Acute exercise bout affects urges for sweets and physical activity participation in overweight regular sweet consumers

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Background
Research has shown that acute moderate intensity exercise can reduce urges for chocolate in normal weight people (Taylor & Oliver, 2009). In addition to that it has been shown that affective response to an acute moderate-intensity exercise stimulus may predict self-reported physical activity 12 month later (Williams et al., 2008). We investigated the effects of an acute exercise bout on urges to consume sweets, affect and responses to stress and a sweet cue. Potential long-term effects on physical activity were assessed 12 months later.

Methods
Following 3 days of chocolate-abstinence 47 overweight, sweet consumers were assessed, on separate days, in 2 randomly ordered conditions, in a within-subject design: 15-min brisk walk or passive control. Following each, participants completed 2 tasks: Stroop color–word interference task, and handling sweets. Urges for sweets, affective activation and valence were assessed. 30 of the 47 participants completed questionnaires about their exercise behaviour 12 months later.

Findings
ANOVAs revealed sig. condition x time interaction effects for: urges for sweets (p<0.01, eta² =0.245), valence (p<0.01, eta² =0.183), and activation (p<0.01, eta² =0.130). 65.6 percent of those surveyed reported more PA since study participation. Wilcoxon tests have shown that participants spent significant more time practicing strenuous (p=0.019) and moderate (p=0.028) PA after the moderate-intensity exercise stimulus compared to time before participating in the PA intervention study. Respondents reported to be more refreshed, calm, energetic, happy, revived and enthusiastic following PA instead of nibbling.

Diskussion
Obtained data show a potential of an acute exercise bout in reducing food craving in overweight people; participating in an acute exercise bout study may increase physical activity levels. The potential of an acute exercise bout in weight reduction programs should be explored.

References