Reviewer's report

Title: Eating in the absence of hunger: interaction between stress, macronutrient intake and disinhibition

Version: 1 Date: 25 July 2011

Reviewer: Kathleen Melanson

Reviewer's report:

This manuscript describes a 4-visit randomized crossover design in 38 adults, to test the effects of an acute laboratory stressor and macronutrients (protein vs. CHO) on wanting, liking, and energy intake (EI). While hypothesized differences did not show for the group as a whole, subjects characterized by disinhibition showed lower wanting and EI after the protein-rich meal as compared to the CHO-rich meal during rest conditions. This macronutrient effect was not apparent during stress conditions, suggesting that stress might override the satiating effects of protein in such individuals.

This work is well-written, and justified based on the scientific literature. The research questions and methods are clearly described, although this reviewer requests a few more methodological details. Appropriate controls were used in procedures, and test meals were nicely matched. The results can be easily followed, and the discussion is based on them. Findings are relevant for both researchers and clinician.

MAJOR COMMENTS:

1. In the Methods section, last paragraph describing test meals, please indicate the types of carbohydrates comprising the shakes and/or test meals as a whole. For example, it is known that different sugars, starches, and fibers can have differential impacts on appetite, so it is important for readers to understand carbohydrate types comprising the test meals. If available, it would be helpful to know a bit more about the protein sources in the shakes too. Such information could be presented as text or a small table.

2. Were any power calculations run? If so, on what were they based?

MINOR COMMENTS:

1. In the first paragraph of the Methods section (lines 132-135), recruitment based on visceral overweight is described, but waist circumference is used as the criteria. Since waist circumference cannot discern between visceral and subcutaneous adipose, the term “abdominal adiposity” is suggested instead.

2. In the first paragraph of the Methods section (lines 137-140), please provide the VAS values on which “liking” of food items was based.

3. In the Methods section, please specify the duration of time between test visits to the lab. What instructions were provided to subjects during these interims?
4. In the Results section, the second paragraph, first sentence under “Appetite Profile”, in the parentheses with data, please provide the p-value for the comparison between pre- and post-meal liking.

DISCRETIONARY REVISIONS:
1. Spell the word “minute” instead of abbreviating it to “min”; sometimes this abbreviation is used for “minimum”.
2. In the second paragraph of the Methods section, second sentence, “unrestraint” should be changed to “unrestrained”.
3. In the Methods section, under Study Design, please clarify how long the fast prior to testing was.
4. In the Abstract and/or Methods, the term ‘ad lib’ could be used to describe the self-selection of the second meal.
5. In the last paragraph of the Results, first sentence (line 383), do you mean, ‘showed no OVERALL differences between macronutrients’?
6. In the first figure legend, change “was” to “were”.

ACCEPT AFTER REVISIONS