

equipped with practice protocol (Hearn 2008). Lack of evidence and poor design of studies for children aged <5 years (Saunders 2007). Early intervention and parental involvement effective, but too few studies in children aged <5 years (Campbell 2007). Multicomponent interventions may be effective (Bluford 2007). Compulsory physical activity is effective in reducing overweight in children (Connelly 2007). Limited, school-based programmes combining healthy dietary habits and physical activity is shown to be a possibly way forward (Flodmark 2006). The development, design, duration and intensity of interventions to prevent obesity in childhood needs to be appropriate, and report intervention scope and progress accordingly (Summerbell 2005). Non-curricular approaches to increase physical activity in youth is possible during school break periods, through youth organizations,

summer day camps, possibly through active transportation (Jago 2004). Pedometer interventions in youth lead to increased physical activity in the short term – long term not investigated (Lubans 2009).

*Practical tools:* The CDC CHANGE tool for communities and the School Health Index will be presented. Evaluation seems to lead to changed priorities on school level. Schools for Health in Europe (SHE network) will be presented. Shape Up and EPODE (Ensemble prévenons l'obésité des enfants) experiences as well as school pedometer project examples (Skolsteget) will be briefly discussed.

*Conclusions:* There is still a lack of high-quality interventions. Some scattered evidence can be presented, but long-term effects are usually not collected. Some innovative approaches can be identified as promising.

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## Identification of preschool children at high risk of future overweight

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*Introduction:* Given that children are becoming overweight at younger ages early intervention is vitally important, but presupposes an efficient identification of high-risk children. The associations between routinely collected risk factors like smoking during pregnancy, high parental BMI, birth weight, short breast-feeding, different measures of infancy/early childhood weight gain, early adiposity rebound (AR) and overweight in adolescence/adulthood are strong. The aim of the present study was to identify risk factors for future overweight that could be feasible for a risk estimation tool to be used among preschool children in general practice.

*Method:* We aimed to test known risk factors' association with future overweight in The Northern Finland Birth Cohorts of 1966 (*n* 4000) and 1986 (*n* 5500). Participants were followed from birth to the age of 31 and 16 years, respectively, where a clinical examination included BMI and waist circumference measurements. Weight and

height data from the age of 0 to 13 years were collected from routine child health examinations.

*Results:* The preliminary results show that smoking during pregnancy, high parental BMI, growth patterns in infancy and early childhood (BMI at specific ages, BMI percentile crossing at specific ages, absolute weight gain between specific ages, BMI peak, etc.), lower age at AR and higher BMI level at AR are strongly associated with overweight in adolescence/adulthood.

*Perspective:* By combining various risk factors using statistical modelling we plan to develop a risk estimation tool to improve our ability to identify preschool children at risk for future overweight. The risk estimation tool will be developed to be used in general practice using routinely collected risk factors.

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