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Topic: Community health and nutrition programs

Title: EVIDENCE AGAINST COMMON SENSE IN NUTRITION: 2. People should use energy balance to adjust their energy intake.

Presentation Type: Oral

Introduction. Energy balance is one of the most used concepts to indicate how people can achieve a equilibrate relation between expend and intake of energy. We provide population-based evidence to allow insights over this issue.

Objective. To analyze effects of energy intake over BMI among Brazilian young adults.

Methods. Data come from 11,235 individuals from 18 to 34y surveyed in 2008-2009 at POF (Budget Household Survey), Brazil. We summarized calories from last 24h feeding episodes reported in first day sheet. We computed basal metabolism from Harris-Benedict formula using weight actual and equivalent to 24kg/m^2 when $\text{BMI} \geq 25$ and the difference of calories between them (DMBH). Correlation and effects were estimated in regression models and adjusted by socioeconomic and demographic variables.

Results. The correlation between calories/day and basal metabolism was $r \approx 0$ for both sexes. In range from 18 to 27kg/m^2 , regression coefficients shows that DMBH and age effects, adjusted for schooling and income, are similar on BMI: 0.04kg/m^2 in men and 0.07kg/m^2 in women. Number of feeding episodes or calories a day has no significant effects over BMI after adjusting. After adjusting for all variables mentioned before, DMBH shows same size effect on BMI for both sexes.

Conclusion We found no evidence it is possible to people using energy balance idea to adjust energy intake to energy expend, daily. Evidences suggest that people eating keeping an eye on actual BMI not healthy BMI. Nutritionists and health professionals should avoid recommend energy balance as a tool for weight control in populations.