RELATIONSHIP BETWEEN RESISTANCE TRAINING AND SELF-REPORTED HABITUAL MACRONUTRIENT AND ENERGY INTAKE

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ABSTRACT

Obesity is reaching epidemic proportions and more effective treatments are required to prevent the expansion of this disease. Treatments should focus on creating a negative energy balance either via increasing energy expenditure or by decreasing energy intake, or preferably both. Therefore, the purpose of this study was to investigate whether resistance training can influence feeding behaviour as determined by self-reported habitual macronutrient and energy intake. The effect of eight weeks of resistance training (n = 13) on self-reported macronutrient and energy intake was compared to a non-exercising control group (n = 13) in inactive males using a computer-based software program. Similar to the non-exercising control group, resistance training resulted in no significant (p > 0.05) changes in the habitual intake of daily intake of total kilocalories, carbohydrates, proteins and fats. In conclusion, eight weeks of resistance training is not an effective mode of training to promote an improvement in macronutrient and energy intake and despite studies demonstrating that exercise itself, in the absence of counseling, may affect feeding behaviour, it may be that resistance training as a mode of training may not be an effective mode of exercise to promote overall physical activity in an attempt to modify the patterns of macronutrient and energy intake. As such, negative energy balance would solely be due to the energy expenditure during this mode of exercise.

Key words: Diet; Exercise; Feeding behaviour; Physical activity.

INTRODUCTION

With the rising incidence of co-morbid diseases stemming from inactive lifestyles and an over-consumption of energy-dense foods (Olivares et al., 2004; Sallis, 1993; Selicker et al., 1994), physical activity has been promoted as an invaluable tool in long-term weight management due to its ability to promote not only an increased energy expenditure through exercise but also changes in nutrient intake (Ambler et al., 1998; Sallis, 1993; Selicker et al., 1994; Tremblay & Almeras, 1995). This is due to the fact that physical activity has been shown to alter macronutrient metabolism and/or stores and affect neuro-systems, such as the Leptin hypothalamic signaling pathway, involved in the control of food intake (Tremblay & Almeras, 1995). In this regard, voluntary energy intake can increase in response to an increased exercise volume (Janssen et al., 1989) possibly due to compensation for the