

8<sup>th</sup> International Conference on

# CLINICAL NUTRITION

December 08-10, 2016 Dubai, UAE

## Vitamin B12: The essential nutrient supplement in Indian population

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Though folate and iron supplementation to pregnant mothers is practiced since 1970s in India, frequency of anemia in mothers as well as population at large has not declined. Recently, we showed vitamin B12 deficiency to be an important cause of anemia. Survey of the Indian populations by different workers in different regions, ethnicities and social strata has revealed nearly 50% population to be vitamin B12 deficient. Folate deficiency occurs in about 10% people. SNP C677T in the gene *MTHFR* is a genetic risk factor which exacerbates the effect of vitamin B12 and folate deficiency. As a result, a quarter of the population studied by us is hyperhomocysteinemic. We demonstrate that together they act as a strong risk factor for several multifactorial, developmental and even chromosomal disorders. A vast section of Indian population is vegetarian: While around 30% are strictly so, nearly as many consume non-vegetarian meal only rarely. Additionally, a proportion of the population is under or malnourished due to lack of a balance diet. Prevalence of amoebic and other infections that adversely affect the gut flora and administration of folates to vitamin B12 deficient individuals, all these contribute to vitamin B12 deficiency and disease proneness. While we provide evidence to this state of affairs, an argument is made for incorporation of vitamin B12 as an essential nutrient supplement in Indian population for a healthier society.

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## Environmental factors associated with overweight or obesity development in children in school age in Botucatu, Sao Paulo, Brazil

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**Introduction:** Childhood obesity has become a public health problem and presents multifactorial causes.

**Objective:** To investigate the influence of environmental factors on the development of overweight or obesity in children in fundamental school age.

**Methodology:** Students at 10 years old (n=102) from public school in the city of Botucatu, São Paulo, Brazil were evaluated. Two groups of children were assessed: G1 composed of children with overweight or obesity and G2 eutrophic children. To determine the nutritional status, it was used the Body Mass Index (BMI) for age and sex, marked on growth charts. The cutoff values used were those recommended by WHO percentiles 85 and 95 for overweight and obesity, respectively. Data about children's life style, familiar characteristics and nutritional status of the parents were obtained. The t-test students were used in the comparison of the groups and significant 'P' was 5%.

**Results:** The mean of weight and height of group 1 is  $82.0 \pm 7.5$  kg and  $158 \pm 0.07$  cm and for group 2 it was  $42.0 \pm 5.2$  kg and  $157 \pm 0.06$  cm, respectively. When analyze the environmental factors, statistically significant difference were identified between the practice of physical activity outside school, hours watching television and the number of siblings ( $p=0.01$ ). As for the type of transport used to go to school, the majority was the bus in groups, 67% in G1 and 89% in G2. Few children usually go walking to school, 4% (G1) and 1% (G2). There was higher percentage of parents with excess body weight in the G1. The risk factors that contribute to the development of overweight in children are also presented in the scientific literature and showed our results.

**Conclusion:** Lesser physical activity and the family profile were identified as determinants factors in excess of weight in the population of children.

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