



# Prevalence of excess body weight and obesity in children and adolescents

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## Prevalence of excess body weight and obesity in children

The indicator measures the prevalence of excess body weight and obesity in adolescents aged 13 and 15 years. Data were drawn from the Health Behaviour in School-aged Children (HBSC) 2001/2002 survey (1), which covers selected countries in the WHO European Region. The data were interpreted in the context of the environment and the relevance and context of policies. An assessment of the situation in the Region is given.

### KEY MESSAGE

 The prevalence of excess body weight (including obesity) in 13- and 15-year-olds is unacceptably high in the Region, ranging from 5% to almost 35% in some countries. All countries show a greater proportion of boys than girls being overweight.

### RATIONALE

Excess body weight and obesity in children and young people are on the rise in Europe and are major risk factors for chronic disease. The indicator measures their prevalence in a standardized way. It can be analysed in relation to action indicators in order to evaluate the effectiveness of policies and make comparisons through a commonly defined measure. It also provides useful information about the impact of addressing risk factors such as the possibility of inadequate nutrition and lack of physical activity. The definition for excess body weight and obesity is based on the percentile values of body mass index (BMI) adjusted for age and gender corresponding to BMI of 25 and 30 kg/m<sup>2</sup> at age 18 years (2).

## PRESENTATION OF DATA

Figures 1a and b show the average prevalence of obesity and excess body weight in 13- and 15-year-olds in 35 countries and sub-regions in the Region that participated in the HBSC 2001/2002 survey (1). The prevalence of overweight and obese adolescents ranges from 3% to almost 35% in 13-year-olds and from 5% to 28% in 15-year-olds.

