

# Obesity: School-Based Programs (2003 Archived Review)

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## Review Summary

### Intervention Definition

These interventions are conducted in the classroom and may seek to increase physical activity and/or improve nutrition, both in school and at home. Classroom and physical education teachers may receive special training to carry out the programs.

### Summary of Task Force Finding

The Community Preventive Services Task Force finds insufficient evidence to determine the effectiveness of school-based programs to prevent or reduce overweight and obesity among children and adolescents because interventions varied and reported outcomes that were not comparable.

### About the Systematic Review

The Task Force finding is based on evidence from a systematic review of 10 studies (search period 1966 - 2001). The systematic review was conducted on behalf of the Task Force by a team of specialists in systematic review methods, and in research, practice, and policy related to obesity prevention and control.

### Summary of Results

While nine studies among children and one among adolescents qualified for the review, they did not identify comparable outcomes.

- The studies showed some positive effects on outcomes related to weight status, but changes were small and the measures used were varied.

### Summary of Economic Evidence

An economic review of this intervention was not conducted because the Task Force did not have enough information to determine if the intervention works.

### Applicability

Applicability of this intervention across different settings and populations was not assessed because the Task Force did not have enough information to determine if the intervention works.

### Considerations for Implementation

Despite the finding of insufficient evidence, the following are considerations for implementation drawn from studies included in the evidence review, the broader literature, and expert opinion.

- When planning future interventions aimed at weight control outcomes, considering interventions that produced modest but positive changes in weight-related measures might be useful. These interventions include the following:
  - Nutrition and physical activity components
  - Additional time for physical activity during the school day, including noncompetitive sports (e.g., dance)
  - Fewer sedentary activities, especially television viewing

### Publications

Centers for Disease Control and Prevention. [Public health strategies for preventing and controlling overweight and](#)

[obesity in school and worksite settings. A report on recommendations of the Task Force on Community Preventive Services.](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5410a1.htm) [www.cdc.gov/mmwr/preview/mmwrhtml/rr5410a1.htm] *MMWR*. 2005;54(RR-10):1-12.

## Task Force Finding

### Intervention Definition

These interventions are conducted in the classroom and may seek to increase physical activity and/or improve nutrition, both in school and at home. Classroom and physical education teachers may receive special training to carry out the programs.

### Task Force Finding (October 2003)

The Community Preventive Services Task Force finds insufficient evidence to determine the effectiveness of school-based programs to prevent or reduce overweight and obesity among children and adolescents because interventions varied and reported outcomes that were not comparable.

### Publications

CDC. Public health strategies for preventing and controlling overweight and obesity in school and worksite settings. A report on recommendations of the Task Force on Community Preventive Services. *MMWR* 2005;54(RR-10):1-12.

## Supporting Materials

### Included Studies

*The number of studies and publications do not always correspond (e.g., a publication may include several studies or one study may be explained in several publications).*

Burke V, Milligan RA, Thompson C, et al. A controlled trial of health promotion programs in 11-year-olds using physical activity “enrichment” for higher risk children. *J Pediatr* 1998;132:840–8.

Gortmaker SL, Peterson K, Wiecha J, et al. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Arch Pediatr Adolesc Med* 1999;153:409–18.

Lionis C, Kafatos A, Vlachonikolis J, Vakaki M, Tzortzi M, Petraki A. The effects of a health education intervention program among Cretan adolescents. *Prev Med* 1991;20:685–99.

Mo-suwan L, Pongprapai S, Junjana C, Puetpaiboon A. Effects of a controlled trial of a school-based exercise program on the obesity indexes of preschool children. *Am J Clin Nutr* 1998;68:1006–11.

Nader PR, Stone EJ, Lytle LA, et al. Three-year maintenance of improved diet and physical activity: the CATCH cohort. Child and Adolescent Trial for Cardiovascular Health. *Arch Pediatr Adolesc Med* 1999;153:695–704.

Robinson TN. Reducing children’s television viewing to prevent obesity: a randomized controlled trial. *JAMA* 1999;282:1561–7.

Sallis JF, McKenzie TL, Alcaraz JE, Kolody B, Hovell MF, Nader PR. Project SPARK. Effects of physical education on adiposity in children. *Ann N Y Acad Sci* 1993;699:127–36.

Tamir D, Feurstein A, Brunner S, Halfon ST, Reshef A, Palti H. Primary prevention of cardiovascular diseases in childhood: changes in serum total cholesterol, high density lipoprotein, and body mass index after 2 years of intervention in Jerusalem schoolchildren age 7–9 years. *Prev Med* 1990;19:22–30.

Walter HJ, Hofman A, Connelly PA, Barrett LT, Kost KL. Primary prevention of chronic disease in childhood: changes in risk factors after one year of intervention. *Am J Epidemiol* 1985;122:772–81.

Walter HJ, Hofman A, Vaughan RD, Wynder EL. Modification of risk factors for coronary heart disease. Five-year results of a school-based intervention trial. *N Engl J Med* 1988;318:1093–100.

### Search Strategies

To be considered for inclusion in the reviews of effectiveness, studies had to include multiple characteristics.

- Description of a primary intervention with participants recruited or enrolled from the school (including preschool) or worksite setting.
- Publication in English during 1966--2001.
- Interventions related to diet, physical activity, or combinations thereof, with sufficient detail to meet Community Guide standards.

- Common weight-related measures as outcomes (e.g., BMI, body weight, and anthropometric measures).
- Control measurement between or within groups (either with baseline and follow-up [before and after] measurements or by using control groups).
- Subjects followed for at least 6 months from the beginning of the intervention to assess weight loss maintenance.

To identify additional studies, manual searches were performed of reference lists from identified reports, extant systematic reviews (certain reviews available through the Cochrane Library), review reports, and reports written by researchers in the field.

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### Disclaimer

The findings and conclusions on this page are those of the Community Preventive Services Task Force and do not necessarily represent those of CDC. Task Force evidence-based recommendations are not mandates for compliance or spending. Instead, they provide information and options for decision makers and stakeholders to consider when determining which programs, services, and policies best meet the needs, preferences, available resources, and constraints of their constituents.

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