The effect of information placebo on physical activity in overweight and obese children

Shira Fanti-Oren, Daphna Birenbaum- Carmeli, Alon Eliakim, Michal Pantanowitz, Dan Nemet.

INTRODUCTION

We previously demonstrated the beneficial short tern effects of positive information on exercise test performance. Yet this does not necessarily reflect real-life exercise conditions, or prolonged effects on physical activity patterns of children.

METHOD

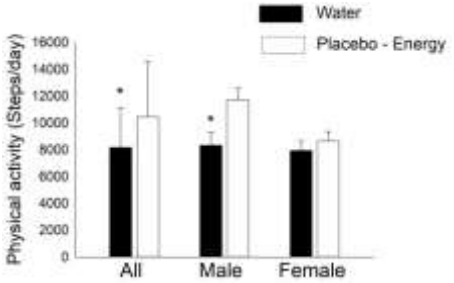
Seventeen pre-pubertal (Age 128.7±26.6m) overweight and obese children (7 females, 10 males) participated in the study. Participants received 7 bottles of mineral water per week for two weeks. Different types of information were randomly provided regarding the drink consumed at each week; standard (water) versus deliberate positive information (presumed energy drink, placebo**)**. Daily step count was measured using pedometers and compared using paired T-test.

OBJECTIVES

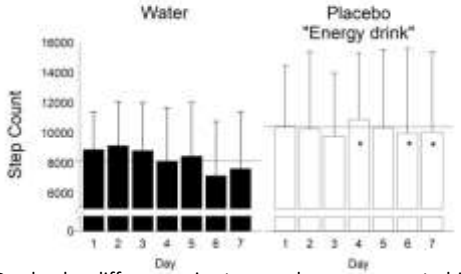
The aim of the present study was to assess the effect of one week of consuming placebo "energy drink" compared to drinking regular water on daily physical activity of obese children participating in a multi-disciplinary program for weight reduction. We hypothesized that the daily physical activity of the obese participants would be increased during the week they believe that they consumed an "energy drink".

RESULTS

Following consuming the placebo drink, children demonstrated significantly higher average daily step number (10,452±4107) compared to the days they drank water (8168±2928, p<0.005). This difference was attributed mainly to male participants. Daily differences in step number became significant toward the end of the seven days studied (Days 4, 6-7).



Water versus placebo average daily steps number. Following consuming the placebo drink, children demonstrated significantly higher average daily steps number compared to the days they drank water (p=0.011)



Day by day differences in step number are presented in Figure 2. Daily differences in step number became significant toward the end of the seven days studied [Days 4 (p=0.028), 6 (p=0.018) and 7 (p=0.048)]

CONCLUSIONS

The use of placebo in the form of deliberate positive information was associated with a significant increase in real-life physical activity in overweight and obese children. Positive information may be used to encourage children with obesity to enhance daily physical activity and energy expenditure.