Long-term effects of daily physical education throughout compulsory school and associations of physical activity levels in children

Background

Physical activity (PA) is in children associated with several health benefits, whereas insufficient PA levels is related to a variety of diseases. Despite this knowledge, only a minority of Swedish children reach the recommendation of 60 minutes of PA per day. Therefore, identifying and thence intervening upon factors associated with PA in children is a public health priority.

Methods

The Pediatric Osteoporosis Prevention study is a prospective controlled intervention study. The intervention school increased physical education (PE) from the Swedish standard of 60 minutes/week to 200 minutes/week. Three control schools continued with 60 minutes/week. The PE lessons included the regular teachers and activities within the national school curriculum. The children were annually evaluated with questionnaires, antopometric measurements and physical performance tests during the intervention and four years beyond termination of the program.

Aim

1. Will a daily PE program during compulsory school induce higher duration of PA four years beyond termination of the program?
2. What factors are, independently of all other factors included in this model, associated with PA levels in eight and ten-year old children?
Preliminary results

**Article 1:** A PE intervention program during compulsory school is associated with higher duration of PA during the intervention, but also four years after termination of the program.

**Article 2:** In eight-year old children before intervention start; age, gender, parental duration of PA, parental attitude towards PA, and having a physically active sibling were factors associated with duration of PA.

**Article 3:** In ten-year old children, factors independently associated with objectively measured PA are age, gender, body height and an intervention program in school.

**Significance**

An intervention program with daily PA induces higher PA levels beyond termination of the program. This intervention also have a positive association to PA levels regardless of all other factors in the model, which highlights the great opportunity for schools to promote PA in children and thereby hopefully decrease the incidence of lifestyle diseases later in life.

**List of publications:**

