

## ICCN Poster Presentations

### Obesity

#### **Impact of exercise on nutritional status and health profile of urban obese women in Hisar City**

S Dahiya\* and C Arora

*Department of Foods and Nutrition, College of Home Sciences, CCS Haryana Agricultural University, Hisar, India, 125004.*

Obesity is one of the major public health problems among women in the developing countries of the world today. The present study was conducted to study the impact of exercise on nutritional status and health profile of urban obese women. Seventy middle aged, obese female respondents belonging to middle and high income groups were selected purposively from various yoga centers Hisar city using the criteria of Body Mass Index and Waist to Hip Ratio. The study revealed that majority of the respondents were educated and were either housewives or in service. Majority of the respondents belonged to high-income group and were married having three to five children. Most of them had BMI in range of 30 to 35 and were Grade II obese. High blood pressure was highly prevalent among the obese respondents followed by arthritis and gout. Most of the respondents had family history of obesity and other related degenerative diseases. Consumption of all the foods except cereals and green leafy vegetables by obese women was higher than in diets of obese women as compared to RDA except intake of  $\beta$  carotene, riboflavin, niacin and iron. Intake of various nutrients was considerably lower in diets of non-obese respondents than of obese respondents. Cereals and their products followed by fruits and sweets were the foods preferred among various food items by majority of obese women. The energy balances was observed to be positive in obese women and negative in case of non-obese women. Non-significant difference was observed as regard to time spent on various activities between the obese and non-obese women. The concentrations of blood glucose, total cholesterol, HDL-cholesterol, LDL-cholesterol, VLDL-cholesterol triglycerides and ratio of total cholesterol and HDL-cholesterol, were observed to fall within the normal range in both non obese and obese women but these values were significantly higher in obese respondents than in non obese respondents. Energy intake was significantly correlated with total cholesterol, HDL and LDL-cholesterol and a negative correlation with VLDL-cholesterol in obese women whereas fat intake was significantly correlated with blood glucose. BMI and waist to hip ratio were positively correlated with blood pressure, blood glucose and lipid profile of obese women. Physical exercise done by obese women for one hour daily for three months had a significant effect on anthropometric measurements except WHR, energy expenditure, energy balance, time spent on light and moderate activities, blood pressure and all the parameters studied in blood except triglycerides. Thus, it may be concluded that exercise treatment for three months had a significant effect on nutritional status and health profile of obese women. Hence, the study recommends reduced energy intake and increased physical activity by obese women to combat obesity.

#### **Mediterranean diet improves lipid profiles over three months**

G Flynn\*<sup>1</sup> and D Colquhoun<sup>2</sup>

<sup>1</sup>Burleigh Heads Medical Centre Burleigh Heads Qld 4220

<sup>2</sup>The Wesley Hospital, Suite 10, Level 1 Wesley Medical Centre, 40 Chasely Street Auchenflower, Qld 4066

**Objective:** To assess the effect on lipid profiles of a Mediterranean type diet which has previously been shown to be effective at weight loss over 3 months.

**Background:** Increasing foods rich in Monounsaturated fat (MUFA) may be preferable to the usually prescribed low total fat diets for weight loss. A Mediterranean diet which is high in MUFA but not energy-dense has been shown to be effective at weight loss both short term (3 months) and long term (12 months). This study looks at the changes in lipid profile in those individuals who had no lipid lowering medication before or during the diet program and remained compliant with the diet for 3 months.

**Methods:** A Mediterranean diet program has previously been shown to be effective at weight loss both short term and long term. Approximately 28% of individuals remain compliant with the program for the recommended 3 months and those individuals are more likely to achieve long-term weight loss at 12 months. Fasting lipid levels were tested before commencing the diet and on completing 3 months of the program. Those individuals who were on lipid lowering medication before or during the 3-month program were excluded from the study.

**Results:** 155 patients were included in the study of whom, 31(20%) were male. Mean age 55 yrs, starting weight was 88.9 kgs and starting BMI 32.3. Mean weight loss was 7.6 kgs. Mean total cholesterol (TC) reduced minimally from 5.59 mmol/l to 5.55 mmol/l at three months. Mean triglyceride level reduced by 31.6% from 1.58 mmol/l to 1.08 mmol/l and high-density lipoprotein-cholesterol (HDL) increased by 9.6% from 1.46mmol/l to 1.60mmol/l. Low-density lipoprotein-cholesterol (LDL) remained essentially unchanged from a mean of 3.47mmol/l before the diet to 3.43mmol/l after 3 months.

**Conclusion:** A Mediterranean diet is effective for weight loss over three months and has early favourable effect on HDL and Triglyceride levels and a neutral effect on TC and LDL levels.