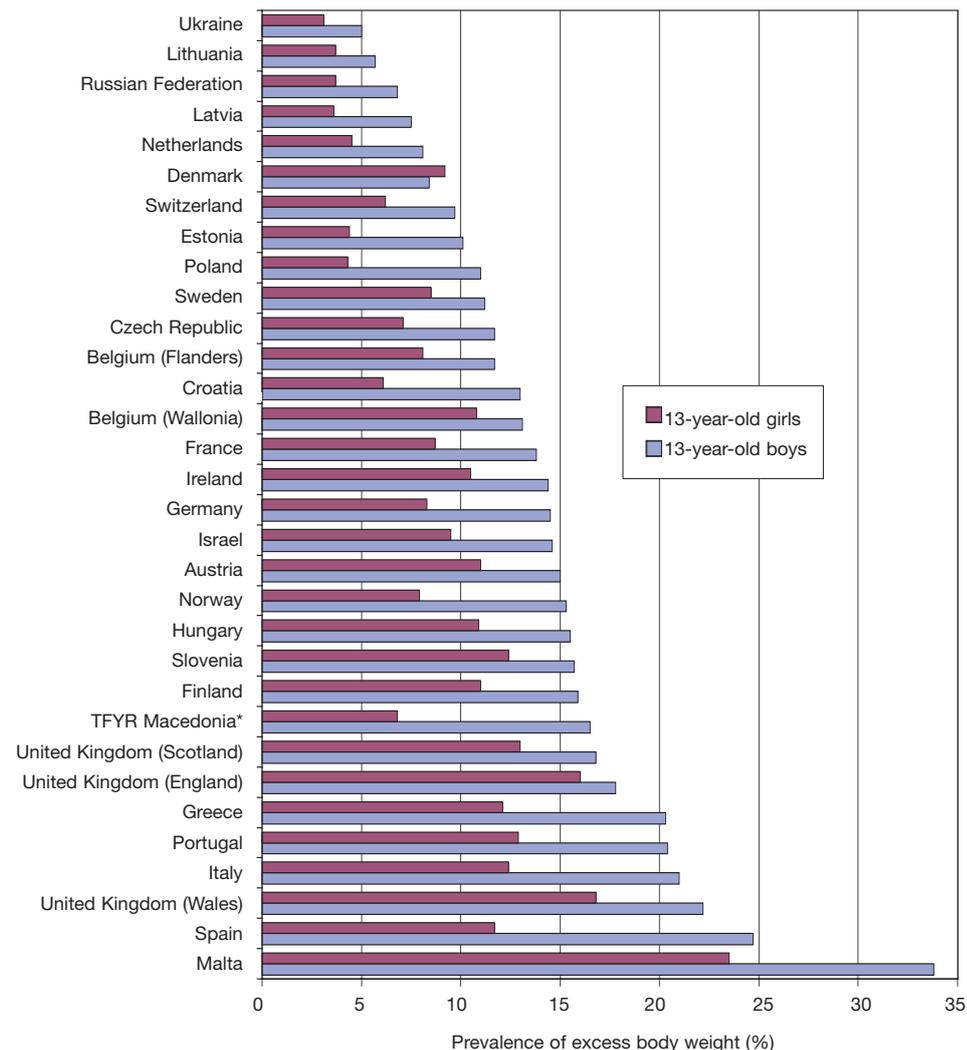
## HEALTH – ENVIRONMENT CONTEXT

Obesity poses one of the greatest public health challenges for the 21st century; in the Region the prevalence of obesity has tripled in the last two decades – a particularly alarming trend. If no action is taken and it continues to increase at the same rate as in the 1990s, an estimated 150 million adults and 15 million children and adolescents in the Region will be obese by 2010 (3). Assuming the trends observed in 2006 continue on a linear basis, they would give a projection of approximately 41% of children in the eastern Mediterranean region and 38% of children in the Region as a whole being overweight (4).

The trend in obesity is especially alarming in children and adolescents. The annual rate of increase in the prevalence of childhood obesity has been growing steadily and the current rate is ten times higher than it was in the 1970s. More than 60% of children who are overweight before puberty will be overweight in early adulthood, which is of particular concern as it will probably reduce the average age at which noncommunicable diseases become apparent, thus greatly increasing the burden on health services which will have to provide treatment during much of their adult life.

Unhealthy diets and physical inactivity are the main contributors to excess body weight and obesity, which are among the leading risk factors accounting for the burden of noncommunicable diseases. Excess body weight is responsible for more than 1 million deaths and the loss of 12 million disability-adjusted life-years (DALYs) in the Region every year. This and obesity are responsible for about 80% of adult cases of type 2 diabetes, 35% of cases of ischaemic heart disease and 55% of cases of hypertensive disease among adults in the Region. Excess body weight is also a risk

Fig. 1a. Prevalence of excess body weight (including obesity) among 13-year-olds in countries of the WHO European Region, 2001/2002



\*TFYR Macedonia = The former Yugoslav Republic of Macedonia

Source: Health Behaviour in School-aged Children (1).

