Weak Satiety Responsiveness Is a Reliable Trait Associated with Hedonic Risk Factors for Overeating among Women.

Dalton, M 2015
Nutrients
7:7421-7436.

Abstract:
Some individuals exhibit a weak satiety response to food and may be susceptible to overconsumption. The current study identified women showing consistently low or high satiety responses to standardised servings of food across four separate days and compared them on behavioural, psychological and physiological risk factors for overeating and future weight gain. In a crossover design, 30 female participants (age: 28.0 □ 10.6; body mass index (BMI): 23.1 □ 3.0) recorded sensations of hunger in the post-prandial period following four graded energy level breakfasts. Satiety quotients were calculated to compare individuals on satiety responsiveness across conditions. Body composition, resting metabolic rate (RMR), energy intake, food reward and craving, and eating behaviour traits were assessed under controlled laboratory conditions. A distinct low satiety phenotype (LSP) was identified with good consistency across separate study days. These individuals had a higher RMR, greater levels of disinhibition and reported feeling lower control over food cravings. Further, they consumed more energy and exhibited greater wanting for high-fat food. The inverse pattern of characteristics was observed in those exhibiting a consistently high satiety phenotype (HSP). Weak satiety responsiveness is a reliable trait identifiable using the satiety quotient. The LSP was characterised by distinct behavioural and psychological characteristics indicating a risk for overeating, compared to HSP.