

BMI cut-off for 95^o and 99^o centile were used for defining obesity and severe obesity, respectively.

Results: Consent was obtained for 97% of sampled children, whose mean age was 8 years and 10 months. According to WHO standards, 5.4% (95% CI 5.1, 5.7) of children were classified as severely obese and they represented 25% of all obese children. Children with severe obesity had a mean BMI of 26.8 (95% CI 26.7, 26.9) and median BMI of 26.4. Among the related factors considered in the study, a multivariate analysis showed that male sex (OR 3.2; 95% CI 2.8, 3.7), ≤8 years of maternal education

(OR 2.8; 95% CI 2.2, 3.6) and living in the southern regions of the country (OR 2.7; 95% CI 2.2, 3.2) were independent risk factors for severe obesity. Among mothers of children severely obese only 25% showed a right awareness of such a high-grade weight excess. New data from *OKkio alla Salute* 2010 will be published on 12th of October and will be included in the final communication.

Conclusions: It is time for Action!! Funding Research relating to this abstract was funded by the Italian Ministry of Health/Centre for Disease Prevention and Control, Chapter 4393/2005 – CCM.

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03 – Prediction of lean body: comparison between two anthropometric indicators

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The rate of physical growth development is an important criterion for the complex assessment of health of children and adolescents. Heredity, environment, work and study conditions, nutrition and physical activity influence upon the growth development of schoolchildren.

Method: In all, 1386 schoolchildren aged between 6 and 16 years were examined: 714 boys and 672 girls. The harmonic physical growth development was determined amongst 1386 (68.3%) of examined children. Disharmonic development with the acceleration of biological development was determined amongst 336 (16.5%) schoolchildren whereas the deceleration of biological development was found amongst 132 (6.5%) children. Sharply disharmonic physical growth development was detected in 176 (8.7%) cases where sixty-four (3.2%) children have manifested deceleration of the biological development and 112 (5.5%) have accelerated development.

Results: The harmonic growth development was observed for 66% or more examined children only for the age 9–15 years. Only 32% of 7-year-old children and 22% of 8-year-old children have harmonic growth development. There were 47% and 53% of harmonically developed individuals in the groups of 6- and 16-year-old children correspondingly. The highest rate of disharmonic physical growth development was characteristic for 6-year-old children – 41.2% (due to excessive fat deposits – 29.4%, due to the deficiency of weight – 11.8%). Children aged 7 years have disharmonic growth development in 35.7% cases, where the excessive body weight is detected for 28.6%, and deficient weight – for 7.1%. Thus the main reason for disharmonic growth development was the excessive fat deposits and only the group of 9-year-old children had more cases of the deficient weight.

Conclusions: Described anomalies of the physical growth development could be related to the unfavourable impact of the environmental factors.

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04 – Prevalence of overweight and obesity in elementary-school children from the Belgian province of Liege

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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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