Briefing
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Tackling childhood obesity

SUMMARY

Childhood obesity remains a considerable public health problem in the European Union (EU). While multiple factors play a role, the global increase in overweight children is mainly linked to a shift in diet towards foods that are high in fat, salt and sugar, paired with a decline in physical activity. Essentially, children today are growing up in an environment that is conducive to weight gain and obesity.

Excess weight in children is associated with a number of serious health consequences. These include early onset of obesity-related chronic conditions, such as cardiovascular diseases and diabetes, as well as psychosocial complications.

The European Commission supports Member States' efforts to take on childhood obesity in a number of ways, including the EU action plan on childhood obesity 2014-2020, which is up for review this year.

The current Maltese Presidency of the Council of the EU has identified tackling childhood obesity among its priorities for health, and intends to present draft Council conclusions on the issue. A technical report on public procurement of food for health in schools, jointly drafted with the Commission, has just been released.

In this briefing:

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Introduction

Childhood obesity is high on the political agenda: 2017 will see the mid-term review of the EU action plan on childhood obesity 2014-2020. Moreover, the current Maltese Presidency of the Council has identified childhood obesity as one of its priorities for health, and intends to present draft Council conclusions on the issue. Despite the various actions deployed, obesity in children remains a problem in the EU. The Word Health Organization (WHO) estimates that on average around one in three European children aged six to nine were overweight or obese in 2010.[1] Childhood obesity is thought to place an economic burden on healthcare systems, both in the short and long term, although literature is scarce.[2] According to the EU action plan on childhood obesity, each year, around 7 % of national health budgets across the EU go towards treating problems linked to obesity in the general population. Added to this are the wider economic costs caused by sickness, social exclusion and premature death.

What is childhood obesity?

The WHO defines overweight and obesity as 'abnormal or excessive fat accumulation that presents a risk to health'. The most common method for determining overweight and obesity in adults (20 years and older) is the body mass index (BMI): a person's weight in kilogrammes divided by the square of their height in metres. However, BMI thresholds for adults may not be suitable for children and adolescents (0 to 19 years), whose amount of body fat changes during growth.[3] The WHO has developed specific standards and references depending on age (0-5 and 5-19 years) for determining healthy body weight.[4]

Causes and contributing factors

Unhealthy weight ranges are the result of an energy imbalance, where energy (i.e. calorie) intake from the consumption of food and drink is greater than energy expenditure through metabolism and physical activity.[5] A number of interacting genetic/ hereditary,[6] metabolic, behavioural, cultural and socioeconomic factors contribute to childhood obesity. The global increase has been mainly linked to: (i) a shift in diet towards a higher intake of unhealthy foods (which the WHO defines as energy-dense, nutrient-poor foods that are high in saturated fats, trans-fatty acids,[7] free sugars[8] or salt); and (ii) a trend towards lower levels of physical activity, due to more time spent on screen-based and sedentary leisure activities, changing modes of transportation, and urbanisation. The problem is further compounded by: lack of information about nutrition; poor availability and affordability of healthy foods; and the way energy-dense foods and beverages are marketed to children and families. The WHO argues that children today are growing up in an 'obesogenic' (obesity-causing) environment that promotes high energy intake and sedentary behaviour, stating that 'every aspect of the environment in which children are conceived, born and raised can contribute to their risk of becoming overweight or obese'.

Health consequences and psychosocial impact

Childhood obesity can negatively affect nearly every organ system. It is associated with endocrine, cardiovascular, gastrointestinal, pulmonary, orthopaedic, neurologic, dermatologic and psychosocial comorbidities. Children who are overweight or obese are more likely than normal-weight children to become obese adults,[9] and therefore at increased risk of developing obesity-related chronic conditions at a younger age. These include: cardiovascular diseases (mainly heart disease and stroke); type 2 diabetes; musculoskeletal disorders (especially osteoarthritis); and certain types of cancer (endometrial, breast and colon). In addition to having a higher obesity risk as adults, overweight or obese children may already carry early signs of these chronic conditions

(such as raised blood pressure, elevated risk markers for cardiovascular diseases and diabetes, or early stages of fatty liver disease) – often without them or their families being aware, therefore hindering preventative measures to reduce later disease risk.

