



Published in final edited form as:

Cell Metab. 2019 July 02; 30(1): 226. doi:10.1016/j.cmet.2019.05.020.

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of Ad Libitum Food Intake

Kevin D. Hall^{*}, Alexis Ayuketah, Robert Brychta, Hongyi Cai, Thomas Cassimatis, Kong Y. Chen, Stephanie T. Chung, Elise Costa, Amber Courville, Valerie Darcey, Laura A. Fletcher, Ciaran G. Forde, Ahmed M. Gharib, Juen Guo, Rebecca Howard, Paule V. Joseph, Suzanne McGehee, Ronald Ouwerkerk, Klaudia Raisinger, Irene Rozga, Michael Stagliano, Mary Walter, Peter J. Walter, Shanna Yang, Megan Zhou

We recently noticed an error in the documented diet order in the individual meal data sheets for one of our study subjects. This error did not affect the primary outcome of the study (diet differences in total daily *ad libitum* energy intake) or the snack intake data, but the error did affect the reported diet differences between breakfast, lunch, and dinner.

Specifically, the ultra-processed diet resulted in increased energy intake at breakfast (144 ± 39 kcal/day; $p = 0.0014$), lunch (248 ± 39 kcal/day; $p < 0.0001$), and dinner (108 ± 41 kcal/day; $p = 0.017$) as compared to the unprocessed diet. Carbohydrate intake was significantly increased during the ultra-processed diet at breakfast (76 ± 22 kcal/day; $p = 0.002$), lunch (139 ± 21 kcal/day; $p < 0.0001$), and dinner (73 ± 25 kcal/day; $p = 0.009$). Fat intake was significantly increased during the ultra-processed diet at breakfast (69 ± 14 kcal/day; $p < 0.0001$) and lunch (130 ± 17 kcal/day; $p < 0.0001$), and tended to be increased at dinner (26 ± 13 kcal/day; $p = 0.06$). Protein intake was significantly lower during the ultra-processed diet at lunch (-22 ± 6 kcal/day; $p = 0.0013$) but was not significantly different from other meals ($p > 0.17$).

The authors apologize for this error and any inconvenience that may have resulted.

^{*}Correspondence: kevinh@nih.gov.