

ICCN Poster Presentations

Obesity

The relationship of plasma leptin to anthropometrical and biochemical markers of overweight primary school students

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Obesity is become an epidemic globally. The prevalence of obesity among children and adults has increased substantially over the last few decades in many part of world especially in developing countries. Childhood obesity is one of the foremost issues, as it becomes a noteworthy sign or predictor for adulthood obesity. The purpose of this cross sectional study was to observe the relationship between leptin, body composition (BMI, %Bfat, Fat Mass), lipid profiles (TC, TG, HDL, LDL) and blood pressure (Sys & Dia) among urban school children. A total of seventy-nine subjects (males 38 and females 41) were selected on a voluntary basis, after having obtained an informed-concern from the subjects and parents. Anthropometrical, body composition, lipid profiles, blood pressure and leptin (ELISA) measurements were measured according to the standard procedures. Overweight and obese are based WHO 1995 (BMI-for-age $\geq 95^{\text{th}}$ percentile = Obesity, 85^{th} percentile \leq BMI-for-age $< 95^{\text{th}}$ percentile = at risk for obesity). All data analyzed using SPSS and are presented as mean \pm SEM. The results shows that 17.7 % were overweight, 49.4 % were obese and the rest were normal (32.9 %) BMI for their age. Majority of subjects were Malays (87.3 %) and followed by Indian (11.4 %) and (1.3 %) Chinese. Pearson correlation test showed a significant positive correlation between leptin and BMI ($r=0.441$, $p<0.01$), % Bfat ($r=0.431$, $p<0.01$), Fat Mass ($r=0.455$, $p<0.01$), lipid profiles (TG, $r = 0.226$, $p<0.05$). No correlation observed between leptin and blood pressure in this present study. Circulating leptin concentrations are influenced by BMI, % Bfat, F-Mass and TG. Though leptin is not correlated with blood pressure, it is known that blood pressure is commonly associated with increased body weight and other health parameters. Appropriate educational intervention programs (nutrition, physical activity and weight management program) should be introduced at early stage to decrease childhood obesity and other health problem among school children.

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Body mass index is not a significant predictor of survival amongst older people

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Introduction: As the population ages, more attention for emergent problems of health and disease in the elderly is needed. The International Union of Nutritional Sciences (IUNS) subcommittee on Nutrition and Ageing, in conjunction with the World Health Organization (WHO) global program for the elderly, embarked on the 'Food Habits in Later Life' (FHILL): a cross-cultural study to test key hypotheses in relation to food habits, health status and social variables in the elderly in 1987. That obesity is associated with increased morbidity and mortality requires specific consideration with advancing years.

Objective: To investigate whether the so-called a healthy BMI (a widely used and simple tool to measure body fatness), between 20-25 kg/m², predicts 7-year survival amongst elderly (aged 70 years and over) from long-lived cultures namely Japanese in Japan, Swedes in Sweden, Anglo-Celtics in Australia, and Greeks in Greece and Australia.

Methods: Baseline data of height and weight were used to calculate BMI from FHILL study participants (n=785). BMI was classified as low (BMI<20), healthy (20 \leq BMI<25), overweight (25 \leq BMI<30), and obesity (BMI \geq 30). Healthy BMI was used as a reference point. All cause mortality from up to seven years follow-up was used as study endpoint. Each Cox Proportional Hazard model was adjusted to age at enrolment (in 5-year intervals), gender, smoking and general health status and was developed to analyse the survival data.

Results: Having a low BMI or being underweight/undernutrition (RR 1.45: 95% CI 0.85-2.58), being overweight (RR 1.16; 95% CI 0.75-1.78), or being obese (RR 0.97: 95% CI 0.55-1.74) did not significantly reduce or increase mortality as opposed to being in a healthy BMI group in the FHILL population.

Conclusions: The FHILL study shows that mortality advantage conferred by having healthy BMI was not evident amongst elderly from longevity cultures. Body fatness, following adjustment for age at enrolment, gender, smoking, and general health status, was not found to be a significant predictor of 7-year survival. Further research may provide better understanding of the relation between optimal BMI and survival amongst older people.