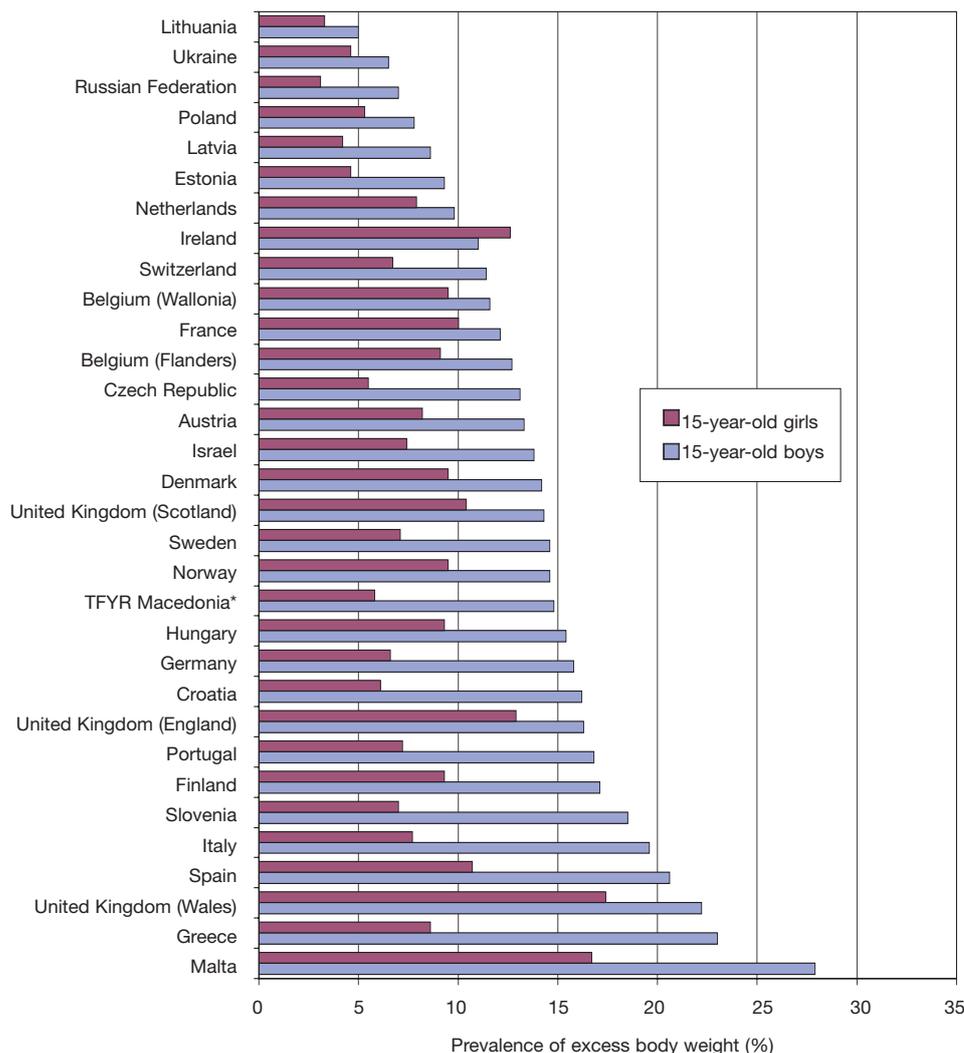
factor for colon cancer, breast cancer, endometrial cancer and osteoarthritis. Obesity also has a negative effect on psychosocial health and personal quality of life (5).

The health consequences of being overweight during childhood are less clear, but a systematic review shows that childhood obesity is strongly associated with risk factors for cardiovascular disease and diabetes, orthopaedic problems and mental disorders. A high BMI in adolescence predicts elevated adult mortality and cardiovascular disease rates, even if the excess body weight is lost. Worryingly, children are now more frequently subject to many obesity-related health conditions once confined to adults (6).

Effective obesity management requires an integrated multisectoral approach, including comprehensive long-term policy measures. Nutritional interventions in the school,

workplace and community have proved moderately effective in preventing obesity. Dietary control can bring several benefits, but caution must be exercised as there may be negative consequences including loss of lean body mass, reduced linear growth and exacerbation of eating disorders. Strategies need to be integrated across food services, health education, physical education, play and sport and the participants should be involved in formulating policies. Weight maintenance regimes (with nutrition counselling) in combination with a heightened level of activity, more walking and the development of an activity programme can increase the effectiveness of obesity therapy. Even when these do not reduce obesity, they may reduce morbidity. Parental involvement in treatment programmes is necessary for successful weight loss among young children and, to a lesser extent, adolescents (7).

**Fig. 1b. Prevalence of excess body weight (including obesity) among 15-year-olds in countries of the WHO European Region, 2001/2002**



\*TFYR Macedonia = The former Yugoslav Republic of Macedonia

Source: Health Behaviour in School-aged Children (1).

