

68

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THE EFFECT OF ACACIA GUM VERSUS A MIXTURE OF WATER-SOLUBLE DIETARY FIBERS ON BLOOD LIPIDS IN HUMANS.

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Water-soluble dietary fibers (WSDF) are generally classified as cholesterol-lowering. This study sought to compare the cholesterol-lowering effects of a medium viscosity, mixture of WSDF (psyllium, pectin, guar gum and locust bean gum) which individually have previously been found to lower cholesterol, with an equal quantity of WSDF from acacia gum. Subjects were mild hypercholesterolemic males (n=13) and females (n=16). WSDF treatments were provided in low-calorie powder form (<5 kcals/svg). Subjects were randomly assigned to a treatment and instructed to mix powders into their usual beverages three times daily (5 g WSDF/svg) with meals for 4 weeks. Diet, exercise and body weights were held constant. Blood samples were drawn twice at baseline (pre-) and weeks 3 and 4 (post-). Blood lipid measures (mg/dL) pre- and post-treatment were averaged and then compared:

Total Cholesterol	Pre-	Post-	Δ	% Δ	P value
WSDF Mixture	251 \pm 20	225 \pm 19	-26 \pm 14	-10	<0.01
Acacia Gum	245 \pm 23	244 \pm 37	0 \pm 25	0	
LDL-Cholesterol	Pre-	Post-	Δ	% Δ	P value
WSDF Mixture	167 \pm 14	144 \pm 14	-24 \pm 13	-14	<0.001
Acacia Gum	160 \pm 21	163 \pm 30	+3 \pm 19	+2	

No changes in plasma HDL-cholesterol and triglyceride concentrations were observed. These data suggest that caution should be used in ascribing cholesterol-lowering efficacy to dietary fibers based solely on their WSDF classification. The results also confirm previous findings that a beverage containing a mixture of WSDF from psyllium, pectin, guar gum and locust bean gum can be a useful cholesterol-lowering adjunct to the diet.