

Strategies for the prevention and control of obesity in the school setting: systematic review and meta-analysis.

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OBJECTIVE: To determine the effectiveness of school-based strategies for obesity prevention and control using methods of systematic review and meta-analysis. **METHODS:** Peer-reviewed studies published between 1966 and October 2004 were considered for review. Studies meeting eligibility criteria were published in English, targeted children aged 3-18 in a school setting, reported weight-related outcomes, included a control measurement and had at least a 6-month follow-up period. Studies employed interventions related to nutrition, physical activity, reduction in television viewing or combinations thereof. Weight related data were analyzed using RevMan software. **RESULTS:** Sixty-four studies were considered for inclusion. Fourteen did not meet inclusion criteria; 29 were excluded due to poor methodological quality. Twenty-one papers describing 19 studies were included in the systematic review and 8 of these were included in the meta-analysis. Nutrition and physical activity interventions resulted in significant reductions in body weight compared with control ((standardized mean difference, SMD=-0.29, 95% confidence interval (CI)=-0.45 to -0.14), random effects model). Parental or family involvement of nutrition and physical activity interventions also induced weight reduction ((SMD=-0.20, 95%CI=-0.41 to 0.00), random effects model). **CONCLUSION:** Combination nutrition and physical activity interventions are effective at achieving weight reduction in school settings. Several promising strategies for addressing obesity in the school setting are suggested, and warrant replication and further testing.