Reviewer’s report

Title: Body Mass Index and Measures of Body Fat for Defining Obesity and Underweight: A Cross-Sectional, Population-Based Study

Version: 1 Date: 23 April 2014

Reviewer: Indu Waidyatilaka

Reviewer’s report:

This is a well designed piece of work which addresses an area which requires to be studied. More details are required in the methodology on statistics. The description of the use of DXA for body fat analysis and in the derivation of an equation currently lacks clarity. Therefore this needs to be stated in more detail in the methodology. Although the limitations are adequately addressed, since the work pertains only to whites, it is felt that this needs to be reflected in the title and abstract and conclusions should be limited to whites. Tables need to be formatted according to the journal style. Overall a check on the tense is required.

Minor essential revisions

Methods
Paragraph on subjects - Reword to indicate that many populations were used giving dates.

Results
Paragraph two – Define middle age.

Discussion
Paragraph one - “difference in the estimates is not significant”- this has to be first mentioned in the results.
Paragraph three – “It seems likely that for this group, body fat contributes more, and lean tissue less, to body weight than usual” – possibly better re-worded as “than in other groups”
Paragraph five - “missing %BF values were imputed for 66 individuals” – should be detailed in methodology.

Tables
Tables need to be formatted according to the journal style.

Discretionary revisions - indicated in the manuscript. Please refer the attached manuscript.

Level of interest: An article of importance in its field.
Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.