INTRODUCTION. Literature indicates that the amount of physical exercise is inversely related with the percentage of body fat (%BF) in men, while the same relationship was not well observed in women (Westerterp et al., 1997). Hypothesis is that energy intake (EI) and macronutrient composition of daily meals are differently linked with physical activity energy expenditure (PAEE) according to gender (Paul et al., 2004). The aim of the study was to investigate the relationships among weekly amount (min/wk) of physical exercise practice, dietary habits and body composition in women.

RESULTS. Statistical analysis showed high lipid (p=0.019) and low carbohydrate (p=0.003) intake in the 3rd respect to 1st and 2nd group. The second MANCOVA showed that the 3rd had a best muscle mass (p=0.027) and body cellular mass (p=0.05) than the other groups, while no differences were found in %BF (Figure 1). Both 3rd and 2nd had the same consecutive years of exercise practice.

DISCUSSION and CONCLUSION. Several studies have indicated that women may compensate for energy expenditure by increasing energy intake to a greater extent than men suggesting a gender-related cause. As literature does not agree on the role of physical exercise to enhance hunger and as our results indicate a higher lipolipidic diet in higher trained groups, the hypothesis is that people training select foods rather than nutrients choosing those that are present in the immediate environment and that are simple to cook (Bellisle, 1999), notwithstanding the female high nutritional knowledge (Parmenter et al., 2000). In fact the 3rd group had higher prevalence of students living alone and cooking for themselves. However, whether the higher fat intake of the 3rd group is based on biological mechanisms or cognitive influences is not yet known. If physical exercise without dieting, in women, did not allow a negative energy balance for the high lipid intake compensation, the hormonal anabolic responses elicited by training was reached. Our results seem to indicate that in order to positively affect body composition, in sedentary women it is enough to control the energy balance alone, whereas in those women that trained regularly it is necessary to control both energy balance and macronutrient composition of daily meals.

References.

E-mail: emanuele.dangelo@virgilio.it