, when the weather is better and the days are longer, they tend to be playing out and more active, but during the darker, colder months, they are much less active."

The team argues that the findings provide further support for initiatives aimed at encouraging physical activity amongst children during winter, particularly at the weekend. To some extent, the structure of the school day, including the need to travel to and from school, protects against inactivity during weekdays in term time.

"Children need to be given more opportunities to be active, particularly during the [winter](#) months and when the weather is bad," adds Dr Esther van Sluijs, the study's senior author also from CEDAR. "This might include better access to indoor spaces where children can be active or through schools changing their policies related to the use of indoor

and outdoor spaces during bad weather."

More information: ANDREW J. ATKIN et al.
Seasonal Variation in Children's Physical Activity
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