

Tracking of weight status of primary school children in Switzerland

Project: 415

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Objective

The aim of this survey was to gain longitudinal data on weight status of Swiss primary school children by re-measuring children who were examined in 2007 during a weight study of the Laboratory of Human Nutrition. Another aim was to analyze the associations between parameters of the children's life style and their anthropometric parameters.

Method

322 out of the 486 children who were inquired accepted to re-participate. Measurements of weight and height were used to calculate body mass index (BMI) and BMI standard deviation score (BMI-SDS) and waist circumference was measured. A questionnaire was given to each child consisting of 11 questions for the child and 5 questions for its parents. The child was asked about its habitual physical activity, soft drink consumption, sleeping patterns, screen time and whether it was interested in sports. Parents were asked about their child's birth weight, their education and their employment status. The BMI-references of the Centers of Disease Control and Prevention were used to classify children as underweight (BMI \leq 5th percentile), overweight (BMI \geq 85th percentile) and obese (BMI \geq 95th percentile).

Results

In boys, prevalence of underweight decreased significantly and prevalence of obesity increased significantly from 2007 to 2010. In girls, prevalence of normal weight decreased significantly and prevalence of overweight increased significantly. 11.5% of all children changed into a higher class of BMI since 2007, 3.1% into a lower one and 85.4% remained in the same class of BMI. BMI-SDS increased significantly from -0.042 to 0.180. Waist circumference increased significantly from 60.1 cm to 66.2 cm. Children who reported high screen time levels, high soft drink consumption and whose families had a low socio-economic status had higher BMI-levels and higher waist circumference. Children who had higher levels of physical activity were more likely to decrease their weight status between 2007 and 2010. (P<0.05)

Conclusion

In summary, weight status of the 322 examined Swiss children has increased between 2002 and 2007. Thus, preventive strategies must be established before and during primary school age. Weight status and changes in weight status are associated with the children's soft drink consumption, screen time, physical activity and their parent's socio economic status. Prevention should therefore aim at promoting physical activity and healthy diet but also at educating parents, since they have a big influence on their children.