Reviewer’s report

Title: Body composition and cardiovascular risk factors in a cohort of young Australian men: a cross-sectional study

Version: 1 Date: 1 March 2013

Reviewer: J. Edward Hunter

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Major Compulsory Revisions:
1. Lines 32-33 (Abstract) and line 90: The statement “significant knowledge gaps exist in young people” is ambiguous. Clarification is needed. Do the authors feel that young adults, as a group, are ignorant of the relationships between risk factors and cardiovascular disease (CVD)? Or do the authors believe that the relationships between risk factors and CVD in young adults have been insufficiently studied? Or both?

2. Lines 66-67: The authors should clarify the statement, “the rate of CV disease is accelerating . . . .” Does this statement apply to both fatal and nonfatal CVD? Is it worldwide or in selected countries? In the U.S., CVD is reported to be the leading cause of death (accounting for 1 of every 3 deaths in 2008), however, from 1998 to 2008, the rate of death attributable to CVD declined about 31%. (see Roger et al, Circulation, 125:188, 2012)

3. Methods Section: Indicate what criteria, other than age, were used in selecting subjects for this study. Were they students at Queensland University of Technology? Were they compensated for participating?

4. Lines 103-107: The implication is that body fat content was the only measurement of body composition reported. On the other hand, Table 1 and the Results section indicate that “fat-free mass” also was determined. A brief description of the “fat-free mass” procedure is needed.

5. Line 141: Table 2, column 1 indicates that PAEE was calculated by subtracting RMR from EE. Line 141 states, “PAEE was calculated by subtracting EE from RMR.” Correction is needed.

6. Line 227: The term “better blood lipid profiles” is vague. The authors should specify how the blood lipid profiles of their subjects were “better” compared to those reported in other studies.

7. Lines 271-272: This sentence implies that the lean men had reduced cardio-respiratory fitness and increased body fat compared to the overweight men. This is not true according to data in Tables 1 and 2. Correction is needed.

8. Table 2, EI, RMR, EE and PAEE values: All show 5 or 6 significant figures, which suggests an unrealistically high degree of accuracy in these measurements. Can kcal levels really be measured to the nearest 1.0 kcal? Three or 4 significant figures would be more appropriate.
9. Table 2: The units for RMR, EE, PAEE and VO2max are incorrect because the time component is missing. E.g., RMR values should be expressed as “kJ/hr” or as “kcal/hr,” not as “kJ” or “kcal.”

10. What follow-up work is suggested by the results of this study?

Minor Essential Revisions:

1. Line 49: Define the abbreviation “EI” so the Abstract can stand alone.
2. Line 55: Change “in blood lipids” to “on blood lipids.”
3. Line 58: Insert “dietary” before “fatty acids.”
4. Line 75: Insert “low levels of” before “high density lipoprotein cholesterol.”
5. Line 106: Change “corresponds with” to “correspond to.” Grammatically, because the subject of the sentence, BMI (body mass indices), is plural, the verb “correspond” should be used.
6. Line 113: RMR must include a time measurement as part of the units, e.g., “100 kcal/hr,” not “100 kcal.”
7. Line 131: Suggest revising “recording household estimates in food record, and entered into . . . .” to “recording household estimates into a food record and entering into . . . .” Delete comma after “record.”
8. Line 149: A reference is needed for the “Borg scale.” Some readers may be unfamiliar with this.
9. Line 161: Define “WC.” Include this term in the List of Abbreviations.
10. Line 163: A period should be inserted after “MUFA,” and “therefore” should be capitalized. (As written, line 163 is a grammatically improper run-on sentence.)
11. Line 169: The P value should be shown as “0.05,” not as “0·05.”
12. Lines 175 and 181: Insert “subjects” after “overweight” and after “lean.”
13. Line 183: Insert “(Table 2)” after “alcohol intake.”
14. Line 189: The units for VO2max should be “mL of O2/min,” not “mL of O2.”
15. Line 209: Insert “ratios” after “PAEE/BW.”
16. Line 217: The word “factor” should be plural.
17. Line 218: Insert “high” before “percentage.”
18. Line 231: Change “behavior” to “behavioral.”
19. Line 234: “Risk factor” at the end of the line should be plural.
20. Line 240: Revise “population young as children” to “populations as young as children.”
21. Line 259: Insert “and” between “groups” and “similar.”
22. Lines 272-273: Need to state that the “reduced cardio respiratory fitness and increased body fat” were seen in the overweight men, who showed lower VO2max levels compared to the lean men. Increased VO2max values seen in the lean men is associated with increased cardio respiratory fitness.
23. Lines 278: The term “MUFA” is usually considered to be plural (monounsaturated fatty acids). Therefore, “has” should be changed to “have.” Also, insert “lipid” after “blood.”

24. Line 281: Add “of EI” after “23%.”

25. Lines 283-284: Change “was” to “were.” What level(s) of dietary MUFA were associated with 20% reduced risk in coronary heart disease events, according to reference 75?

26. Line 286: Change “intake of MUFA favorable affect CV risk factors” to “intake of MUFA favorably affects CV risk factors.” “Intake” is a singular noun.

27. Line 289: Insert “sources” after “animal.”

28. Lines 290-291: The wording “a Mediterranean predominantly from animal plant” is confusing. Do the authors mean “a Mediterranean diet in which MUFAs were primarily from animal sources” or “a Mediterranean diet in which MUFAs were primarily from plant sources,” i.e., referring to two types of Mediterranean diets?

29. Line 297: Should the sentence read, “Normal and overweight participants may be misclassified using BMI.” rather than, “Normal and overweight participants are misclassified using BMI”? 

30. Figures 1 and 2, vertical axes: The designation “CV risk factors” is confusing. How about “Average number of CV risk factors per subject”?

31. Lines 200-201, 574-575: Slashes needed between “plant” and “animal” (plant/animal) to indicate ratios.

32. Table 1: The P value for “Body fat (%)” is listed as “0.000.” Shouldn’t this P value be “<0.001”?

33. Line 596, Table 2: Why were VO2max levels not measured for 4 subjects (1 lean, 3 overweight)?

Discretionary Revisions

1. Line 30, Abstract (also Line 63, Introduction, and elsewhere): I suggest abbreviating “cardiovascular disease” as “CVD” rather than as “CV disease.” Nutrition Journal may have a preferred abbreviation.

2. Line 102: I suggest using “circumference” singular, not plural (two times in this line).

3. Line 184: For the sentence, “Lean men consumed more energy relative to BW”, add parenthetically that the lean subjects had a larger EI/BW ratio than did the overweight subjects.

4. Lines 207 and 223: Insert “waist” before “circumference” or use abbreviation “WC.”

5. Line 267: Consider changing “figures” to “ratios.”

6. Line 269: Consider changing “than” to “compared to.”

Quality of written English: Needs some language corrections before being
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.