

# Study finds obesity spiked in children during COVID-19 lockdowns, only the youngest bounced back

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Obesity among primary school children in the UK spiked during the COVID-19 lockdown. Credit: Ketut Subiyanto, Pexels, CC0 ([creativecommons.org/publicdomain/zero/1.0/](https://creativecommons.org/publicdomain/zero/1.0/))

Obesity among primary school children in the UK spiked during the COVID-19 lockdown, with a 45% increase between 2019/20 and 2020/21 among 4–5-year-olds, according to a study published in *PLOS ONE* by Iván Ochoa-Moreno from the University of Southampton, UK, and colleagues. The authors estimated that without reversals, increased obesity rates in Year 6 children alone will cost society an additional £800 million in health care.

During the first year of the pandemic, school closures dramatically altered the routines of [young children](#). Cancellation of organized sports, disrupted sleep schedules, more screen time, and deterioration of healthy eating habits likely contributed to the largest single-year increase in overweight and obesity prevalence seen in children in decades.

To better understand the long-term health and [economic costs](#) of rising [obesity rates](#) in young children, the authors of the study compared Body Mass Index (BMI) data from England's National Childhood Measurement Program (NCMP) before, during, and after the COVID-19 pandemic among children in their first and last years of primary school (aged 4–5 and 10–11 years old). Using data from two additional longitudinal cohorts in the UK, they modeled the impact of these BMI trends on adult health outcomes and costs.

The researchers observed a 45% increase in obesity prevalence during 2020–2021 in children between 4–5 years old, and a similar effect in Year 6 children. This increase was twice as high in the most deprived areas of England. While the number of overweight and obese 4–5-year-olds returned to pre-pandemic levels the following year, the increases seen in older children persisted into 2022.

The study estimated that this group of children will cost society an additional £800 million in [health care](#), for conditions like type 2 diabetes and heart disease, over their lifetimes.

The researchers state that the persistence of weight gain in older children suggests that reversing obesity is very challenging in older age groups, while the quick reversal to pre-pandemic levels in young children highlights the promise of policies targeting children under five as a strategy to tackle obesity.

One of the study's authors, Professor Keith Godfrey, adds, "The sharp increase in [childhood obesity](#) during the COVID-19 pandemic illustrates the profound impacts on children's development. Alongside the escalating costs of the ongoing epidemic of childhood obesity, it is clear that more radical new policy measures are required to reduce obesity and secure well-being and prosperity for the country as a whole."

**More information:** Projected health and economic effects of the increase in childhood obesity during the COVID-19 pandemic in England: The potential cost of inaction, *PLoS ONE* (2024). [DOI: 10.1371/journal.pone.0296013](https://doi.org/10.1371/journal.pone.0296013)

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