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## Nutritional status, energy expenditure, segmental body composition and physical activity performance with metabolic holter assessment in non-obese women with PCOS

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**Background/Aims:** The prevalence of polycystic ovary syndrome (PCOS) is increasing markedly. Inspite that, combined data on dietary intake, satiety, active energy expenditure and body composition are seen limited in PCOS. The aim of this study is to evaluate the relationship between satiety, food intake, active energy expenditure, segmental body composition and weight status in new diagnosed young women with PCOS.

**Subjects and Methods:** Thirty three (n=33) new diagnosed consecutive women with PCOS, hirsutism and hyperandrogenism, and 31 age and BMI-matched healthy control women were recruited for the study. PCOS is defined according to Rotterdam criteria. Physical activity is assessed by metabolik holter equipment for consecutive three days and anthropometric measurements were taken. Subjective satiety is assessed by satiety index scale (SI). Food intake is recorded with 24-h food record for 3 consecutive days by using a photographic atlas of food portion sizes. Total daily energy, macro and micro nutrient intakes were calculated by food composition database (BEBIS). Assessment of human body composition is used for determining the nutritional status of the population. Body composition analysis of quantity and distribution of body fat and fat free mass parametres were assessed by Bioelectrical Impedance Analyses (BIA). Results were compared with Recommended Daily Allowances (RDAs) according to age and gender.

**Results:** Mean BMI was 22.63  $\pm$  3.64, 21.54  $\pm$  2.77 kg/m<sup>2</sup> in PCOS and control groups respectively. Mean age was 22.03  $\pm$  4.21/21.71  $\pm$  2.67 year respectively. Nutritional habits were similar in both groups. No significant differences were found in total energy intake, percentage of carbohydrates, fats and other micronutrients (p > 0.05). Energy percentage of proteins (% 14.38  $\pm$  2.69, p= 0.008) were statistically different in control subjects than in the PCOS group. The measurements of physical activity duration (1.39  $\pm$  .86/2.17  $\pm$  .98 hours, *p* = 0.002), active energy expenditure (372.35  $\pm$  198.32/494.10  $\pm$  186.50 kcal, *p* = 0.018), steps counting (9370  $\pm$  3587/11730  $\pm$  3564 kcal, *p*= 0.013), right leg fat mass (p= 0.035), right arm fat mass (p= 0.040) and right arm fat free mass (p= 0.035) were statistically different between PCOS and control groups respectively.

**Conclusion:** New diagnosed women with PCOS at baseline had similar satiety sensations, distribution and quantity of body fat parametres, muscle mass and nutritional status when compared to healthy women. Control subjects were found more active in expending energy. There were no differences in respects to their dietary habits.

## Biography

Gulcan Arusoglu is completed her graduation from top University in Turkey and she is working now at Kirklareli University, Turkey.

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