

Title Influence of whole and fresh-cut mango intake on plasma lipids and antioxidant capacity of healthy adults

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Abstract

The content of antioxidant compounds and antioxidant capacity of whole and fresh-cut mango, stored for 10 days at 12 °C and 5 °C, respectively and their influence on serum antioxidant capacity and lipid profile of normolipidemic humans were studied. Whole mango (WM) had a higher content of flavonoids, β -carotene and antioxidant capacity, determined by oxygen radical scavenging capacity, (ORAC) and 1,1-diphenyl-2-picrylhydrazyl (DPPH) assays, than the fresh-cut fruit (FCM). FCM presented higher amounts of total phenols. Thirty normolipidemic volunteers, ages 20–50 years, were randomly divided into two groups (WM and FCM) 15 persons each. During 30 consecutive days volunteers from groups 1 and 2, received daily 200 g of WM or FCM, respectively. Lipid levels and antioxidant capacity in plasma were determined at 0, 15 and 30 days of the experiment. Serum triglycerides were significantly reduced after 30 days of supplementation with WM and FCM (37 and 38% respectively); VLDL levels were reduced in a similar proportion. No significant changes in other plasma lipid levels were observed. Both treatments increased plasma antioxidant capacity measured by ORAC and TEAC methods. According to the results obtained in this study, we suggest that addition of mango fruit to generally accepted healthy diets could have a beneficial effect preventing hypertriglyceridemia, and that fresh-cut processing does not affect the beneficial properties of mango.