



In which settings are programs effective for preventing obesity in school-aged children?



PLAIN LANGUAGE SUMMARY - DECEMBER 2022

KEY MESSAGES

- Obesity prevention programs delivered in schools **can help** promote healthy weight in children.
- School-based obesity prevention programs **do not cause serious harm**.
- Programs in **after-school settings** may have promise in promoting healthy weight, however we **need more high-quality studies** to confirm this.
- Overall and to date, obesity prevention programs delivered in **home and community settings** have not been effective in significantly promoting healthy weight.
- We do not yet know enough about the effect of programs delivered in **health care settings**.
- There is a need for more information on the **costs of obesity prevention programs** in all settings.

What is this review about?

This review asked:

- In which settings are programs effective in promoting healthy weight in children and adolescents?
- Do these programs cause unintended adverse effects?
- Are these programs cost-effective?



This systematic review and meta-analysis provides the most up to date evidence about the effectiveness of childhood obesity prevention programs delivered in different settings

Why is this important?

An increasing number of children globally are overweight.

Being overweight as a child can cause serious health and wellbeing issues that continue into adulthood.

Agencies and governments worldwide have endorsed recommendations for promoting child healthy weight across different settings such as schools, in the home and in health care.

To inform policy decisions that can improve child healthy weight we need to understand in which settings healthy eating and physical activity programs can work best.

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What did we do?

1 We systematically searched for the highest quality studies that assessed the impact of programs conducted in any setting that target healthy eating and/or physical activity on the weight of children aged 6 - 18 years.

2 We included randomized controlled trials that compared the use of obesity prevention programs to no program, or a different program.

3 Where possible, study results were pooled together to calculate an overall summary of the effect of programs in each setting.

We did this by conducting a **meta-analysis**; a statistical method used to combine the results from multiple studies.

4 We were able to combine results for 93 school-based, 12 after-school program, 21 community-based and 13 home-based trials. Relevant data was not available for enough health care trials to conduct a meta-analysis.

What is included in this review?

195 studies published to June 2021



183,063 participants



Studies were grouped by setting and conducted in schools, after-school programs, community, home and health care settings.



Most studies were conducted in high-income countries



Most studies involved children aged 6-12 years



All studies used various different combinations of healthy eating and/or physical activity strategies



What were the main findings?

1. When we pooled findings together by setting, only school-based obesity prevention programs were found to have a positive impact on child weight, though the impact was very small.
2. No overall significant positive effects were found for obesity prevention programs in after-school, community or home settings.
3. There was some evidence of a positive benefit for programs delivered in after-school settings, however more studies are required to confirm this.
4. We found very few studies of obesity prevention programs delivered in health care setting.
5. Adverse effects from obesity prevention programs were investigated in 53 trials. Of those, 10 trials reported presence of an adverse effect, none of which were severe.
6. Few studies reported on cost-effectiveness. Of the 10 that included this information, 9 reported the intervention to be cost effective.

A summary of the limitations of the evidence

The different combinations of healthy eating and physical activity strategies in the obesity prevention studies meant that it was not possible to identify which specific strategies were effective.

The lack of positive effects in after-school, home and community settings should be interpreted with caution due to the overall low certainty of evidence in these settings

About Us

This research was conducted by researchers at the University of Newcastle, Hunter New England Population Health and the National Centre of Implementation Science (NCOIS). NCOIS is an NHMRC funded Centre for Research Excellence associated with the University of Newcastle.

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Full article

Hodder RK, O'Brien KM, Lorien S, Wolfenden L, Moore THM, Hall A, Yoong SL, Summerbell C. 'Interventions to prevent obesity in school-aged children 6-18 years: An update of a Cochrane systematic review and meta-analysis including studies from 2015-2021.', *EClinicalMedicine*, 54 101635 (2022). <http://dx.doi.org/10.1016/j.eclinm.2022.101635>