

عنوان مقاله:

Effects of oat and wheat bread consumption on lipid profile, blood sugar, and endothelial function in hypercholesterolemic patients: A randomized controlled clinical trial

محل انتشار:

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خلاصه مقاله:

BACKGROUND: Increased lipid profile after each meal can disturb the endothelial function. The present study assessed the effects of bread supplemented with oat bran on serum lipids and endothelial dysfunction in patients with hypercholesterolemia. **METHODS:** This clinical trial was conducted on 60 isolated hypercholesterolemic patients. The subjects were randomly allocated to either intervention (consuming at least five daily servings of oat bread with 6 g beta-glucan) or control (receiving at least five servings of wheat bread). Anthropometric indicators, fasting blood sugar and lipid profiles were measured at baseline and after 6 weeks (in the end of the intervention). Endothelial function was assessed using flow-mediated dilation (FMD). Within the group and between group differences were investigated using paired t-test and Student's t-test, respectively. **RESULTS:** Oat bread consumption could significantly reduce total cholesterol ($P = 0.029$). A significant increase in baseline and after ischemia brachial artery diameters at the end of the study was seen. However, it did not have a significant effect on FMD ($P = 0.825$). In the control group, none of the measured indices had changed significantly at the end of the study. Finally, only the mean change of brachial artery diameter after ischemia and baseline brachial artery diameter were significantly higher in the intervention group than in the control group ($P = 0.036$ and $P = 0.012$ respectively). **CONCLUSION:** Oat bread with beta-glucan could successfully reduce cholesterol levels. Furthermore, in this study oat bread did not reduce FMD more than wheat bread. Since hypercholesterolemia is a proven risk factor for endothelial dysfunction, hypercholesterolemic patients can hence be advised to eat oat bread. **Keywords:** Bread, Diet, Flow-Mediated Dilation,

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