

Title of Intervention	Stockholm Obesity Prevention Project (STOPP) school-based policy intervention
Intervention Strategies	Environments and Policies
Purpose	To assess whether a school-based prevention program, focused on reduced unhealthy eating and increased physical activity during school time over a 4-year period could reduce the prevalence of overweight and obesity among 6 to 10-year-old children.
Populations	6 to 10 year old children in Swedish schools.
Settings	School-based
Partners	Stockholm Schools
Intervention Description	<p>A school-based policy intervention focusing on changing the school environment. School staff was encouraged to promote healthy eating and physical activity. Additionally, policies were put in place to promote healthy eating and physical activity including:</p> <ol style="list-style-type: none"> 1. 30 minutes of daily physical activity time was added to the curriculum. 'To reduce sedentary behavior, children were not allowed to bring toys that might increase this behavior (such as hand held computer games) to schools and after school care centers.' 2. 'The teachers were instructed to encourage the children to increase the intake of vegetables during the school lunch. To facilitate this, all intervention schools agreed to offer a variety of vegetables and the food was arranged so that the children first served themselves vegetables and thereafter the main course. White bread was substituted with whole-grain bread or similar products including a high amount of dietary fibers. The sugar content in the school lunches and in the afternoon snacks was reduced. Whole-fat or medium-fat milk was substituted by skimmed milk, and low-fat butter, cheese and yogurt were provided. Sandwich ingredients were required to be low fat.' 3. Intervention schools were encouraged to eliminate sweets, sweet buns and ice cream in association with festivities. When celebrating birthdays, parents were asked not to provide these products at schools and after school care centers. Furthermore, parents of the children in the intervention schools were instructed not to supply sweetened drinks, sweets, and other unhealthy products in the packed lunch during school excursions and sports days.

	4. A STOPP newsletter was distributed to parents and school staff of intervention schools twice annually aimed to increase the awareness of the intervention. Furthermore, the research staff had meetings with the school personnel once every term, aimed at increasing the awareness of the intervention. School nurses received education in obesity-related problems.	
Theory	Not mentioned	
Resources required	Staff/Volunteers:	Routine school staff.
	Training:	Twice a year updates.
	Technology:	None
	Space:	Not mentioned
	Budget:	None
	Intervention:	Policies
	Evaluation	Stadiometer, digital scale, accelerometers. Food questionnaire, and ChEAT (Children's Eating Attitude Test).
Evaluation	Design:	Cluster-randomized controlled study.
	Methods and Measures:	'Ten schools were selected in the Stockholm county area and randomized to intervention and control schools. Low-fat dairy products and whole-grain bread were promoted and all sweets and sweetened drinks were eliminated in intervention schools. Physical activity (PA) was aimed to increase by 30 minutes per day during school time and sedentary behavior restricted during after school care time. Physical activity was measured by accelerometry. Eating habits at home were assessed by parental report.'
Outcomes	Short term impact:	Not measured.
	Long term impact:	The prevalence of overweight and obesity decreased by 3.2% in intervention schools compared with an increase of 2.8% in control schools.
Maintenance	Newsletters and teacher updates twice a year.	

Lessons Learned	1. 'The effect of intervention was more pronounced in boys than in girls, which is in contrast to what has been observed in more education-based obesity prevention programs.'
	2. 'The interest in implementing the program varied considerably among the teachers, and some teachers reported it was difficult to integrate physical activity in their ordinary lessons.'
	<p>3. 'The implementation of the intervention including healthy school lunches and afternoon snacks was, with minor divergences, successful in all intervention schools. Removal of all types of sweets was more difficult to accept for the school staff and required frequent reminders from the STOPP staff.'</p> <p>4. 'Other dietary aspects of the participants, such as breakfast and dinner habits, not dealt with in the intervention program, did not differ. These results might suggest that changes in school lunches and after school care snacks, strict rules and attitudes against unhealthy eating among professional caretakers facilitate parental selection of more healthy food alternatives.'</p>
Citation(s)	Marcus, C., Nyberg, G., Nordenfelt, A., Karpmyr, M., Kowalski, J., & Ekelund, U. (2009). A 4-year, cluster-randomized, controlled childhood obesity prevention study: STOPP. <i>International Journal of Obesity</i> , 33(4), 408-417.