Introduction

The recently novel identified hormone, irisin, has gained attention as a way to increase energy expenditure by enhancing metabolic function. Exercise and active lifestyle increase the upregulation of exercise-regulated genes that have direct effect on cellular metabolism. The objective of this study is to analyze the effects of one bout of high intensity exercise on circulatory levels of irisin in healthy young adults.

Methods

• **Sample:**

A total of 24 participants were exercised. Subjects were blocked by sex, BMI, and LBM and randomized to either control (n=13) or intervention (n=11) (Table 1). One control was excluded for not fulfilling the inclusion criteria (Figure 1).

• **Procedures:**

Physical fitness was assessed through body composition, muscular strength, cardiopulmonary fitness, and irisin levels. Strength assessments were performed after 3 familiarization sessions in order to acquire appropriate exercise techniques, and provide the learning effect (Figure 1).

• **Intervention:**

High-intensity circuit training consisting of 3 whole body exercises, 3x10 with resting periods of 30 seconds/associate and 1-2 minute intervals. Intensity was set at 7-8 on the 0-10 Perceived Exertion (RPE) scale [1]. Lactate levels were measured to cross-check intensity (Figure 2).

Discussion and Conclusions

In addition to heterogeneous research findings, the lack of changes in serum concentrations of irisin after a resistance training intervention shown in this study adds controversial results to the literature [2-4].

Irisin is an exercise-induced hormone, often contributing variables such as mean temperature, body temperature, daily variance, physical fitness levels, exercise intensity, and exercise designs - with control group - might be critical factors for future studies.

Results

Interaction effect (time x intervention) [F(2,42) = 2.28, p = 0.11], time [F(2,42) = 0.32, p = 0.74] and intervention [F(1,21) = 0.239, p = 0.63] effects were not significant (Figure 3) when circulating irisin levels (ng/ml) were analyzed.

Acknowledgements: CATEL, PT2015 Scholarship Category Program at TTU, participants, and Research Assistant.