FRUIT AND VEGETABLES INTAKE AND PLASMA HOMOCYSTEINE LEVELS AMONG RESIDENTS OF MUNICIPALITY OF SAO PAULO

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Introduction The elevated concentration of plasma homocysteine (pHcy) was recently identified as risk factor for cardiovascular disease. Many studies have linked consumption of fruits and vegetables (F&V) with decreased of pHcy.

Objectives To investigate the pHcy concentrations according to consumption of F&V.

Methods A cross-sectional analysis was conducted in a sample of 291 individuals of both sexes, aged 12 y or over, that are from a population-based study performed in 2008–2010 in municipality of Sao Paulo. The consumption of fruits and vegetables were measured by two 24-h dietary recalls applied in non-consecutive days. Biochemical analysis of pHcy was conducted by the fluorescence polarisation immunoassay method. The cut-off point of pHcy used was <8 μmol/l for individuals younger than 15 y, <12 μmol/l for individuals with 15–65 y and <16 μmol/l for those over 65 y. The median consumption of F&V was described according to the pHcy levels (normal or high) in both sexes and analysed using the Kruskal–Wallis test.

Results The median of F&V was 97.9 g/day, with females exhibiting the higher consumption (154 g/day). Considering the WHO recommendation (>400 g/day), only 5.8% of individuals had adequate intake. There were no differences in the medians of intake of fruit and vegetables in females according to pHcy levels (normal: 112.88 g/day; high: 155.25 g/day). Unlike, we found lower consumption of F&V in males with hyperhomocysteinemia (normal: 96.80 g/day; high: 23.30 g/day, p<0.05).

Conclusion F&V intake is low in this population, especially in men with hyperhomocysteinemia. Therefore, it is necessary to encourage the F&V intake in this population.