Children with excess weight may also experience psychosocial complications (such as body dissatisfaction, symptoms of depression, impaired social relationships, and reduced health-related quality of life) and face social stigmatisation (for example, bullying or being ignored by peers). Furthermore, childhood obesity has been linked to poorer educational outcomes (including absenteeism, school problems and decreased engagement with school) and early school drop-out, as well as reduced employment stability and lower earnings.

Industries' 'EU Pledge' on advertising

The EU Pledge, led by the World Federation of Advertisers (WFA), is a voluntary initiative by major food and beverage companies to change the way they advertise on TV, print and internet to children under the age of 12 in the EU. The initiative was launched in 2007 as a commitment to the EU platform for action on diet, physical activity and health. Member companies must meet a common benchmark, but can go further. Moreover, they are required to monitor, and report on, the implementation of their commitments. EU Pledge nutrition criteria were first published in 2012 and updated in 2015.

EU policy, with a focus on the action plan

European Commission

The Commission supports Member States' action on childhood obesity in a number of ways. Its strategy on nutrition, overweight and obesity-related health issues, adopted in 2007, focuses on the risks associated with poor nutrition and limited physical exercise, while also addressing inequalities across Member States. 'Priority targets' are people of lower socioeconomic status as well as children and young people, given that overweight, obesity and physical inactivity tend to start in childhood, and often disproportionately affect disadvantaged groups. The strategy covers a range of policies, framing action under six headings: better informed consumers; making the healthy option available; encouraging physical activity; priority groups and settings; developing the evidence base to support policy making; and developing monitoring systems. Tools for implementing the strategy include the High-level group on nutrition and physical activity, with representatives from Member State governments, and the EU platform for action on diet, physical activity and health, whose members range from food industry associations to consumer-protection non-governmental organisations (NGOs).

EU action plan on childhood obesity

In 2014, the high-level group published the EU action plan on childhood obesity, to be evaluated at the end of 2020, with a mid-term review planned for 2017. Its overarching goal is to contribute to halting the rise in overweight and obesity in children and young people (0-18 years) by 2020. The action plan makes the case for an 'engagement in whole-of-government, whole-of-society and health-in-all-policies approaches'.

Recognising the multidimensional nature of obesity, the action plan points to the need to address factors such as: eating patterns (more fast food and sugar-sweetened beverages, shift towards taking meals outside the home, less time spent eating family meals); physical activity patterns (low levels of physical activity, with a tendency for it to drop off between the ages of 11 and 15); sedentary behaviours ('screen time' spent in front of the TV, computer or game console, including the negative effects of children's exposure to advertisements on eating habits); and parental socioeconomic status (association between socioeconomic disadvantage, physical inactivity, food insecurity and obesity).

The action plan work is based on the premise that preventative interventions targeting children and adolescents pay off, and it sets out objectives for integrated, community-based initiatives that involve a wide range of stakeholders across eight fields of action: support a healthy start in life; promote healthier environments, especially in schools and preschools; make the healthy option the easier option; restrict marketing and advertising to children; inform and empower families; encourage physical activity; monitor and evaluate; and increase research.

Joint action, research projects and other tools

Obesity in children has been addressed in various projects under different EU funding mechanisms, such as the EU Health programme.[10] A joint action on nutrition and physical activity (JANPA), co-financed by the Commission, was launched in 2015, with the aim of curbing the incidence of obesity in children and adolescents by 2020, through the sharing of best data and practices.

Examples for projects financed through the EU's research programme Horizon 2020 include: SELECTionPREDISPOSED, to identify novel obesity-risk genes as tools for the detection of early childhood obesity; and BigO (Big data against childhood obesity), which involves reaching out to 25 000 obese children and adolescents as sources for community data. According to the Commission, a budget of €20 million is envisaged in 2017 to finance projects under the topic 'How to tackle the childhood obesity epidemic?'.

Moreover, the Commission promotes healthier eating habits among children via the EU school milk and fruit and vegetables schemes.[11] It also supports Member States in reducing the salt, sugar and fat contents of food within the EU framework for national action on selected nutrients. The technical report on 'public procurement of food for health in schools', published jointly with the Maltese Presidency, is conceived as a practical tool to support Member States in translating their national school food standards into food procurement specifications.

