EVIDENCE AGAINST COMMON SENSE IN NUTRITION: 1. How many meals a day should I take to achieve a healthy weight?

Introduction

Common sense has become a mighty driven in nutrition behavior of population last decades. Some of that come from extrapolation of clinical experiences; some come from nutritionist advice in media. We provide population-based empirical evidence to allow insights over this issue.

Objective

Describe correlation among eating frequency and energy intake in a 24h period.

Methods

Data come from 11,235 individuals from 18 to 34y surveyed in 2008-2009 at POF (Budget Household Survey), Brazil. We summarize calories and feed episodes across last 24h in first day sheet, and estimated its correlation by Pearson’s coefficient. Finally, correlation was stratified over two units’ groups in BMI ranges.

Results

The general correlation among day-calories and eating frequency was 0.42 (mean increase of 259kcal) in male and 0.40 (mean increase of 208kcal) in female. Over BMI 18-29 range, the mean increase of day-calories by eating frequency assumes an inverse U-shape in males and a wavelike shape in female. In BMI healthy range, from 20 to 24, the correlation was 0.41 (mean increase of 254kcal) in male and 0.37 (mean increase of 196kcal) in female.

Conclusion
Evidence suggests that increasing meal frequency stimulates the raise of total daily calories at population, irrespectively from nutritional status. Nutritionists and Health professionals strongly should avoid recommending increasing feeding frequency as a strategy for weight control in populations.