



ABSTRACTS:

Onning G, et al. Effects of Consumption of Oat Milk, Soya Milk, or Cow's Milk on Plasma Lipids and Antioxidative Capacity in Healthy Subjects. *Ann Nutr Metab* 1998;42:211-220.

A drink based on oats has been developed with new technology. In this study the effects of this oat milk, soya milk and cow's milk on plasma lipid, glucose, insulin, and antioxidant status (measured as the ability of serum to suppress the formation of the radical cation ABTS*+) were compared in 24 healthy men and women. Half of the subjects (group A) consumed 0.75-1 liters/day of oat milk and soya milk for 4 weeks each, and the other half (group B) consumed oat milk and cow's milk for two 4-week periods. In the combined groups A plus B the oat milk regimen resulted in decreased plasma cholesterol (4%) and low-density lipoprotein (LDL) cholesterol (9%) levels as compared with baseline, but no changes in high-density lipoprotein cholesterol (HDL) and triglyceride values were observed. Also soya milk consumption resulted in decreased LDL cholesterol concentrations. The only significant plasma lipid change observed during consumption of cow's milk was an increase in HDL cholesterol. No consistent changes in body weight, fasting blood glucose, serum insulin, and antioxidant status occurred after consumption of any milk regimen. A significant correlation between baseline antioxidant status and total plasma cholesterol was found ($r = -0.56$). It is proposed that the high content of beta-glucans in oat milk was responsible for the decreased plasma cholesterol and LDL cholesterol concentrations, but the effect could also be due to a replacement of saturated fat in the customary diet by unsaturated fat. It is concluded that oat milk can be used as an alternative to other milk drinks by subjects who would benefit from reduced LDL cholesterol values.

Onning G, et al. Consumption of Oat Milk for 5 Weeks Lowers Serum Cholesterol and LDL Cholesterol in Free-Living Men with Moderate Hypercholesterolemia. *Ann Nutr Metab* 1999;43:301-309.

The aim of this study was to investigate whether consumption of a newly developed oat milk deprived of insoluble fiber would result in lower serum cholesterol and low-density lipoprotein (LDL) cholesterol levels in men with moderate hypercholesterolemia. The study had a randomized, controlled double-blind design, and oat milk was compared with an identically flavored control drink. Sixty-six men were recruited from a screening program and were randomly assigned to two groups. Each group took either oat milk or a control drink (rice milk) for 5 weeks (0.75 liters/day) and then switched to the other drink regimen for another 5-week period with a 5-week washout period between the test periods. The oat milk contained more dietary fiber, especially beta-glucan (0.5 g/100 g), than the control drink (<0.02 g/100 g). Both drinks were well appreciated and got similar sensory evaluation, indicating that the double-blind design had been attained. In the final analysis 52 subjects remained. Compared with the control drink, intake of oat milk resulted in significantly lower serum total cholesterol (6%, $p = 0.005$) and LDL cholesterol (6%, $p = 0.036$) levels. The decrease in LDL cholesterol was more pronounced if the starting value was higher ($r = -0.55$, $p < 0.001$). The concentration of high-density lipoprotein cholesterol was not significantly different after consumption of the two drinks. Serum triglycerides did not change significantly after intake of oat milk, but a significant increase was observed after intake of the control drink ($p = 0.003$). It is concluded that also oat milk deprived of insoluble fiber has cholesterol-reducing properties.

Access to full-text at:

http://www.researchgate.net/publication/12567399_Consumption_of_oat_milk_for_5_weeks_lowers_serum_cholesterol_and_LDL_cholesterol_in_free-living_men_with_moderate_hypercholesterolemia