

# CAHE JC Critically Appraised Article Summary

## Journal Club Details

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<b>Date of submission</b>	2008 December
<b>Journal Club location</b>	ECH (Greenacres Community Therapy Service)
<b>JC Facilitator</b>	Gillian Hendrie
<b>JC Discipline/s</b>	Multi-disciplinary

### Clinical Scenario

Is there a difference in the effects of exercise alone and exercise with diet on weight and muscle strength among older adults?

### Review Question/PICO/PACO

- P** Elderly people aged 60 and above
- I** Structured exercise program (with diet)
- C** No exercise; no diet
- O** Weight, fitness or strength

### Article/Paper

Frimel TN, Sinacore DR, Villareal DT. Exercise Attenuates the Weight-Loss-Induced reduction in Muscle Mass in Frail Obese Older Adults. *Medicine & Science in Sports & Exercise* 2008; 1213-1219.

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<b>Article Methodology:</b>	Randomised Clinical Trial
<b>Returned JC on:</b>	1 December 2008
<b>By CAHE staff member:</b>	Lucylynn Lizarondo

Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>The study asked a clearly focused question.</p> <p><i>Participants:</i> Sedentary community living obese older adults; had stable medications and stable weight; with at least 2 of 3 criteria for mild-moderate physical frailty; Excluded were those with severe cardiopulmonary disease, diabetes mellitus, musculo or neuromuscular impairments, sensory or cognitive deficits, cancer, those taking corticosteroids, androgens, estrogen-containing compounds.</p> <p><i>Intervention:</i> Diet alone and Diet plus exercise</p> <p><i>Outcomes:</i> body weight, fat mass, fat free mass, lean mass, strength</p>
2				<p>The study design used is an appropriate research approach to address the objective of the study, which was to determine the effect of adding exercise to diet-induced weight loss on fat free mass and lean mass of older, obese adults. However, having a control or an exercise only group would have provided more information as to the exclusive effects of exercise on weight loss.</p> <p>Is it worth continuing? YES</p>
3	✓			<p>The participants were randomly allocated to the intervention groups. However, no specific randomisation technique was reported.</p> <p>No significant differences were found at baseline between the diet alone group and diet plus exercise on all outcomes including indicators of physical frailty. This homogenous distribution of participants may suggest that randomisation was successful.</p>
4	✓		✓	<p>The personnel who performed the assessment were blinded to group assignment at baseline and after 6 months of diet plus exercise therapy. It might not have been possible to blind the participants and therapists who facilitated the exercise.</p>
5			✓	<p>All the participants were followed up in each study group. There were however participants who were unable to complete some of the exercises. Training volumes for these exercises were therefore omitted from the analysis.</p>
6	✓			<p>Outcomes were measured and collected in the same way for all participants.</p>
7		✓		<p>The study did not report power calculation. It would therefore be difficult to say whether the number of participants was adequate.</p>



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Ques No.	Yes	Can't Tell	No	Comments
8				Results were presented using means and SD. P values were computed to determine differences between groups.  <i>Bottom line result:</i>  The addition of exercise to diet decreases the amount of muscle mass loss during voluntary weight loss (through diet) in frail obese older adults and significantly increases muscle strength.
9				Differences between groups were determined based on p-value computation. Results may therefore be considered precise.
10				The small sample size in the study may limit the extent to which the results may be considered generalisable. However, the most important outcomes were considered and very few participants reported orthopaedic or arthritic impairments, which may already be expected in the frail population. Whilst the study has flaws in its methodology, the benefits of exercise in addition to diet cannot be ignored.