

Impact of Exercise Modes on Appetite Markers

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ABSTRACT This study investigates the effects of different acute exercise modes on appetite marker ratings. Twelve healthy male subjects participated voluntarily in the study and written informed consent was obtained from all subjects before participation. The subjects underwent four, 120 minute trials (exercise and control) in a randomized crossover design. These included three exercises and one control. In the exercise trials, the subjects performed three different exercise protocols (60 minutes exercise and 60 minutes recovery). In the control trial, subjects rested for 2 hours. The ratings of subjective feelings of appetite markers were reported on 100 mm visual analogue scales (VAS) at baseline and at 20, 40, 60, 80, 90, 120 minutes after baseline. The visual analogue scales (VAS) were used to measure the following appetite markers: (i) hunger, (ii) fullness, (iii) desire to eat, and (iv) prospective food consumption. Repeated-measures, and two-factor ANOVA were used to examine differences between the four trials over time to note appetite marker changes. Between-trial differences at each time point were examined using a one-way ANOVA and the Bonferroni post hoc tests when significant interactions were found. The two-way ANOVAs revealed significant ($P < 0.05$) trial \times time effects ($P < 0.05$) and time ($P < 0.05$) effects in all appetite markers except hunger. The exercise modes are not different from control ($P > 0.05$) in any of the appetite markers except for the feeling of satiety, and the differences between exercise modes are that, combined exercises decrease the feeling of satiety more than combined exercises, and caused desire to eat and prospective food consumption more than resistance exercises ($P < 0.05$). In conclusion, this finding lends support for a role of exercise in weight management.