

**Introduction:** Childhood obesity is a growing epidemic in many parts of the world. This is a major public health problem because obesity often tracks into adulthood, with many complications. During the last two decades, the prevalence of childhood obesity has been estimated in several countries. In Belgium, data are available from some parts of the country but no recent data exist for the province of Liege. The objective of the study is to assess the current prevalence of overweight and obesity in schoolchildren from the province of Liege.

**Method:** A retrospective study was conducted from the school health records of 1403 children monitored in 2005–2006 by school health centres in the Province of Liege. Height and weight, as part of routine child health monitoring, have been measured in light clothing by

trained nurses. Complementary data such as physical activity were also recorded.

**Results:** The mean age of the population studied was 7 years (2.26–14.6 years). Using the IOTF definition, the prevalence of overweight (including obesity) was 16.6% for girls and 15.9% for boys, and the prevalence of obesity was 3.96% and 4.44%, respectively. Overweight is increasing with age, particularly in girls between 5 and 8 years of age.

**Conclusions:** In comparison with other European countries, the prevalence of overweight and obesity in the Belgian province of Liege is intermediate, between the high prevalence in Southern Europe and the relatively lower prevalence in Northern Europe. It will be important to follow the situation in order to adjust prevention programmes.

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## 05 – Abdominal obesity in children aged 12 years: a cross-sectional study in the Belgian province of Liege

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**Introduction:** Abdominal obesity is a major component of metabolic syndrome (MS), a cluster of risk factors for CVD. It can already be detected in late childhood and adolescence, which is important in terms of prevention. In population-based study, waist circumference (WC) is considered as a reliable indicator of abdominal obesity, which estimates the risk of developing MS. The objective of the study is to determine the prevalence of abdominal obesity in children aged 12 years in the province of Liege.

**Method and population studied:** A cross-sectional study was conducted in 2008–2009 including 784 children selected at random among the population of the school health centres, Province of Liege. WC was measured by trained nurses and complementary data were recorded. To assess abdominal obesity, percentiles of WC have to

be used. No specific percentile curves for Belgian adolescents are available. Therefore, percentile curves from other countries were used.

**Results:** The mean age of the studied population was 11.5 (SD 0.5) years. Prevalence of abdominal obesity varied between 15.4% according to the US percentile curves and 48.4% with the percentile curves of Great Britain and was significantly higher in girls than in boys. There was a significant association between WC, age, BMI and professional status of the mother in both sexes.

**Conclusions:** Abdominal obesity in adolescents seems to represent a significant public health problem in the province of Liege. No data are available to compare with other Belgian regions. To better understand the situation, the development of Belgian-specific reference curves is needed.

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## 06 – Overweight and obesity in a representative sample of schoolchildren – exploring the urban–rural gradient in Sweden

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*Introduction:* Depending on dwelling place and socio-economic factors, children experience different prerequisites for health. In the present study, we gathered information about the national Swedish prevalence of overweight and obesity among 7–9-year-old children. Further, the impact of level of urbanisation, and level of education in the children's living areas, on prevalence of overweight and obesity was investigated.

*Method:* In spring 2008, 4538 children in ninety-four proportionally randomly selected primary schools in Sweden underwent anthropometric examinations by trained staff. Overweight, pre-obesity and obesity were defined using the International Obesity Task Force reference. School areas were classified based on level of urbanisation and area-level education.

*Results:* Overweight was found in 17% of the children, including 14% pre-obese and 3% obese. For overweight,

OR with 95% CI was 1.33 (0.92, 1.88) and 1.61 (1.25, 2.07) in semi-urban and rural areas, respectively, relative to urban areas. After adjusting for area-level education, differences by degree of urbanisation were greatly attenuated and non-significant. For obesity the urban–rural gradient was observed in boys only and remained after adjustment for area-level education. For area-level education, risk estimates were significantly elevated, OR = 1.75 and 2.21 for overweight and OR = 2.62 and 3.69 for obesity, in medium and low education areas, respectively, when compared with high education areas.

*Conclusions:* The present study confirms an urban–rural gradient, for overweight in both boys and girls, but for obesity only in boys. The socio-economic gradient based on area-level education was more robust, unaffected by gender and could partly explain the observed urban–rural differences.

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## 07 – Sociodemographic and lifestyle factors associated with overweight in a representative sample of 11–15-year-olds in France

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*Introduction:* Lifestyle factors can interact to influence overweight. Comprehensive studies linking overweight, concomitantly with several demographic and potentially modifiable lifestyle factors and health-risk behaviours, have been limited in adolescents – an age-group characterized by changes in lifestyle behaviours, which shows high overweight prevalence.

*Method:* Self-declared data were obtained from a nationally representative sample of 11–15-year-olds (*n* 7154) concerning their age, height, weight and lifestyle factors. Overweight was defined using International Obesity Task Force reference. The multivariate association of overweight with several sociodemographic and lifestyle factors was examined with logistic regression.

*Results:* The adjusted OR (AOR) for the association with overweight in boys were: 1.53 (95% CI 1.05, 2.22) for low family affluence; 0.65 (0.51, 0.83) for eating breakfast

daily; 0.71 (0.56, 0.91) for moderate-to-vigorous physical activity (MVPA); and 0.70 (0.55, 0.90) for vigorous physical activity (VPA). For boys, MVPA compensated the effect on overweight of TV watching during the week. For girls, the AOR were: 0.59 (0.42, 0.82) for age (15 *v.* 11 years); 2.28 (1.58, 3.29) for low family affluence; 0.62 (0.42, 0.90) for MVPA; 0.75 (0.56, 0.99) for VPA; and 1.92 (1.42, 2.59) for TV viewing. Fruit and vegetable intake, computer and videogames use, smoking and alcohol consumption were not associated with overweight.

*Conclusions:* Family affluence and moderate/vigorous physical activity were negatively associated with overweight in this nationally representative sample of youth. Breakfast skipping and watching TV were the strongest lifestyle correlates of overweight in boys and girls, respectively. These findings could serve to prioritize areas for developing actions and targeted messages for overweight prevention in youth.

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## 08 – Influence of socio-economic factors on obesity prevalence among children and teens in Hainaut

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