10 findings from the iFamily study

The EU-funded iFamily study examined how families, friends and environment influence health and behaviour. Extending its predecessor, Idefics, the study tracked children's development in eight Member States: Belgium, Cyprus, Estonia, Germany, Hungary, Italy, Spain and Sweden. The results, released in February 2017, include:

- Rates of overweight/obesity vary between European regions (from around 40 % of children aged 2-10 in southern Italy, to less than 10 % in Belgium).
- Children from disadvantaged families are more often overweight/obese than those from advantaged groups, and this divide increases with age.
- Girls are more likely to be overweight/obese than boys.
- Unhealthy diets are more common in children from poorer and less educated families.
- Less than a third of children meet physical activity guidelines of 60 minutes' exercise per day.
- European children eat too much energy-dense foods.
- Children exposed to commercial TV are more likely to consume sweetened drinks.
- Watching TV during meals, having a TV in the child's bedroom, and watching TV for more than an hour per day are associated with being overweight/obese.
- Family members are similar to each other in their weight status, risk factors and what they eat, with children tending to be more like their mothers than their fathers.
- Teenagers are particularly likely to eat more unhealthy foods if their friends also eat unhealthily.

Council

Maltese Presidency of the Council of the EU: Childhood obesity as a priority for health

Malta has a high prevalence of obese children. In light of the negative impacts of childhood obesity and the related social and economic costs, the Maltese Presidency is addressing the issue as one of its main priorities. Malta is pursuing work to identify and disseminate good practices; look into the findings of the mid-term review of the EU action plan on childhood obesity, including areas needing further action; prepare draft Council conclusions on ways to achieve the goal of halting the rise in childhood obesity by 2020; and develop voluntary guidance for the procurement of healthy food in schools, with a technical report launched in February 2017.

In its 2013 recommendation, the Council recognises the relevance of exercise for children, stating that physical education at school has the potential to be an effective awareness-raising tool. The 2014 Council conclusions invite Member States, among other things, to promote physical activity in the family and school environments, and to encourage the supply of healthy dietary options, particularly in schools, pre-schools and sport facilities. Member States are asked to develop national action plans, as well as contributing to the implementation of the EU action plan on childhood obesity, and to work to reduce children's exposure to advertising, marketing and promotion of high-fat, high-salt and high-sugar foods.

European Parliament

On 20 January 2016, Parliament voted to reject a Commission delegated act on baby food, which would notably have allowed such food to contain high levels of sugar. Parliament reasoned that the proposal lacked sufficient measures to protect infants and young children against obesity, and that the allowed maximum sugar level put forward should be substantially lowered in line with WHO advice: the delegated act allows 30 % of the energy in baby foods to be provided by sugar, whereas the WHO recommends limiting the intake of free sugars to less than 10 % of total energy intake, with a further reduction to less than 5 % for additional health benefits. Parliament's resolution called on the Commission to bring forward a new proposal that takes into account available evidence.

A number of individual Members have sought to encourage action on the issue of childhood obesity, for example through a motion for a resolution and a written declaration in 2015 (although neither of these gained enough support to progress further).

International initiatives

World Health Organization

According to the WHO, childhood obesity is one of the most serious public health challenges of the 21st century. The WHO considers prevention to be the most feasible option for addressing obesity in children, and one that needs a high priority. In the absence of dietary recommendations of global utility for children and adolescents, the WHO's general advice includes:

- increasing consumption of fruit and vegetables, as well as legumes, whole grains and nuts;
- limiting energy intake from total fats, and shifting fat consumption away from saturated to unsaturated fats;
- limiting the intake of sugars;
- being physically active (accumulating at least 60 minutes each day of regular, moderate- to vigorous-intensity activity that is developmentally appropriate).

The WHO recognises childhood obesity as a societal problem requiring population-based, multisectoral, multidisciplinary, culturally relevant action across various policy areas, namely agriculture, transport, urban planning, environment, food processing, distribution and marketing, and education. The 2016 final report of the WHO's Commission on ending childhood obesity supports a life-course approach: preconception and pregnancy; infancy and early childhood; and older childhood and adolescence. Its recommendations are aimed at reversing the trend of children aged under five years becoming overweight and obese, and include: promoting the intake of healthy foods; promoting physical activity; preconception and pregnancy care; early childhood diet and physical activity; health, nutrition and physical activity for school-age children; and weight management.

