

Ingestão de Cerveja e níveis plasmáticos de Homocisteína – Estudo Quase-Experimental

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Background: The elevation of serum homocysteine is an independent and significant risk factor for vascular diseases. The prevalence of hyperhomocysteinemia in the general population is between 5-10%, and these values increase to 30 to 40% in the elderly. Some studies have documented a decrease of homocysteine levels with moderate consumption of beer. However, this inverse association lacks experimental evidence. **Objective:** To evaluate, in older adults, the effectiveness of non-alcoholic beer and non-alcoholic beer with a high content of folic acid in reducing hyperhomocysteinemia.

Participants and Methods: A quasi-experimental study, involving 40 older adults with advanced age with high serum homocysteine levels ($>11\mu\text{mol/L}$ in women and $>12\mu\text{mol/L}$ in men) was conducted. The older adults were divided into three groups. During a period of three weeks, the control group (n=23) consumed 500mL of water per day, the second group (n=8) 500ml non-alcoholic beer per day and the third group had 500 ml non-alcoholic beer with a high content of folic acid ($40\mu\text{g}/100\text{mL}$) daily. Levels of homocysteine, folic acid and cobalamin were evaluated at baseline and after this intervention.

Results: No statistical significance differences between groups were found at baseline and at the end of the intervention for the levels of folic acid and cobalamin. A decrease of homocysteine levels was observed in the group supplemented with non-alcoholic beer with high folic acid content (mean= $3.55\mu\text{mol/L}$, interquartile range= $2.1\mu\text{mol/L}$) compared to the control group ($0.9\mu\text{mol/L}$, interquartile range= $1.5\mu\text{mol/L}$), $p<0.05$. A non statistically significant reduction was also observed between the control group and the alcohol-free beer group (2.45 mmol/L , interquartile range = 6.3 mmol/L).

Conclusion: Non-alcoholic beer with a high content of folic acid intake during three weeks significantly decreased homocysteine levels in older adults with advanced age.

Key-words: folic acid, cobalamin, homocysteine, non-alcoholic beer, older adults with advanced age.