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BRAZILIAN NUT INTAKE INFLUENCE THE LIPID PROFILE OF OBESE WOMEN

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The Brazilian nut (*Bertholletia excelsa*) is rich in both monounsaturated and polyunsaturated fatty acids and it is known for its high selenium (Se) content. The mineral Se has great importance because it is part of the catalytic site of the antioxidant enzyme glutathione peroxidase (GPx). Several studies have shown an inverse relationship between nuts consumption and cardiovascular risk reduction. This study tested the hypothesis of whether the consumption of this nut could affect the serum lipids of obese women. We enrolled 70 obese women aged 40.5±8.9 years with BMI of 35.56±5.88 kg/m² recruited in the outpatient clinic of endocrinology. They were randomly assigned to either ingestion of Brazil nuts (BN) group or control (CO) group and they were followed up for 2 months. Participants of the treatment group consumed one Brazilian nut daily (around 327.56 µgSe/day) and the control group avoided the intake of any food containing the nut for the same period of time. On baseline and after two months of follow-up, blood samples were collected for biochemical analysis – total cholesterol, low-density lipoprotein cholesterol (LDL-c), high-density lipoprotein cholesterol (HDL-c) and triacylglycerol levels. Thirty-nine participants of the treated group (BN) and twenty-six of the control group (CO) completed the trial. The CO group showed a bigger increase in total cholesterol ($\Delta_{\text{After-Before}}=26.88$) compared to the BN group ($\Delta=3.67$; $p=0.011$) and showed a tendency towards a bigger increase in both non-HDL cholesterol ($\Delta=22.08$ for CO vs. $\Delta=4.82$ for BN; $p=0.057$) and triacylglycerol levels ($\Delta=45.92$ for CO vs. $\Delta=-2.36$ for BN; $p=0.076$). In contrast, Brazilian nut ingestion did not alter LDL-c or HDL-c levels in any group. In summary, this study suggests that the daily intake of Brazilian nut may have a beneficial effect in the lipid profile of obese women, stabilizing the serum levels of total cholesterol, non-HDL cholesterol and triacylglycerols.