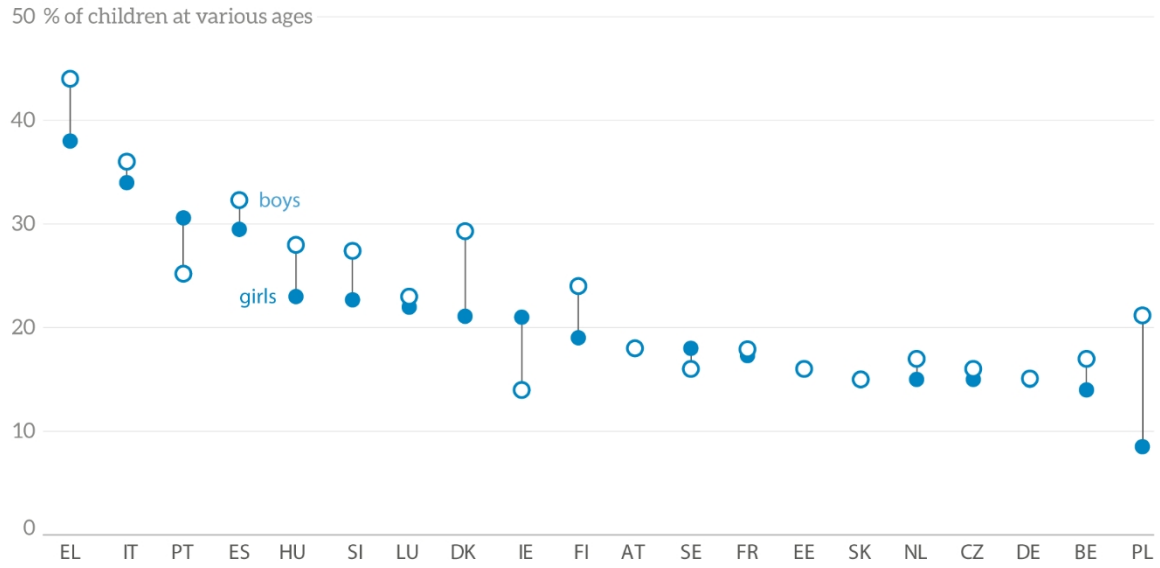
The WHO Regional Office for Europe (WHO/Europe) has developed several activities to tackle the issue in the European region.[12] The Childhood obesity surveillance initiative (COSI) measures trends in overweight and obesity among primary-school children (6-9 years old). Among the objectives of the WHO European food and nutrition action plan 2015-2020, which 'supports and is consistent with' the EU action plan on childhood obesity, is addressing 'pervasive marketing to children of foods and drinks high in energy, saturated fats, trans fats, sugar or salt', and the 'inappropriate marketing of follow-on foods and complementary feeding for infants and young children'. The European nutrient profile model, designed as a voluntary tool for use by governments to restrict marketing of unhealthy foods to children, follows from the action plan. The WHO/Europe's 2016 report on food marketing to children via digital media calls for immediate action by policy-makers, on account of the fact that marketing of foods and non-alcoholic beverages high in saturated fat, salt and/or free sugars has been shown to influence children's food preferences and choices, shape their dietary habits and increase their risk of becoming obese.

Organisation for Economic Co-operation and Development

The Organisation for Economic Co-operation Development (OECD), in its 2010 Sassi report, points to the lack of high-quality information on the problem of childhood obesity. According to the report, surveillance has been poor, and children's heights and weights have only been systematically monitored in a few countries.

The OECD's 2015 Health at a glance report states that childhood obesity has increased in the last few decades worldwide, but seems to be stabilising in high-income countries. The report asks for caution when comparing rates across countries, given that estimates are based on national surveys among children at various ages, and that definitions of 'overweight' and 'obese' may vary. According to the data presented, boys tend to be overweight or obese more often than girls (see Figure 1). This is nevertheless at variance with the findings of the iFamily study, which observed a greater prevalence in girls (see text box above). Possible reasons for diverging results may be differences in coverage or methodology.

Figure 1 – Measured overweight status, including obesity, among children, 2013 (or latest year)



Data source: OECD, Health at a Glance 2015. Graph: Christian Dietrich.

According to the report, the increased focus on obesity has led to many community-based initiatives in OECD countries in the past few years. These most frequently target professional training, the social or physical environment, and actions for parents.

