

## Study: Preventing type 2 diabetes in young people is possible without medication

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Ten minutes of physical activity a day or less screen time is all it takes to delay the onset of type 2 diabetes and slow its development in youth, according to a study led by Université de Montréal clinical associate

professor Dr. Mélanie Henderson, a pediatrician, endocrinologist and epidemiologist at UdeM's affiliated children's hospital, CHU Sainte-Justine.

Obesity rates are on the rise among Canadians under the age of 19 and are reaching alarming levels. With the number of children with type 2 diabetes expected to quadruple in Canada over the next few decades, Dr. Henderson's research offers a glimmer of hope by quantifying how physical activity and sedentary behaviors affect key diabetes indicators.

"With just 10 minutes of moderate to [vigorous physical activity](#) per day, we see a decrease in the risks associated with the development of type 2 diabetes in at-risk children," said Soren Harnois-Leblanc, an UdeM Ph.D. in epidemiology and first author of the study, which was published in November in *Lancet Child Adolescent Health*.

"Reducing sedentary time by an hour a day offers similar benefits," said Dr. Henderson. "Screen time, whether it's television, video games or [social media](#), is particularly harmful, but it's also easier to avoid than transportation-related sedentary time, for example. Not all sedentary habits have the same impact on cardiometabolic health."

Changing one's lifestyle habits can be tricky, however. The body has built-in mechanisms to maintain its highest weight, making it very difficult to lose weight. That's why it's so important to act early with children and adolescents having a family history of obesity, the researchers say.

"There's an urgent need to develop and implement obesity prevention policies that are aimed at promoting [physical activity](#) and reducing sedentary behaviors to prevent diabetes in vulnerable populations," Dr. Henderson said. "We need to target health across the board," added Harnois-Leblanc.

A total of 630 Quebec children with a family history of obesity were monitored over a seven-year period in three cycles: ages 8–10, 10–12 and 15–17. Several tests were used to measure key diabetes indicators including insulin sensitivity, insulin secretion and blood glucose levels. Physical activity and total [sedentary time](#) were measured by accelerometry, and leisure [screen time](#) was assessed using a self-reported questionnaire.

**More information:** Soren Harnois-Leblanc et al, Estimating causal effects of physical activity and sedentary behaviours on the development of type 2 diabetes in at-risk children from childhood to late adolescence: an analysis of the QUALITY cohort, *The Lancet Child & Adolescent Health* (2022). [DOI: 10.1016/S2352-4642\(22\)00278-4](https://doi.org/10.1016/S2352-4642(22)00278-4)

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