

Long-term study identifies early predictors of sedentary behavior in children

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In work published in the open access journal *PLoS ONE* today, more than 500 8 to 10-year-olds wore activity monitors providing Newcastle University and University of Strathclyde researchers with a very accurate picture of how little time children spent being physically active.

They were monitored for a range of actions from moving around, climbing stairs to running, [playing games](#) and skipping.

Researchers found:

- Children spent only 4% of awake time in moderate to vigorous intensity physical activity, this is about 20 minutes per day while the recommended amount for health is 60 minutes per day.
- At age 8, [girls](#) were already less active than boys - something known to occur at secondary school - but this study has shown that the difference in physical activity between boys and girls starts much earlier on.
- Older fathers tended to have less active children.
- Children who took part in sports clubs outside of school were significantly more active than those who did not.
- Parents who restricted access to television were shown to have children who were less active.

Newcastle University's Dr Mark Pearce led this study funded by the National Prevention Research Initiative. He said: "Given the importance

of physical activity in maintaining good health, we know we need to get our kids more active. What we hadn't known until now is how young we need to be catching them, or the reasons that lay behind their lack of activity.

"Already at the age of eight, we are seeing girls being less active than boys. This is something which we know then gets worse as they approach their [teenage years](#).

"One of the important things is that most girls don't see sport as cool. We need to be tackling these issues earlier by encouraging girls to exercise, by providing a wider range of opportunities than are currently on offer and by ensuring they see positive female role models, particularly in the media."

As to why the children of older fathers were found to be less active, Dr Pearce said: "We think there may be a variety of explanations for this such as older fathers reaching more senior posts and having to work longer hours or maybe seeing themselves in a more traditional role so spend less time in active play with their children."

Professor John Reilly from the University of Strathclyde, one of the researchers involved in this study said: "There is an urgent need for interventions, at home and at school, which will help primary school children become more physically active."

In the Gateshead Millennium Study, 508 [children](#) wore activity monitors for at least three days and their movement was registered which meant their activity levels were objectively measured. The data were then related to an accompanying questionnaire and data collected previously in this study which has been on-going since birth.

Findings included that the average daily percentage of time spent doing

moderate or vigorous [physical activity](#) was just 4.1%. Girls, on average spent 2.5% less of their day doing activity.

More information: Pearce MS, Basterfield L, Mann KD, Parkinson KN, Adamson AJ, et al. (2012) Early Predictors of Objectively Measured Physical Activity and Sedentary Behaviour in 8 Year Old Children: The Gateshead Millennium Study. *PLoS ONE* 7(6): e37975. [doi:10.1371/journal.pone.0037975](https://doi.org/10.1371/journal.pone.0037975)

Provided by Newcastle University

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