Stakeholders' views

In 2014, at the launch of the EU action plan on childhood obesity, FoodDrink Europe reaffirmed the commitment of the European food and drink manufacturers to fight childhood obesity. Their brochure on the 10th anniversary of the EU platform for action on diet, physical activity and health features examples of best practices and initiatives to: enhance the formulation of products; innovate and offer more choice to consumers; encourage research supporting this innovation; increase consumer information; contribute to responsible marketing and advertising, in particular to children; and stress the importance of healthy lifestyles.

The Union of European Soft Drinks Association (UNESDA) contends that, since 2006, the sector has made far-reaching commitments to the EU platform for action on diet, physical activity and health, including: no advertising to children under 12 years; not offering their products for sale in primary schools; and responsible selling behaviours in schools. The soft drinks industry has recently stated its intention to reduce added sugars by a further 10 % by 2020. The announcement, said to be a response to the EU's call for reformulation and sugar reduction, includes plans to reformulate, innovate and use smaller packaging formats, encouraging consumers to privilege reduced- and zero-calorie beverages.

On improving healthy food choices, the European Consumer Organisation (BEUC) considers that action is required in a number of areas: labelling (pack nutrition labelling, health and nutrition claims, menu labelling for restaurants); reformulation (clear EU targets across the main food categories, realistic portion sizes, reformulating meals served in public institutions such as schools); and marketing to children (broadening the scope of the EU Pledge, better definitions of what can and cannot be advertised, marketing restrictions for children aged up to 16 instead of 12 years, keeping schools free from junk-food marketing).

According to the European Association for the Study of Obesity (EASO) and its Childhood Obesity Task Force (COTF), obesity should be classified as a chronic disease in children and adolescents. This would increase awareness and help improve care.

Main references

EU action plan on childhood obesity 2014-2020, European Commission, 2014.

European food and nutrition action plan 2015-2020, WHO Regional Office for Europe, 2015.

Obesity and the economics of prevention, Franco Sassi, OECD, 2010.

Public procurement of food for health, Maltese Presidency and European Commission, 2017.

Endnotes

1 Data collected in the framework of the WHO's Childhood obesity surveillance initiative (COSI), rounds 1 and 2. Round 2 (2009/2010) was conducted in fifteen European countries: Belgium, Cyprus, the Czech Republic, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Norway, Portugal, Slovenia, Spain and the former Yugoslav Republic of Macedonia. The prevalence of overweight or obesity (as per WHO definitions) in children varied significantly across countries, from 18 % to 57 % among boys and from 18 % to 50 % among girls; 6-31 % of boys and 5-21 % of girls were obese. Southern European countries had the highest rates of overweight children. (The analysis covered all countries except Cyprus and Malta, which did not deliver their data to the COSI database.)

2 A German study found that overweight and obese children have greater medical care costs and an increased probability of being high utilisers of healthcare.

3 The EU action plan on childhood obesity defines 'overweight' and 'obesity' in children as follows: (i) in pre-school children aged 0-5 years, the proportion of children with a sex- and age-specific BMI-for-age value above +2 z-scores and above +3 z-scores of the 2006 WHO-recommended child growth standards, respectively; (ii) in school-age children and adolescents aged 5-19 years, the proportion of children with a sex- and age-specific body mass BMI-for-age value above +1 z-score and above +2 z-scores of the 2007 WHO-recommended child growth reference, respectively.

4 See also the online Child and Teen BMI Calculator by the US Centers for Disease Control and Prevention (CDC).

5 See also the 2015 European Parliamentary Research Service (EPRS) 'At a glance' note on excess weight.

6 A recent study has found that around 35-40 % of a child's BMI is inherited from their parents, and that this 'parental effect' is highest for obese children.

7 See also the European Parliamentary Research Service (EPRS) briefing on trans fats.

8 They include, as per WHO, 'monosaccharides and disaccharides added to foods and beverages by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrate'.

9 As one paper puts it, 'the origins of obesity are being traced to early childhood development': most obese adults were obese as adolescents, and most obese adolescents were overweight or obese as children.

10 See also the annual work plan for 2017, point 4.1.3 (measures to reduce the exposure of children to marketing of foods high in fat, sugar or salt).

11 See also 2016 EPRS 'At a glance' note on the reformed scheme.

12 The WHO European region comprises 53 countries.

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