Reviewers report

Title: The effects of increased dietary protein yogurt snack in the afternoon on appetite control and eating initiation in healthy women

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Reviewer: Vicky Drapeau

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REVIEWER’S REPORT FOR PAPER ENTITLED « The effects of increased dietary protein yogurt snack in the afternoon on appetite control and eating initiation in healthy women » by Laura C Ortinau, Julie M Culp, Heather A Hoertel, Steve M Douglas and Heather J Leidy

(NUTRITION JOURNAL - Short report)

REVIEWER COMMENTS

This article aimed to evaluate the impact of a high protein snack on appetite control markers including subsequent energy intake compared to an isocaloric normal protein snack. A second objective aimed was to identify predictors of onset of eating. Thirty-two women were asked to eat on two separate days a snack (normal or high protein) 3 h after a standardized lunch. They were then invited to complete visual analogue scale every 30 min and throughout the afternoon until dinner (ad libitum) was requested. The objectives of this well design study (randomized cross-over design) are quite interesting and merits attention particularly in the context of the high obesity prevalence. I only have minor comments/suggestions to address to the authors.

Minor comments:

1. Background, 3rd para: The authors indicate that the purpose of this study was to evaluate the impact of a high protein snack on appetite control, satiety and delays subsequent eating compared to an isocaloric normal protein snack. In this objective, it’s seems like appetite control is separate from satiety (which is not the case). Moreover, why only indicate delays subsequent intake and not subsequent energy intake? In my opinion, after reading this study, it would be more appropriate to indicate that the main aimed of this was to evaluate the impact of high protein snack on appetite control which include satiation and satiety (assessed with visual analogue scale), delays subsequent eating (hour) as well as subsequent energy intake (kcal). This should be revised throughout the text (including the abstract).

2. Methods, 1st para: The authors indicate that the subjects had no eating disorders, diabetes or rapid weight fluctuation during the past six months. Is it possible to specify how eating disorders and diabetes were assessed? Please
specify what was the body weight fluctuation interval, which correspond to “no rapid weight loss/gain”. In the same para, please specify if cognitive restriction and menstrual cycle was assessed in this group of subjects. Because cognitive restriction is usually high in this group of participants and that this eating behaviour trait can influence appetite control, the impact of cognitive restriction on the present study results should be addressed in the discussion (ex. Outcome on the results, limitation, etc). The same is true for the menstrual cycle and appetite control.

3. Methods, experimental design: Please specify which visual analogue scale was used – 100 mm or 150 mm? Also specify if the participants were allowed to do some activities between in the 8 h testing period (ex. Reading, watching TV, etc). In my opinion, 8 hour testing is very long for a participants and the dinner could have been request because they were bored.

4. Methods experimental design: The authors indicate that they evaluate perceived appetite: hunger, desire to eat and prospective food consumption) and satiety (fullness). This is a little bit unclear as fullness is part of all perceived appetite sensations and can either assessed satiation (i.e. the termination of a meal) or satiety (i.e. the period of time between two eating episodes). The same is true for each appetite sensation. It should be adjusted in the text.

5. Data statistical analysis: Please specify if Person correlations were performed on one appetite sensation time point or on changes in appetite sensation in response to the snack or during afternoon.

6. Discussion, 2 para: In line with comment no. 4, this sentence should be adjusted “In addition to changes in perceived sensations of fullness over time, another …."

7. Discussion: Please discuss briefly some limitations (specific population, women, etc).

8. Abbreviations : Why – NS for No snack ? no mention in the text.

9. Figure 1: Please add indications regarding lunch and snack consumption. The post snack area under the curve units should be (mm * 120 min) since the first post snack perceived appetite sensation was taken 30 min after the snack.

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

yes- I'm supported by Danone Institute to test the impact of a nutrition education program on the consumption of fruit and vegetable and dairy product.