

# 5<sup>th</sup> European Nutrition and Dietetics Conference

June 16-18, 2016 Rome, Italy

## Low fat dairy foods improve lipid profile and proinflammatory markers in overweight/obese early postmenopausal women after a 6-month weight loss intervention

Jasminka Z Ilich<sup>1</sup>, Jafarinasabian P<sup>1</sup>, Carter N A<sup>1</sup>, Inglis J E<sup>1</sup>, Liu P Y<sup>2</sup>, Shin H<sup>3</sup> and Kim Y<sup>4</sup>

<sup>1</sup>Florida State University, USA

<sup>2</sup>University of Akron, USA

<sup>3</sup>Retirement Research Institute, South Korea

<sup>4</sup>Rutgers University, USA

We previously showed that consumption of low fat dairy foods (4-5 servings/day), resulted in better body composition (lean and fat tissue) outcomes compared to calcium (Ca) supplement or control group in postmenopausal women after a 6-month weight loss intervention. Here we report the effect of dairy foods and/or Ca supplementation on lipid profile and proinflammatory markers in the same population. A total of n=97 overweight/obese early postmenopausal women completed the 6 months follow up and had complete datasets. They were divided into 3 groups: Supplement (pills containing 630 mg Ca+400 IU of vitamin D/day); Dairy (low fat dairy consumption, 4-5 servings/day) and Control (placebo pills). Each group included moderate energy restriction (~85% of energy needs). Glucose, insulin, lipid profile (cholesterol, triglycerides, LDL, HDL) as well as Apo A1, Apo B and CRP were analyzed in fasting blood samples by commercially available Enzyme Linked Immunosorbent Assay (ELISA) kits. There was improvement in each measured parameter, probably due to weight loss, except in glucose, HDL and Apo B which remained the same. Dairy group showed the highest % decrease in total cholesterol and LDL, 6.1% and 7.7%, respectively, compared to Supplement (3.2% and 3.4%) and Control (3.8% and 1.7%) groups. Additionally, Apo A decreased in Dairy group while it increased in Supplement and Dairy groups. In conclusion, the intervention with low fat dairy foods complemented with hypo caloric diet resulted in the best outcomes for lipid profile and highest reduction in Apo A. Increasing the low fat dairy foods to 4-5 servings/day may be beneficial for metabolic profile in postmenopausal women during weight loss.

### Biography

Jasminka Z Ilich is the Hazel Stiebeling Professor of Nutrition at the Florida State University. She has earned her PhD at the Ohio State University and the University of Zagreb, Croatia in Medicinal Sciences and her MS at the University of Utah in Foods and Nutrition. Her research includes clinical studies in older women with nutritional interventions incorporating behavioral modification and modes of physical activity for augmentation of bone and body composition. She has recently identified a triad incorporating bone loss, muscle loss and adipose tissue expansion and termed it "Osteosarcopenic Obesity Syndrome". Recently, she started investigating the newly discovered hormone irisin, in connection with brown fat, beige fat activation. Her research also includes outreach to underserved communities for education and health promotion interventions to foster obesity prevention, improvement in cardiovascular risk factors and overall healthier lifestyle. On the molecular level, she investigates nutritional influences on mesenchymal stem cell differentiation into osteoblasts and adipocytes lineages and crosstalk with myocytes.

[jilichernst@fsu.edu](mailto:jilichernst@fsu.edu)

### Notes: