

Decreasing sedentary time in class found to reduce obesity in children

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Introducing more movement into lessons led to an 8% reduction in children's waist-to-height ratio, according to new research from UCL and the Institute of Sport, Exercise and Health (ISEH).

The study, [published](#) in *Obesity Facts*, is the first scientific assessment of the impact that reducing sedentary behavior in the classroom has on obesity in [primary school children](#). The authors say that the positive impact on children's weight, regardless of factors like socio-[economic status](#), suggests that the approach could be a cheap and effective way to improve children's health.

According to the most recent estimates (2022–23), 22.7% of Year 6 children in England are obese. This is up from 18.9% in 2012–13.

Previous exercise interventions in schools aimed at reducing obesity have met with some success in the short term, but have been resource-intensive and haven't always led to lasting behavioral changes.

In this study, researchers from UCL and ISEH investigated the effect of reducing sedentary time, rather than increasing exercise, on [physical activity](#) and obesity in children at 30 U.K. state primary schools.

Teachers at 26 of those schools were trained to include Active Movement in lessons, with four control schools continuing to teach as normal. Active Movement is a new approach to reducing child inactivity by integrating non-sedentary behavior and low-level activity into daily routine.

All schools completed a self-reported survey to gauge how active a child is in terms one and three, while three intervention and three control schools also measured children's waist-to-height ratio.

In the schools where more movement was introduced, children's waist-to-height ratio was reduced by 8% and sport participation increased by 10% between term one and term three of the academic year. Children with a higher baseline waist-to-height ratio showed the greatest improvement, regardless of socio-economic status, age or gender.

Dr. Flaminia Ronca, first author of the study from UCL Division of Surgery & Interventional Science and the Institute of Sport, Exercise and Health, said, "Studies have shown that for most children in the U.K., classroom time is the most sedentary part of their life. By introducing movement into teaching in creative ways, such as standing up to answer questions or walking around the classroom as part of a learning exercise, we can significantly reduce their sedentary time and our study shows that this can lead to a recognizable improvement in their waist-to-height ratio."

The intervention schools followed the Active Movement program, a school-based program developed by Professor Mike Loosemore and Peter Savage that integrates behaviors such as standing and walking in the classroom. It was designed to integrate non-sedentary behavior and low-level physical activity into a child's normal school routine without disrupting the curriculum.

Peter Savage, an author of the study from Active Movement, said, "When we first propose the idea of active movement to teachers, their first reaction is often to say that they don't know how they'll manage to do this on top of everything else. But they usually discover that active movement can make a classroom easier to manage, rather than harder. Not only are children getting physical benefits from being less sedentary, the learning environment is improved."

While obesity affects children from all backgrounds in the U.K., those from the most deprived areas are more than twice as likely as those from the least deprived areas to be obese. Children from the poorest areas are also likely to attend schools with fewer resources than those in more affluent areas. The approach trialed in this study is valuable because it doesn't require schools to spend money on equipment or staff to implement it.

Professor Mike Loosemore, senior author of the study from UCL Division of Surgery & Interventional Science and the Institute of Sport, Exercise and Health (ISEH), said, "Our results show that reducing sedentary behaviors during school time can be an effective obesity reduction strategy for primary school children who are overweight.

"What's even more encouraging is that this method was effective regardless of the child's socio-economic status, age or gender. It is something that schools could introduce without needing to invest heavily in equipment or staff, and everyone will benefit."

More information: Flaminia Ronca et al, Decreasing sedentary time during lessons reduces obesity in primary school children: the Active Movement study, *Obesity Facts* (2024). [DOI: 10.1159/000536665](https://doi.org/10.1159/000536665)

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