



Childhood obesity



Definition

Childhood obesity and overweight is measured against a UK standard growth charts:

- Children or adolescents with a BMI equal to or greater than the 85th centile, adjusted for their age and sex, on UK standard growth charts, are considered to be overweight (including obesity).
- Children or adolescents with a BMI equal to or greater than the 95th centile, adjusted for their age and sex, on UK standard growth charts, are considered to be obese.

NB The Scottish Health Survey uses slightly different terminology reflecting the difficulties of measuring obesity and overweight for children.

Why is it important?

Obesity in childhood can cause social, psychological and health problems, and is linked to obesity later in life and poor health outcomes as an adult. Children who are obese are twice as likely to develop type-2 diabetes.

Environmental and behavioural factors can increase the risk that a child becomes overweight.

- Diet, physical activity and sedentary behaviour patterns are strongly associated with Body Mass Index (BMI).
- Children with parents who are a healthy weight have a lower risk of being overweight than children of obese parents.

In 2014/15, more than one in five (21.8%) primary 1 children were found to be overweight (see definition above), including nearly one in ten (9.8%) who were obese. The 2015 Scottish Health Survey reported that more than a quarter of children (28%), aged two to 15 years, were overweight, including one in seven (15%) who were obese.

Current situation

In Glasgow in the period 2012/13-2014/15 about 6% of primary 1 children were found to be obese. The percentage of primary 1 children who were obese varied between 1% and 12% across Glasgow's neighbourhoods.

Are there inequalities to consider?

A higher proportion of children living in deprived areas are more likely to be overweight and obese compared to those living in more affluent areas. The risk of being overweight and obese rises as deprivation levels increase. In 2014/15, a quarter (25.1%) of primary 1 children living in the most deprived areas were overweight, including one in eight (12.5%) who were obese. In contrast, in the least deprived areas, one in six (17%) primary 1 children were overweight, including one in 14 (7%) who were obese.

Overall, it is predicted that rates of childhood obesity will decrease slightly in the future. However, the proportion of children who are overweight and obese has been reducing more for those living in affluent areas, so socio-economic inequalities in childhood obesity are likely to continue to increase.

Challenges and solutions

Interventions to prevent and manage childhood obesity can be supported by changes to the environment in which children grow up.

For example:

- reformulation of food and drinks high in sugar
- restrictions on advertising and sponsorship from junk food retailers aimed at children through social media or at family and sporting events
- rebalance of price promotions towards healthy food
- regulation of portion size of out-of-home food

Prevention interventions

A multi-component and holistic approach which aims to improve diet and physical activity in numerous areas of children's lives, including the environment in which they live, is more likely to achieve long-term change than a focus on a single aspect of behaviour. However, little is known about which elements are the most successful and cost-effective.

Interventions that have shown positive effects have included elements such as:

- integration of healthy eating, body image, and physical activity into the school curriculum
- increased physical activity sessions and movement skills throughout the school week
- improved nutritional quality of school food
- environmental and cultural practices that support healthy food and physical activity
- support for teachers (and other staff) to implement health promotion activities
- parental support and home activities that encourage children to be more active, eat more healthily, and reduce screen-based activities

Weight management programmes

Weight maintenance rather than weight loss can be the goal of weight management programmes in children and adolescents as their BMI will improve as they grow taller.

Better weight outcomes are associated with programmes which:

- **adopt a multi-component approach.** Interventions that include dietary and physical activity elements along with behavioural strategies are more effective than single component programmes.
- **target parents and children or whole families.** Child-only interventions, particularly for younger children (under 12 years) are less effective in reducing BMI. Family-based programmes appear to be equally effective across the social gradient.
- **are longer and more intense.** Programmes lasting at least six months have been found to be more effective than shorter interventions. Higher contact time was also associated with increased effectiveness.

Examples of positive action

1. The Daily Mile

The [‘Daily Mile’](#) was introduced by the head teacher of St. Ninian’s primary school after being concerned about the level of fitness of pupils in the school. Each class of pupils is taken by their teacher to run round the school field (5 laps = a mile) at a time of the teacher’s choosing during the school day. Teachers have noticed improvements in pupils’ concentration, over and above increases in physical fitness.

Links to other issues

[Children’s physical activity](#)

[Active travel to school](#)

[Active travel to school \(Evidence for action briefing\)](#)

Links to other resources

Grant, K (2017) [How can we reduce obesity in Scotland?](#) Edinburgh: Scottish Parliament Information Centre.

Mackie, P. & McCann, A. (2014): [Report of the Scottish Public Health Obesity Special Interest Group: Expert Group on the Development of the Child Healthy Weight Programme in Scotland.](#) Glasgow: Scottish Public Health Network (ScotPHN)

SIGN (2010): [Management of Obesity. SIGN Guidelines 115.](#) Edinburgh: Scottish Intercollegiate Guidelines Network.

Scottish Government (2010): [Preventing Overweight and Obesity in Scotland: A Route Map Towards Healthy Weight.](#) Edinburgh: Scottish Government.

Public Health Scotland website - [A systems approach to diet and healthy weight.](#)