## POLICY RELEVANCE AND CONTEXT

In 2004, the World Health Assembly in resolution WHA57.17 adopted the global strategy on diet, physical activity and health (8). The strategy contains recommendations for WHO and its Member States, international partners, nongovernmental organizations and the private sector to develop, implement and evaluate activities to combat the rise in noncommunicable diseases through a healthier diet and increased physical activity. The results of the implementation of the global strategy were presented at the World Health Assembly in 2006. In 2004, the Fourth Ministerial Conference on Environment and Health adopted the Children's Health and Environment Action Plan for Europe, which includes four regional priority goals to reduce the burden of environmental-related diseases in children (9). One of the goals

(RPGII) aims to reduce the prevalence of excess body weight and obesity by implementing health promotion activities in accordance with the global strategy on diet, physical activity and health.

The European Charter on counteracting obesity (10), adopted in November 2006 at the WHO European Ministerial Conference on Counteracting Obesity, recognized the importance of both healthy nutrition and physical activity for preventing and reducing excess body weight and obesity. The Charter endorsed a vision of societies "where healthy lifestyles related to diet and physical activity are the norm" and "where healthy choices are made more accessible and easy for individuals". Translated into action, this means not only the classic health promotion approaches but also the creation of oppor-

tunities for daily physical activity, for example through the promotion of cycling and walking by better urban design and transport policies, or for balanced nutrition in school cafeterias.

The Regional Office will also present the Second Action Plan on Food and Nutrition Policy to the WHO Regional Committee in September 2007 (11). This will address obesity and nutrition-related chronic diseases, micronutrient deficiencies, food insecurity and malnutrition and foodborne diseases.

In 2005, the European Union (EU) launched the green paper (COM (2005) 637 final) on Promoting healthy diets and physical activity: A European dimension for the prevention of overweight, obesity and chronic diseases (12) together with a consultation on the issues raised by the green paper, with the aim of identifying the possible contribution at Community level of promoting healthy diets and physical activity.

The EU has also launched a platform for action on diet, physical activity and health (13). Under the leadership of the European Commission, the platform brings together stakeholders from commercial, professional, consumer and other civil organizations to take voluntary action to halt and, hopefully, reverse the rise in obesity, particularly among children. The spirit of the platform is to work under the leadership of the Commission and to provide an example, which others will choose to follow across Europe, of coordinated but autonomous action by different parts of society to deal with the many aspects of the problem.

## ASSESSMENT

The prevalence of obesity and excess body weight ranges from 3% to 34% in 13-year-olds and from 5% to 28% in 15-year-olds across the Region. Boys have a higher prevalence than girls in almost all European countries, except for among 15-year-olds in Ireland where girls have a slightly higher prevalence. On average, the prevalence of obesity and excess body weight in 13-year-olds in the Region is 14.4% among boys and 9.3% among girls, and 8.2% and 6.0% among 15-year-olds, respectively.

The high and increasing prevalence of excess body weight and obesity in children points to the need for comprehensive strategies to address the main driving forces of this health burden, including nutrition, physical activity and lifestyle. Action is needed at different levels: regional and international frameworks, social policies and national legislation, organizational and commercial practices, planning controls and regional strategies, community and cultural traditions, school and work practices and peer influence, family habits and choices, and individual action.

## DATA UNDERLYING THE INDICATOR

### Data source

HBSC survey 2001/2002 (1).

### Method of calculating the indicator

The prevalence of excess body weight and obesity is calculated as the percentage of adolescents reported to be in the weight categories corresponding to adult BMI values of  $\geq 25.0$

and  $\geq 30.0$  kg/m<sup>2</sup> according to the cut-off points developed by Cole et al (2). From these findings, subjects were further subdivided into pre-obese and obese groups, corresponding to adult BMI values of 25.00–29.9 kg/m<sup>2</sup> and  $\geq 30$  kg/m<sup>2</sup>. Excess body weight is defined as a BMI of  $\geq 25.0$  kg/m<sup>2</sup>.

### Geographical coverage

The 2001/2002 survey was conducted in 35 countries and regions (Fig. 1).

### Period of coverage

Data from the 2001/2002 survey.

### Frequency of update

HBSC surveys are carried out at four-year intervals. The 2001/2002 survey was the sixth and most recent in the series and was conducted in 35 countries and regions. The data are collected in all participating countries and regions through school-based surveys, using the international research protocol.

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