

Questions and Answers About Childhood Obesity

10 May 2017

1. What is childhood obesity?

Childhood obesity is a condition of extreme overweight in children and adolescents. Living with obesity or overweight, consisting mainly of body fat, can lead to health problems, such as cardiovascular disease and type 2 diabetes, sometimes already at an early age. Children may also develop psychological problems, like depression and anxiety, which further reduces their quality of life. Obesity has significant economic consequences, including high health care costs for both the individual and the society. It is important to understand the causes of weight gain, and to learn how to best prevent and treat it.

2. How many children live with obesity or overweight?

The World Health Organization estimates that the number of Europeans living with obesity has more than tripled since the 1980s, and that around 1 in 3 children aged 6-9 years old have obesity or overweight.¹

There are large country differences, with the south of Europe having the highest number of children affected by overweight. The statistics also show that the increase in childhood obesity rates has slowed down in developed countries, but not in low- and middle-income countries, where more children affected by obesity (see the weight categories in question 5).¹ Monitoring the prevalence and trends of childhood obesity is important to see if prevention and intervention programmes have an effect.

3. How does obesity develop in children?

Being affected by obesity is the result of a combination of several factors that contribute to an [energy imbalance](#) over a longer period of time. The below (non-exhaustive) list includes factors that may increase or decrease the risk.

	Increased Risk	Decreased Risk
Dietary Factors:	<ul style="list-style-type: none"> • Intake of large meals. • Intake of sugar sweetened drinks. 	<ul style="list-style-type: none"> • High fruits and vegetables intake.
Behavioural factors:	<ul style="list-style-type: none"> • Frequent snacking (especially on foods high in fat, sugar and salt). • Not getting adequate sleep • Screen time (television, laptop, tablet, etc.). • Skipping breakfast. 	<ul style="list-style-type: none"> • Physical activity. • Limited sitting time.

Physical environment:	<ul style="list-style-type: none"> • ‘Obesogenic’ environment stimulating unhealthy eating behaviours. • Little physical activity. 	<ul style="list-style-type: none"> • Healthy meal options in the school canteen. • Access to free drinking water. • Supporting infrastructures (bicycle lanes, safe walking areas, stairs, etc.). • Supporting facilities (sports clubs, recreational facilities, public transport services, etc.).
Social environment:	<ul style="list-style-type: none"> • Unhealthy diet- and activity patterns of parents or friends. • Familial stress. • A lack of acceptance from peers, and a low socioeconomic status. 	<ul style="list-style-type: none"> • Health education and physical activity programmes at school.
Psychological factors:	<ul style="list-style-type: none"> • Impulsivity, depression, self-esteem, and anxiety. <p>Vice versa, having obesity or overweight may lead to psychological and social problems.</p>	
Pregnancy and early life nutrition:	<ul style="list-style-type: none"> • Under- and over-weight of the mother during pregnancy. 	<ul style="list-style-type: none"> • Breastfeeding <p>For the health of both mother and child, the WHO recommends exclusive breastfeeding until six months of age, followed by a step-by-step introduction of complementary foods.</p>
Genetics:	<ul style="list-style-type: none"> • Several genes <p>Having one or more of these genes does not necessarily mean that that will happen, likewise for the other abovementioned factors. It a combination of several factors that will define whether a child has obesity.</p>	

4. What are the health consequences of childhood obesity?

Obesity in children is strongly linked to health problems, at present, and later in life. It is likely to be carried over into adulthood, and increases the risk for a variety of physical health problems, including: type 2 diabetes, cardiovascular disease, musculoskeletal problems including joint and muscle pain, reduced mobility and balance, obstructive sleep apnoea, asthma, and early entry into puberty.

Stigmatisation, discrimination, and bullying are psychosocial consequences of childhood obesity. This can lead to a low self-esteem, social isolation, low performance at school and a general low mood, such as depression, self-blame, shame and helplessness.

