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Review

Educational interventions in childhood obesity: A systematic review with meta-analysis of randomized clinical trials

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Abstract

Objective

To assess the effectiveness of educational interventions including behavioral modification, nutrition and physical activity to prevent or treat childhood obesity through a systematic review and meta-analysis of randomized trials.

Method

A search of databases (PubMed, EMBASE and Cochrane CENTRAL) and references of published studies (from inception until May 2012) was conducted. Eligible studies were randomized trials enrolling children 6 to 12 years old and assessing the impact of educational interventions during 6 months or longer on waist circumference, body mass index (BMI), blood pressure and lipid profile to prevent or treat childhood obesity. Calculations were performed using a random effects method and pooled-effect estimates were obtained using the final values.

Results

Of 22,852 articles retrieved, 26 trials (23,617 participants) were included. There were no differences in outcomes assessed in prevention studies. However, in treatment studies, educational interventions were associated with a significant reduction in waist circumference [-3.21 cm (95%CI $-6.34, -0.07$)], BMI [-0.86 kg/m² (95%CI $-1.59, -0.14$)] and diastolic blood pressure [-3.68 mmHg (95%CI $-5.48, -1.88$)].

Conclusions

Educational interventions are effective in treatment, but not prevention, of childhood obesity and its consequences.

Highlights

► We report a systematic review of educational interventions for childhood obesity. ► Educational interventions to treat childhood obesity reduced BMI. ► Educational interventions to treat childhood obesity reduced waist circumference. ► Educational interventions to treat childhood obesity reduced diastolic pressure.

Abbreviations

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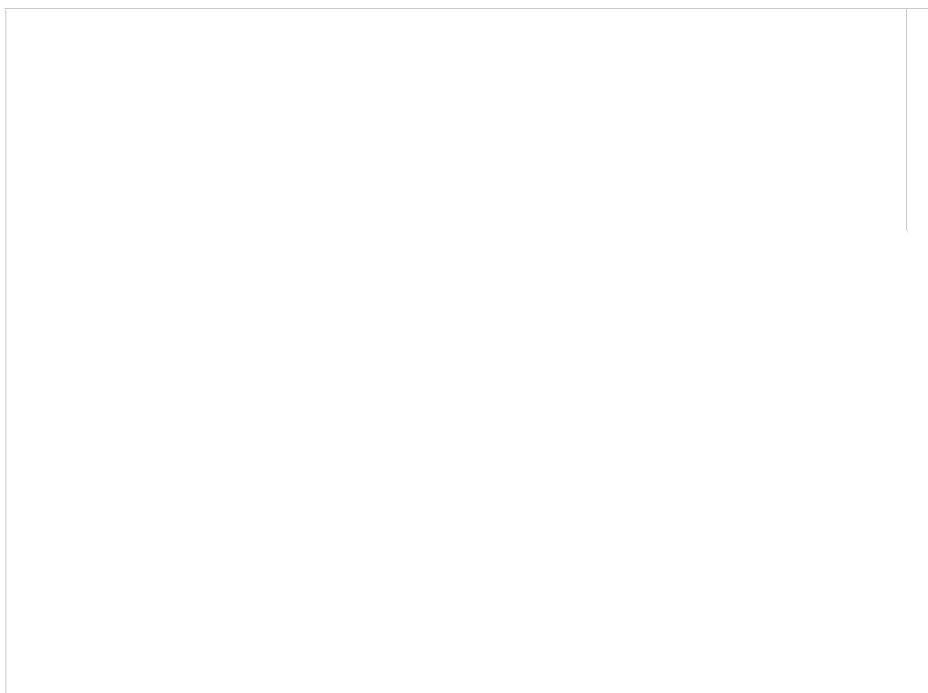
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