



# Overweight and obesity among school children 11–15-year-old continues to increase

The proportion of school children with overweight or obesity has doubled over the past 30 years according to the results from Health Behaviour in School-aged Children (HBSC), a survey of 11–15-year-olds.

Since 1989/90 the proportion of school children aged 11–15-years with overweight or obesity has more than doubled. Overweight increased from about 7 to 15 percent between 1989/90 and 2017/18, and the corresponding figures for obesity was about .08 to 4 percent. This indicates that the proportion of children with obesity was five times higher in 2017/18. The results also point to a marked increase in obesity after 2009/10.

The results are based on self-reported data from the HBSC study, conducted every four years since 1989/1990 among 11–15-year-old students. The prevalence of overweight and obesity is unequally distributed, with both gender and age differences. Overweight and obesity was more common among boys than girls, and the risk increases with age.

## Development in different age groups

The proportion of 11-year-old boys with overweight or obesity varied slightly, but during the period 1989/90–2017/18 increased from 5 to 9 percent. Among girls it increased from 8 to 12 percent.

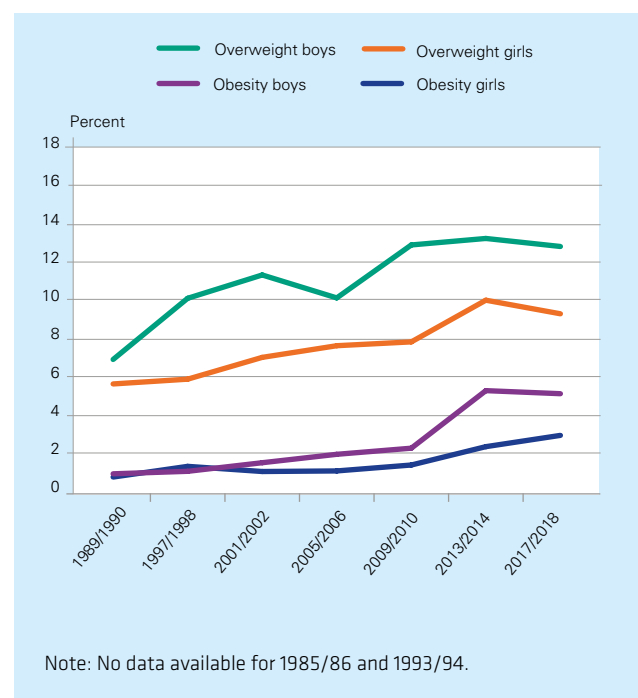
The proportion of 13-year-old boys with overweight or obesity increased gradually from 8 to 20 percent in 2017/2018. The pattern was similar for girls with an increase from 5 to 12 percent.

The proportion of 15-year-old boys with overweight or obesity increased from 10 to 20 percent between 1989/90 and 2013/14, but decreased to 16 percent in 2017/18. Among girls, the proportion was between 6 and 9 percent until 2009/10. It increased to 13 percent in 2013/14 but dropped to 12 percent in 2017/18.

## SUMMARY

- Overweight and obesity among school children has doubled over the past 30 years.
- The risk of overweight and obesity is higher among boys than girls, and increases with age.
- Few school children reach the recommendations for physical activity and daily intake of fruits and vegetables.
- Overweight and obesity during childhood increases the risk of overweight and obesity as an adult.
- The increase in overweight and obesity depends largely on the physical and social environment in which we live.

**Figure 1.** Proportion of girls and boys with overweight and obesity, 1989/90–2017/18.



Many factors have an impact on the prevalence of overweight and obesity in school-aged children. Some examples are housing, local environment, socio-economic factors and lifestyle – including eating habits and physical activity.

### Positive changes in dietary habits

Indicators of eating habits show changes both among girls and boys during the years with available data (2001/02–2017/18). The proportion of children reporting that they eat sweets and drink soft drinks daily decreased, while daily intake of vegetables increased. Nearly 50 percent of girls eat vegetables daily, compared to about 40 percent of boys. The consumption of fruit has not changed, however, it differs by age and gender. It is mainly younger children who eat fruit every day. Among 11-year-olds, 29 percent of boys eat fruit every day compared to 35 percent of girls. Among 13- and 15-year-olds, of both sexes, 23–27 percent eat fruit daily.

### Physical activity decreases with age

Results from objectively measured physical activity, from a subsample of participants that wore accelerometers for a week in HBSC 2017/18, indicate that students are inactive during the majority of their waking time. This means that they mostly sit or stand and move very little. Inactive time increases with age, from 67 percent for 11-year-olds to 75 percent for 15-year-olds. In all age groups, inactive time is evenly distributed over the week, indicating that students are no more active during leisure time and weekends than during school hours.

#### METHOD

Self-reported height and weight data was used to calculate the Iso-BMI (according to International Obesity Task force) and in line with the National Handbook of Child Health Care which requires the removal of extreme values (i.e. weight values that are 3 standard deviations above or below the mean). The Iso-BMI takes into account age and gender and categorized weight status as: underweight (BMI<18.5), normal weight (BMI 18.5–24.9), overweight (BMI 25–29.9) or obese (BMI>30).

\* Body mass index (BMI) is a ratio that is calculated by dividing the body weight (kg) by height in metre square (m<sup>2</sup>).

### The local environment and society have an impact

Current rates of overweight and obesity is a clear indication that the physical and social environment promotes weight gain. Society is part of the cause, but also part of the solution. Creating supportive environments allows for healthier choices and thus reduces the risk of overweight and obesity among school children. For example, the local environment can be designed to invite and facilitate movement, by encouraging active transport to and from school and school yards that stimulate movement. Within schools, food policy and routines for school meals are integral. However, continued research is required on the social conditions and actions leading to more physical activity and the adoption of healthier eating habits among school children.

### Why is this information important?

Overweight and obesity affect the physical and mental health of school children and is therefore a major public health issue. In addition, the risk of overweight and obesity during childhood increases the risk in adulthood. The ill health of individuals with overweight or obesity is associated with financial and social costs for society and the individual. Obesity among adults alone is estimated to cost society approximately SEK 70 billion per year. Since 1980, the prevalence of obesity has tripled in adults, and today every other adult in Sweden has overweight or obesity.

#### TARGET GROUP AND AIM

This factsheet shows the development of overweight and obesity among 11–15-year-old school children in Sweden from 1989/1990 to 2017/2018. This knowledge is important for identifying target groups for health promotion and prevention of overweight and obesity. Both individual-based and societal efforts are needed for school children to be more physically active and adopt healthy eating habits. Such efforts are a prerequisite for achieving the sustainability goals in Agenda 2030.

We appeal to those who decide on, develop, or work with health promotion and preventive measures, for example, in the municipalities, regional administrative boards or schools.



Folkhälsomyndigheten  
PUBLIC HEALTH AGENCY OF SWEDEN