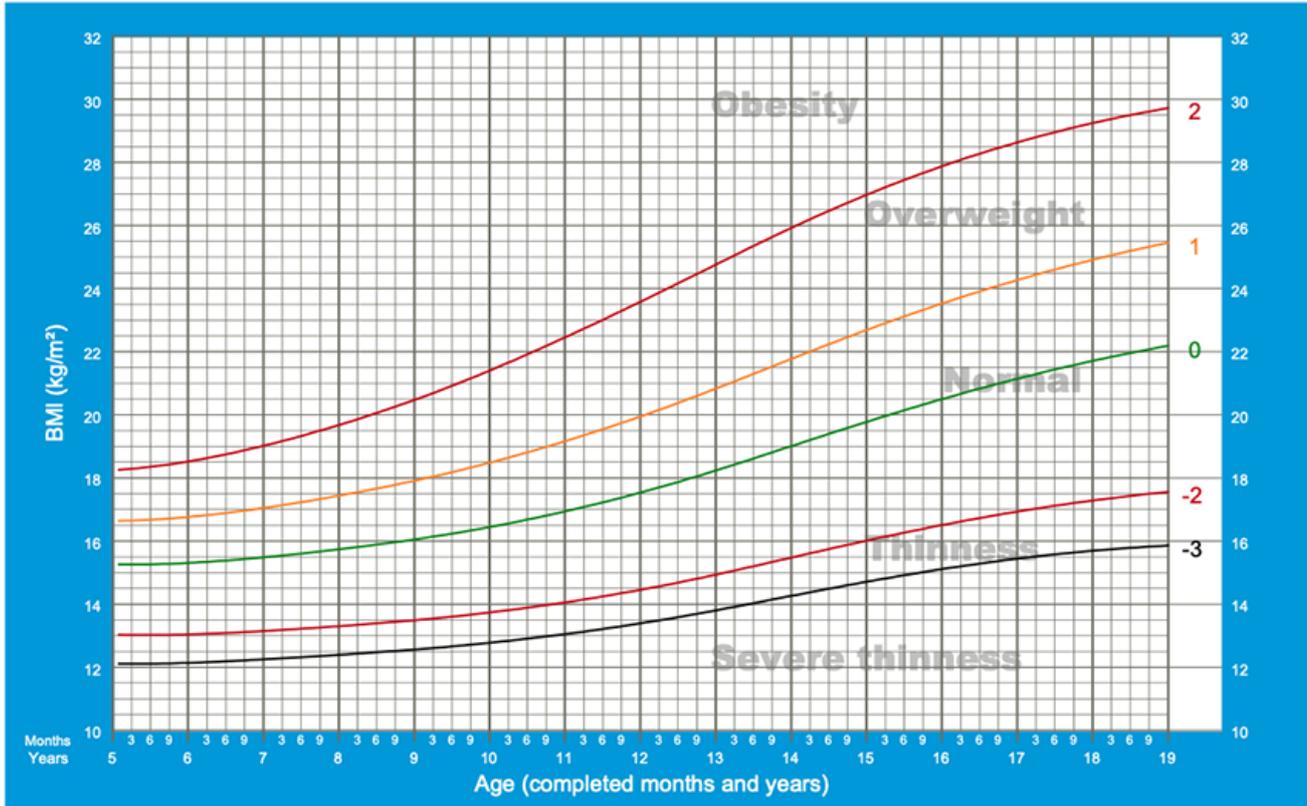
The financial consequences of childhood obesity and associated diseases are significant. It has been estimated that in the European Union, every year about 7% of the national health budget is spent on the obesity-linked diseases.² As the number of individuals living with obesity is likely to increase, so will the costs for the prevention and treatment.

5. How is obesity in children measured?

Assessing obesity in children is different and more complex than in adults, because children grow and develop at different paces at different ages. To assess a child's weight category, his/her body mass index (BMI) is compared with the 'BMI-for-age' chart (Figure 1). The charts reflect the natural growth patterns of children, and may have small country differences.

