

# ZUMBA FITNESS PROGRAM AS THERAPEUTIC APPROACH TO IMPROVE BODY COMPOSITION IN AN INACTIVE OVERWEIGHT AND NORMAL WEIGHT POPULATION: ASSOCIATION WITH DAIRY INTAKE

Marcela Guerendiain<sup>1</sup>, Emilio Villa-González<sup>2</sup>, Susana Paz-Viteri<sup>2</sup>, Vinicio Sandoval<sup>2</sup>, and Yaira Barranco-Ruiz<sup>2</sup>

<sup>1</sup> School of Medicine, Faculty of Health Sciences, National University of Chimborazo, Riobamba, Ecuador.

<sup>2</sup> School of Physical Culture, Faculty of Health Sciences, National University of Chimborazo, Riobamba, Ecuador.

**Background:** Zumba Fitness® may be a handy physical activity program to improve body composition and prevent obesity and non-communicable diseases in inactive people. However, its interaction with dairy intake has not yet been studied.

**Aims:** To evaluate Zumba Fitness® program effect on body composition and its association with dairy intake in inactive workers.

**Methods:** 39 inactive workers (39.18±6.77 years), normal-weight (NW, n=15), overweight (OW, n=19) and obese (OB, n=5), were included. Body composition (Σ6-Skinfold, Fat-mass, Muscle-mass, BMI), blood pressure, and dairy intake (milk, yogurt, cheese) were analysed at baseline and after 16-weeks of Zumba Fitness® and nutritional education intervention.

**Results:** After intervention Σ6-Skinfolds and fat-mass decreased ( $p<0.001$ ), and muscle-mass increased ( $p<0.001$ ), whereas weight, BMI, waist-hip index and blood pressure remained unchanged. No statistical differences in adiposity anthropometric indicators between NW and OW+OB were observed. At baseline, dairy intake was divided into tertiles. BMI ( $p=0.019$ ), Σ6-Skinfolds ( $p=0.012$ ) and fat-mass ( $p=0.034$ ) showed higher changes in the lowest cheese intake group, independently of age, sex and physical activity.

**Conclusions:** Zumba Fitness® program reduces adiposity in both excess weight and normal-weight inactive workers. Previous dairy intake could modulate the program effects.

Conflict of interest: None Declared. Funding: National University of Chimborazo, Ecuador (29-CI-2014-10-17-22).