

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Assessing the nutrient intake of a low carbohydrate, high fat (LCHF) diet; a hypothetical case study design.
AUTHORS	Zinn, Caryn; Rush, Amy; Johnson, Rebecca

VERSION 1 – REVIEW

REVIEWER	Dr Trudi Deakin X-PERT Health registered charity, UK "I am author of a number of patient handbooks that are distributed via the charity X-PERT Health"
REVIEW RETURNED	17-Aug-2017

GENERAL COMMENTS	<p>Dear Authors,</p> <p>Congratulations on preparing a paper that addresses an important topic that is currently debated throughout nutrition and dietetics. The paper is clear and well written and discusses all the relevant issues commonly debated. The following suggestions may help provide further clarity to the reader:</p> <ol style="list-style-type: none">1) As many clinicians only read the abstract in published papers – if there is space, would it be worthwhile adding that although iron didn't meet the NRV, it did achieve 86-98% of the threshold and that meal plan 2 for males only exceeded the threshold for saturated fat by 2g (0.6%). This is likely to prevent readers exaggerating the findings by not knowing the detail!2) Although NRV is referred to through occasionally this is replaced with RDI with no definition.3) Need to define what AI is.4) On page 10, would it be worthwhile pointing out that protein only exceeded the AMDR if saturated fat was restricted.5) In the discussion, would it be worthwhile commenting on the fact that no diet is likely to meet all nutrient requirements every day and that is why people are encouraged to consume a varied diet.6) On page 18 (Table 2), does "T" refer to teaspoon or tablespoon? Of note, the Reference Intakes (RIs) in the UK do define the threshold for saturated fat in grams. Interestingly, this is set at 20g which means that all four of the real food meal plans would exceed this amount.
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REVIEWER	Stephen Phinney Virta Health San Francisco, CA USA Virta Health (co-founder) Atkins Nutritionals (science advisor)
REVIEW RETURNED	17-Aug-2017

GENERAL COMMENTS	My one general concern is that the hypothetical subjects are lean active adults eating a LCHF diet in energy balance. In contrast, many overweight people adopt a LCHF diet and voluntarily under-consume energy for months, achieving significant weight loss. The authors should acknowledge this time-limited phase of a LCHF, and address its effects on meeting macro- and micronutrient targets. Specific comments: Page 9, line 25. Rephrase "Despite RDIs met achieved..." Page 10. To expand the applicability of this work beyond Australia and NZ, consider mentioning corn oil as a very rich source of omega-6 while being virtually devoid of omega-3 fatty acids.
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REVIEWER	Mary Bridget Barnes Flinders University, Australia
REVIEW RETURNED	17-Nov-2017

GENERAL COMMENTS	Statistical reviewer was concerned that it was not clear how the large number of data was used (ABS 2011-13, 19-50 year olds). Nutrition results are generally presented in Table 3 as one number, not a range or with Standard Error.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name

Dr Trudi Deakin

Dear Authors, Congratulations on preparing a paper that addresses an important topic that is currently debated throughout nutrition and dietetics. The paper is clear and well written and discusses all the relevant issues commonly debated. The following suggestions may help provide further clarity to the reader:

1) As many clinicians only read the abstract in published papers – if there is space, would it be worthwhile adding that although iron didn't meet the NRV, it did achieve 86-98% of the threshold and that meal plan 2 for males only exceeded the threshold for saturated fat by 2g (0.6%). This is likely to prevent readers exaggerating the findings by not knowing the detail!

Response: A relevant suggestion. The abstract has been altered by adding both of these results and slightly modified elsewhere to adhere to the 300 word limit.

2) Although NRV is referred to through occasionally this is replaced with RDI with no definition.

3) Need to define what AI is.

Response: The NRVs, RDIs and AIs have now been defined in the methods section (pg 6).

4) On page 10, would it be worthwhile pointing out that protein only exceeded the AMDR if saturated fat was restricted.

Response: This point has been added, as suggested.

5) In the discussion, would it be worthwhile commenting on the fact that no diet is likely to meet all nutrient requirements every day and that is why people are encouraged to consume a varied diet.

Response: This point has been added, as suggested.

6) On page 18 (Table 2), does "T" refer to teaspoon or tablespoon?

Response: An asterisk has been added to Table 2 to denote that T = tablespoon and a double asterisk for tsp = teaspoon.

Of note, the Reference Intakes (RIs) in the UK do define the threshold for saturated fat in grams. Interestingly, this is set at 20g which means that all four of the real food meal plans would exceed this amount.

Response: That is interesting and actually makes more sense than a % threshold. A slight change has been made to the text in relation to this comment, to highlight that % threshold for saturated fat exists in New Zealand and Australia (pg 9).

Reviewer: 2

Reviewer Name
Stephen Phinney

My one general concern is that the hypothetical subjects are lean active adults eating a LCHF diet in energy balance. In contrast, many overweight people adopt a LCHF diet and voluntarily under-consume energy for months, achieving significant weight loss. The authors should acknowledge this time-limited phase of a LCHF, and address its effects on meeting macro- and micronutrient targets.

Response: This important consideration has been acknowledged and addressed in the last paragraph of the discussion section (pg 11).

Specific comments:

Page 9, line 25. Rephrase "Despite RDIs met achieved..."

Response: Change has been made to remove the word "achieved"

Page 10. To expand the applicability of this work beyond Australia and NZ, consider mentioning corn oil as a very rich source of omega-6 while being virtually devoid of omega-3 fatty acids.

Response: Corn oil has been added to the range of oils mentioned.

Reviewer: 3

Reviewer Name
Mary Bridget Barnes

Statistical reviewer was concerned that it was not clear how the large number of data was used (ABS 2011-13, 19-50 year olds). Nutrition results are generally presented in Table 3 as one number, not a range or with Standard Error.

Response:

i. We used the data from the Australian Bureau of Statistics for 2011-2013 which stated that the average Australian male and female, in an age category defined as adults (18 years and over) was 175 cm tall and 162 cm, respectively. There was not a large number of data used, but rather one value that represented the average of the population group. To reduce confusion, we have added the words "national average" for male and female adults in this section of the manuscript (pg 5).

ii. For the NRVs, one threshold value is developed and specified for each nutrient for each age category (apart from magnesium, which has now been clarified better in this section (pg 5)). Hence, reiterating that this was not a lot of data but one threshold value. This explains the use of one value and not a range or Standard Error in Table 3.

As a result of this comment, we noticed that we have not shown the range for magnesium in Table 3; this has now been altered in track changes for both males and females.