Is obesity bad for older persons: a systematic review of the pros and cons of weight reduction in later life

Bales C W, Buhr G

CRD summary
This review assessed the effects of intentional weight loss interventions in older adults on outcomes other than weight loss, concluding that there were clinically important benefits of weight reduction for older persons with osteoarthritis for outcomes related to physical function. This conclusion may not be reliable due to a number of shortcomings in the review and/or reporting process.

Authors' objectives
To assess the effects of intentional weight loss interventions in older adults on outcomes other than weight loss.

Searching
PubMed was searched. Search terms, but not search dates, were reported. Reference lists of retrieved articles and an earlier systematic review were searched for additional articles. The search was restricted to English-language studies.

Study selection
Randomised controlled trials (RCTs) in subjects aged 60 years or older were eligible for the review. Studies were required to report weight loss of three per cent or more of baseline body weight or 2 kg compared to baseline, body mass index (BMI) 27 kg/m² or higher and a trial duration of at least six months. Most trials involved participants with specific health conditions such as osteoarthritis, physical frailty or type 2 diabetes. Interventions varied but included diet, exercise, diet and exercise, composite weight loss interventions, sodium reduction and resistance training and weight loss. In the included studies the mean participant age ranged from 64.0 to 71.1 years and mean BMI ranged from 30.8 to 39.0 kg/m². Study duration (where stated) ranged from 6 to 78 months. A variety of outcomes, in addition to weight loss, were reported across the trials.

The authors stated neither how the papers were selected for review nor how many reviewers performed the selection.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
The authors stated neither how the data were extracted for the review nor how many reviewers performed the data extraction.

Methods of synthesis
The data were summarised narratively with differences between the studies presented in tables and discussed in the text.

Results of the review
The review comprised 16 studies that represented five distinct trials. The number of participants was unclear and varied for different outcomes.

For metabolic, clinical and self-reported functional outcomes related to osteoarthritis, coronary heart disease and diabetes mellitus weight loss interventions had favourable or neutral effects. Data from two trials suggested that negative effects of weight loss on bone mineral density might be partially offset by high-intensity resistance training.

Authors' conclusions
There were clinically important benefits of weight reduction for older persons with osteoarthritis for outcomes related to physical function and possibly for diabetes mellitus and coronary heart disease.
CRD commentary

The review addressed a clear question along with clear inclusion criteria. However, only one database was searched for studies, the literature search was restricted to publications in English and there was no specific search for unpublished studies. These restrictions may mean that some studies were missed and both publication and language bias could have been present. In addition, the likelihood of reviewer bias and error could not be evaluated as details of the methods employed to select studies and extract the data were not given. The quality of the included studies was not reported and only limited details of the studies were presented, which made it difficult to judge the appropriateness of using a narrative synthesis. Owing to the limitations highlighted, the reliability of the review conclusions could not be evaluated and, therefore, should be treated with caution.

Implications of the review for practice and research

Practice: The authors stated that decisions about weight loss interventions for obese older persons should be considered on an individual basis in light of their weight history and medical condition.

Research: The authors did not state any implications for research.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.