BMI-for-age BOYS

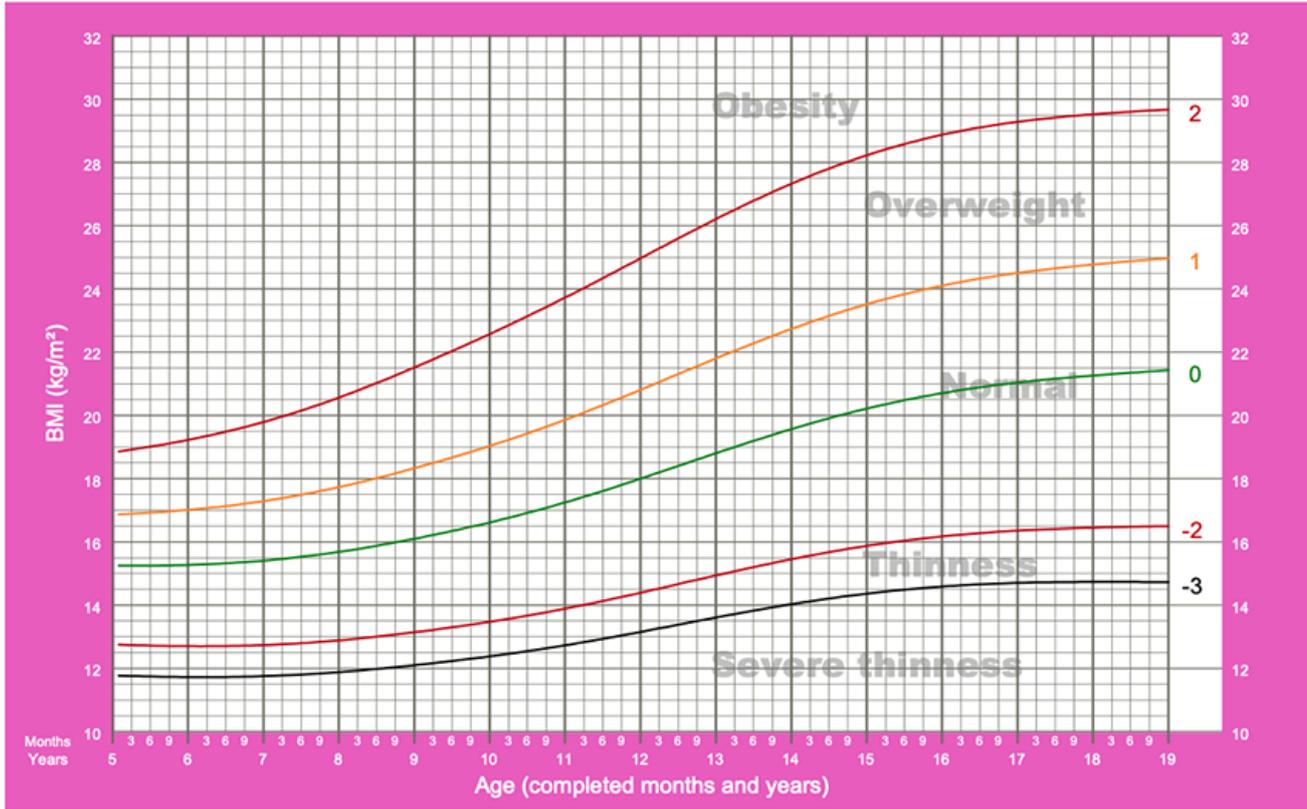
5 to 19 years (z-scores)



2007 WHO Reference

BMI-for-age GIRLS

5 to 19 years (z-scores)



2007 WHO Reference

Figure 1: The World Health Organisation (WHO) BMI chart for boys and girls aged 5 to 19 years old. The numbers of the coloured lines indicate the weight categories: below -3 is 'severe thinness', between -3 and -2 is 'thinness', between -2 and 1 is 'normal weight', between 1 and 2 is 'overweight', and higher than 2 is 'obesity'³

6. How can obesity in children be prevented?

Parents, care givers, teachers, public authorities, businesses, and the wider community all play a vital role in helping children to develop healthy habits. Some by being role models, others by providing a supportive environment. Small, achievable, and realistic changes are recommended for long-term success.

Recommendations and suggestions (non-exhaustive)	
parents/care givers	schools
<ul style="list-style-type: none"> • Pay attention to portion sizes – use smaller plates. • Avoid using food to stimulate or reward good behaviour or to 	<ul style="list-style-type: none"> • Promote healthy eating: provide healthy snacks.

Recommendations and suggestions (non-exhaustive)

<p>satisfy the emotional needs of children – use stickers, play, or exercise as a reward (be creative!).</p> <ul style="list-style-type: none"> • Encourage children to try new foods, so they learn to accept and appreciate a wide range of tastes. Rejection of novel or bitter foods is normal, especially in younger children, but multiple offerings will increase the acceptance. • Ensure the child gets enough sleep, between 9 to 14 hours is recommended, depending on the age.⁴ • Encourage physical activity. According to WHO, a child should be physically active at least 60 minutes per day!⁵ • Develop a supportive social environment for the child, such as family meals, no eating in front of the television, and regular (physical) activities. 	<ul style="list-style-type: none"> • Include healthy options in vending (fruit and rice crackers). • Provide access to free drinking water. • Provide daily and mandatory physical activity. • Make playgrounds available and encourage children to be active during breaks and lunch periods. • Put focus on health education with interactive activities, like cookery demonstrations, nutrition and healthy food options.
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For more in-depth information about childhood obesity, read [EUFIC's Childhood Obesity Review](#).