Reviewer's report

Title: Effects of higher protein vs. higher fat snacks on appetite control, satiety, and eating initiation in healthy women

Version: 2
Date: 2 September 2014

Reviewer: Vicky Drapeau

Reviewer's report:

REVIEWER COMMENTS

This short article aimed to evaluate the impact of a higher-protein yogurt snack on appetite control and subsequent food intake compared to two other high-fat snacks. Twenty women were invited to participate in this randomized crossover study. The authors observed that consumption of the higher-protein snack led to a greater reduction in afternoon hunger, delayed in eating initiation (about 20-30 min) and reduces subsequent caloric intake by about 100 kcal.

The article is well written. Even though this study included a small number of participants and has been done in women only, the objectives are interesting and merits attention particularly in the context of body weight control. I have one major concern and other minor comments/suggestions to address to the authors.

General concern

I was surprised that the authors did not consider energy density of the three snacks under investigation as an important factor that could explain the results. It is well known that low energy dense preload can enhance satiety and reduce subsequent energy intake at a meal (Rolls, Physiol and Behav, 2009). When looking at table 1, we could guess that the yogurt snack has a lower energy density than the two other snacks. Is it possible that energy density could explain the results? In my opinion, energy density should be included in the introduction, present in table 1 and considered in the last part of the article (discussion).

Other minor comments

Page 3, line 4: Please specify: In the US population, nearly one third of daily....
Page 3: Can you specify why this study was done only in women? Usually, this type of studies are easier to complete in men has women menstruation cycle can influence appetite sensations and food intake (Dye and Blundell, Hum Repro, 1997). This is probably not an issue because of the randomized design. However, information about menstruation cycle should be provided.
Page 4: Please specify whether participants had to refrain from intense physical activity the day before experiment? If not, this should consider as a study limit.
Page 4: Specify if the participants were aware about the real study objectives.
Page 4, line 18: Correct: « visual analogue scale on appetite sensations » and
specify the length of the scale (100 or 150 mm).

Page 4 : Provide more information about breakfast and dinner composition.

Page 4 : Please specify if the participants were allowed to drink during breakfast or dinner or between meals.

Page 5 : The author observed that yogurt led to greater reductions in afternoon hunger compare to chocolate. Based on this observation we would expect that yogurt would reduce more food intake compare to chocolate. But then on page 6, the author indicates that the consumption led to approximately 100 kcal less at dinner compare to crackers. Why chocolate and not crackers ? How can we explain these different results? Impact of sweet and savoury food on appetite sensations should be discussed.

Page 6, line 12: Specify: “…and reduces short-term food intake…”

Page 6, line 16: Need references after the sentence: “Several previous snack studies....”

Page 7: line 6: “This inconsistent finding…” specify which findings.

Page 7: The authors indicate that complex CHO reduce appetite and increase satiety more than simple CHO. This is not always the case. Other studies indicate that some complex CHO with high glycemic index have lower impact on appetite sensations than simple CHO (with lower glycemic index. This should be rephrased/modified.

Page 7: correct : “reduce appetite “ for “reduce hunger”

Table 1.

Add energy density of each snack

Please indicate kcal also in kJ

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I have no conflict of interest