

# When do German children gain weight?

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Scientists working with Professor Dr. Dr. Perikles Simon, head of the Sports Medicine division of Johannes Gutenberg University Mainz (JGU) in Germany, suggest in the light of recent analyses that German children gain weight soon after entering elementary school.

From birth up to the age of five [years](#), today's children's weight development is nearly identical to those from twenty years ago. Then as now there are about 10 percent of the children in this age range who are classified as [being overweight](#). There is even a slight tendency that in the first five years of their life, today's children weigh less as it was 20 years ago. "However, what we have found is that over the next three years in school there is a significant increase in the prevalence of overweight compared to a representative international and German reference population," explains Sascha Hoffmann from the JGU Institute of [Sports Science](#). Supported by the research group of Cognition and Perception of the University of Tübingen, the JGU scientists asked a relatively simple question: When exactly do German children [gain weight](#)? The results were recently published in the leading journal *Obesity* (Silver Spring).

Sascha Hoffmann, as part of his doctorate, performed an in-depth analysis of the public use file of the KiGGS Study – The German Health Interview and Examination Survey for Children and Adolescents, conducted between May 2003 and May 2006. For data analysis, Rolf Ulrich, Professor for Cognitive Psychology at the University of Tübingen, used a procedure which – in contrast to standard data analyses – allows a more objective comparison of age groups; so it is now

possible to determine exactly when considerable changes in data sets occur. The results indicate that, in Germany, at the age of 7.2 years there may be the highest increase in the prevalence of childhood overweight. At 8 years of age, more than 20 percent of German children are considered to be overweight. About 20 years ago, this was the case for only 10 percent of children. During the supposed critical phase of puberty, this rate in overweight remains relatively constant through to adulthood.

These findings provide important starting points to target the progressive overweight in Germany. An aspect that the researchers will consider in more detail in the coming years will be if "school entry" has an effect on the weight status of children. The researchers want to find out how the increase in bodyweight in this particular range of life can be explained. Principal investigator Professor Dr. Dr. Perikles Simon warns about assuming that the reasons for this increase in weight can be principally linked to school routine: "Our children were attending school also 20 years ago, and the children today encounter a similar school environment. The only difference is that there was previously no such rapid increase in numbers of overweight children. We postulate that this is due to a fairly complex interaction of several factors which are probably mainly to be found in the children's home environment."

The researchers also noted that the underlying foundations for this relatively rapid increase in the percentage of [overweight](#) children during their first year of [school](#) are most probably laid already when the children are at kindergarten age. In order to test this hypothesis more closely, baseline data have already been collected in 35 kindergartens in Mainz. Here, the researchers were aided by the inner-university research promotion program, the Child-Friendly Rhineland-Palatinate program established by the Ministry of Integration, Family, [Children](#), Youth, and Women, and the city of Mainz. The currently ongoing collection of longitudinal data in elementary schools in Mainz has also attracted

widespread regional support. "Despite all the positive encouragement that we have received up to now, we will soon need financial support from additional partners to be able to develop appropriate intervention programs", concludes Simon.

**More information:** S. Hoffmann, R. Ulrich, P. Simon: Refined Analysis of the Critical Age Ranges of Childhood Overweight: Implications for Primary Prevention. *Obesity* (Silver Spring), 20 June 2012 [doi: 10.1038/oby.2012.172](https://doi.org/10.1038/oby.2012.172)

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