

Study finds less obesity in 3- and 4-year-olds after the pandemic

March 25 2024



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The prevalence of overweight and obesity in the group of three- and four-year-olds in Sweden has decreased after the pandemic. The increase during the pandemic thus appears to have been temporary. These are the findings of a study conducted at the University of Gothenburg and

Uppsala University.

The [study](#), published in the journal *JAMA Pediatrics*, is based on data on 50,833 children aged three to five years. Health care data about the children are sourced from regular check-ups at pediatric health care centers, BVC. Participating regions were Dalarna, Jönköping County and Sörmland.

The researchers have previously been able to demonstrate increased overweight and obesity during the pandemic among three- and four-year-olds in Sweden. According to the current study, today's three- and four-year-olds are at about the same levels as three- and four-year-olds before the pandemic. The group of five-year-olds has not had similar weight changes.

The studied time periods are before the COVID-19 pandemic (up to and including April 2020), early pandemic (May 2020-May 2021), late pandemic (June 2021-March 2022) and post-pandemic (from April 2022).

Increasing and decreasing BMI

In the group of three-year-olds, the proportion with obesity increased from 2.4% before the pandemic to 3.4% during the early pandemic, and then decreased to 2.3% during the late pandemic. After the pandemic, the proportion of three-year-olds with obesity was 2.6%.

The development of overweight in three-year-olds follows the same pattern. The proportion of overweight children went from 11.6 to 13.2%, followed by a decline to 11.3 during the late pandemic. After the pandemic, the proportion of overweight three-year-olds was 11.9%.

In the group of four-year-olds, BMI ([body mass index](#)) also changed

significantly. The obesity rate increased from 2.6% before the pandemic to 3.7% during the early pandemic, then declined to 3.1% during the late pandemic and to 2.5% after the pandemic.

The proportion of overweight in the group of four-year-olds rose from 10.3% before the pandemic to 11.7% during the early pandemic, and then decreased to 9.9% during the late pandemic and after the pandemic.

Unhealthy weight can regress

Globally, [weight gain](#) in young children during the pandemic has been explained by changes in [dietary habits](#) and reduced [physical activity](#) as a result of social restrictions and closed preschools. In Sweden, preschools were up and running, but the weight trend remained the same as in other countries, which, according to the researchers, may be due to the fact that many children missed out on [nutritious food](#) and regular outdoor activity.

The fact that the weight trend has now been broken is also of great importance in the long term. Childhood obesity increases the likelihood of continued obesity in adulthood, with an increased risk of cardiovascular disease, cancer, and lower quality of life.

Responsible for the study are Anton Holmgren, Pediatrician at Halland Hospital, who conducts research in pediatrics at Sahlgrenska Academy, University of Gothenburg, and Anna Fäldt, Researcher at Uppsala University within pediatric health and parenthood.

"The fact that the proportion of overweight and obese three- and four-year-olds has decreased indicates that the weight gains were related to the pandemic, and that an unhealthy weight status can be reversed. This also applies at the individual level, a significant proportion of the children where we had repeated measurements dropped to a lower BMI

class after the pandemic," says Holmgren.

More information: Anna Fäldt et al, Childhood Overweight and Obesity During and After the COVID-19 Pandemic, *JAMA Pediatrics* (2024). [DOI: 10.1001/jamapediatrics.2024.0122](https://doi.org/10.1001/jamapediatrics.2024.0122)

Provided by Swedish Research Council

Citation: Study finds less obesity in 3- and 4-year-olds after the pandemic (2024, March 25)
retrieved 27 April 2024 from

<https://medicalxpress.com/news/2024-03-obesity-year-olds-pandemic.html>

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