Reviewer's report

**Title:** Effects of whole grain rye crisp bread for breakfast on appetite and energy intake in a subsequent meal: two randomized controlled trails with different amounts of test foods and breakfast energy content

**Version:** 2  
**Date:** 17 December 2013

**Reviewer:** Mette Kristensen

**Reviewer's report:**

Reviewer comments:

This paper covers the findings from two small appetite studies on the effect of rye crisp bread.

A major concern is that it is unclear why two separate studies were conducted? Was there an a priori hypothesis on the effect of meal size? It seems that a rationale for the composition of the test meals where both proportion of crisp bread and caloric content is changed at the same time making it difficult to conclude on the effects of either of them, is missing. Also, why was a comparator not a white wheat crisp bread not also included?

**Introduction:**

The introduction is too long. It should be focused on the area of rye (whole grain) foods and appetite rather than longer term effects. Ex lines 76-83 covers longer-term studies and should be removed as well as lines 66-68 on hunger and weight regulation. Also, lines 85-91 could be shortened.

L86: Abbreviate VAS the first time

The aim of the study should be described in the end of the introduction, and not both here and in the first paragraph of the method section – please combine.

**Methods:**

Please describe the overall design before detailed info on VAS (L138-144). This should be described later under a separate point including the information on the validation.

L111: please specify who were blinded? participants, investigators, statisticians, others?

L121: seems strange that a wish to become pregnant is relevant in a study of 1-2 weeks?

L122: Delete sentence on age and just add the range of age allowed under inclusion criteria.

Was there a BMI range as a inclusion criteria?

Was menopausal status and cycle taken into account?
L124: Was water allowed during fasting? Was it limited / fixed?
L136: Seems like weight, height and birthdate is recorded twice, both before and after a meal?
L157: unclear what complete blinding refers to?
Method for height and weight should be described in more detail and apparatus noted.
L165; what is table spread?
L179-180: Unclear whether the pickle and beetroot is served in fixed amounts? Unclear what measures were taken to standardize the amount of frying oil? What is the energy density and composition of the dish? Was the amount of water fixed?
L192: How was AUC calculated? All above zero or not? With the trapezoidal method?
L194: why was sex not included in the model? Was baseline included as a covariate?

Results:
Generally, there is no need to apply the term significant / significantly as the p-value indicate level of significance and only differences which are in fact significant should be referred to as differences.
The term “overall” is used a few times, however it is clear what it refers to. Is it a reference to the repeated measures analysis?
L259: A reference to fig 2H is missing.

Discussion:
L 280-282: What is the importance of this statement?
L289: Here it is specified that the participants were not blinded highlighting the importance of specifying blinding under the methods.
L294-300: The macronutrient composition of the meals differ between study 1 and 2, which may also affect appetite.
L342-346: The viscosity of the luminal content may be as high for RB as for porridge, as the author also states. However, the authors contradict themselves when stating that microstructure does not matter, as it does seem to affect immediate satiety (t=30 min) and thus can also be speculated to affect satiation. However, this may be related to differences in meal volume (incl. fluids) which is not discussed.
L353-357. These references to phenolics seem highly speculative, please revise.
L362-363: Please refrain from concluding on long term effects based on these data. This is not appropriate.

Table 2: I suggest the table is rearranged to ease the comparisons of treatments within study by having all study 1 product characteristics on the left and study 2
on the right, and RB up and WB below as it is already.
Table 3: I suggest the same structure as for table2.
Figures: All figures are lacking error bars, also P values are lacking for some percentage changes (fig 2G+H)

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
Nothing to declare