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ORIGINAL ARTICLE

Two weeks of overfeeding with candy, but not peanuts, increases insulin levels and body weight

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Abstract

Objective: To study the effects of snacking based on fast acting carbohydrates (candy) or fat and protein (peanuts) in a prospective randomized, parallel intervention study. ***Methods:*** Basal metabolic rate (BMR) and cardiovascular risk factors were measured before and after hyper-alimentation by addition of

women completed the randomized study. ***Results:*** Energy-intake increased similarly in the groups (candy: +46.1±35%, peanuts: +46.8±28% *p*=0.96). Body-weight (candy: from 67.3±7.6kg to 68.1±7.3kg, *p*=0.01, nuts: from 68.7±6.1kg to 69.0±5.7kg *p*=0.3) and waist circumference increased significantly only in the candy group. At the end of the study LDL cholesterol (candy: 2.6±0.4mmol/l peanuts: 2.1±0.4mmol/l, *p*=0.005) and ApoB/ApoA-1-ratio (candy: 0.68±0.16 peanuts 0.53±0.11, *p*=0.01) were higher in the candy group than in the peanut group. On the other hand, BMR increased only in the peanut group (candy: from 6.657±1.1MJ/24h to 6.762±1.1MJ/24h, *p*=0.3 nuts: from 6.896±0.98MJ/24h to 7.256±1.1MJ/24h, *p*=0.02). ***Conclusion:*** Two weeks of snacking based on peanuts does not cause the same negative metabolic effects as an isocaloric diet in which the snacking is based on short acting carbohydrates in the form of candy in non-obese healthy subjects.

Keywords:: hyper alimentation, human, peanuts, basal metabolic rate, cholesterol