

## ICCN Poster Presentations

### Clinical nutrition: diagnosis and management

#### The study of food habits and its correlation with serum lipids profile in NIDDM patients at two hospitals of Tabriz

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**Background:** Diabetes mellitus is a disease characterized by high glucose level resulting from defects in insulin secretion, insulin action, or both. Prevalence of diabetes increases with increasing age and its prevalence in adults is slightly higher in women than in men. Diabetes mellitus is one of the most important risk factors for coronary heart disease.

**Objectives:** The present study was conducted to determine food habits and their correlation with serum lipid profiles in diabetics patients (TypeII) at Sina and Asadabadi Hospitals affiliated to Tabriz Medical Science University-Iran.

**Method:** 118 diabetic patients (89 women and 29 men) aged  $52 \pm 10$  years old were selected by simple random sampling at two Hospital of Tabriz. Food patterns were estimated by using of 24 hour recall for three consecutive days and daily nutrient intake was calculated by using food composition software. Daily energy and nutrient intakes were compared with RDA. We determined their correlation with serum lipids profile by using correlation test.

**Result:** Mean  $\pm$  SE of energy (Kcal), carbohydrate (gr), protein (gr), fat (gr), fibre (gr), cholesterol (mg), saturated fatty acid (gr), monounsaturated fatty acid (gr), and polyunsaturated fatty acid (gr) were  $95.68 \pm 2.68$ ,  $103.27 \pm 2.55$ ,  $115.95 \pm 3.42$ ,  $73.43 \pm 2.60$ ,  $80.03 \pm 3.55$ ,  $67.26 \pm 5.30$ ,  $58.72 \pm 2.21$ ,  $56.61 \pm 4.14$  and  $47.57 \pm 3$  respectively. Mean  $\pm$  S.E of fasting blood sugar (mg/dl), 2 hours plasma glucose level (mg/dl) cholesterol (mg/dl), triglyceride (mg/dl) and high density lipoproteins (mg/dl) were  $178.47 \pm 7.19$ ,  $272.62 \pm 8.58$ ,  $229.66 \pm 4.96$ ,  $271.74 \pm 20.33$  and  $49.16 \pm 3.53$  respectively. We found that daily energy, total fat, and cholesterol intake had direct correlation with serum lipids ( $P < 0.05$ ). There were no other significant correlations between daily nutrient intakes with serum lipids.

**Conclusion:** Based on the results of present study, education about decreasing daily calorie and any kind of fat intake emphasized.

#### Resting metabolic rate in people taking atypical antipsychotic medication.

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**Objectives:** Weight gain is a significant clinical issue for people prescribed atypical antipsychotic medication. This is particularly true of those medications known to promote the greatest weight gain, namely olanzapine and clozapine. To date there have been no published guidelines to assist clinicians to choose appropriate resting metabolic rate (RMR) prediction equations to estimate energy expenditure. The objectives of this study were to measure RMR via indirect calorimetry in a group of men taking clozapine and to determine whether RMR for this population can be accurately predicted using previously published regression equations.

**Methods:** Eight males who had completed at least six months treatment with the atypical antipsychotic, clozapine participated in this study. Body composition was determined via the deuterium dilution method and RMR was measured using a ventilated hood system (Deltrac II). Comparisons between measured RMR and predicted RMR using five different equations were undertaken. Bland and Altman plots were used to assess the agreement between measured and predicted RMR.

**Results:** Participants were all diagnosed with chronic paranoid schizophrenia and characterised as follows: age:  $28.0 \pm 6.7$  years (mean  $\pm$  SD); clozapine dose:  $456.3 \pm 142.5$ mg/day; waist circumference:  $108.1 \pm 19.3$ cm; BMI:  $29.8 \pm 6.8$ kg.m<sup>2</sup>; %BF:  $30.0 \pm 9.5$ . The mean measured RMR for the group was  $1825 \pm 408$  kcal/day. The Harris and Benedict (1919) and Schofield (1985) equations systematically overestimated RMR by 16%. Bland and Altman plots showed that the equations of Owen (1987) and Jensen (1988) over predict RMR at the lowest RMR value (1266kcal/day) by 15% and 32% respectively. However, at the highest RMR value (2287kcal/day), the equations of Owen (1987) and Jensen (1988) over predicted RMR by only 9% and 3% respectively. Estimations of RMR using the equation of Movahedi (1999) were too variable for clinical use.

**Conclusions:** The difficulty in recruiting participants to this project demonstrates the importance of having confidence in a chosen prediction equation to estimate RMR. It is not feasible to routinely test RMR to determine energy expenditure for assistance with weight management. When estimating energy requirements as part of a weight management program in men who have been taking clozapine, predictions of RMR from the equations of Harris and Benedict (1919) and Schofield (1985) should to be reduced by 280 kcal/day.