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THE EFFECTS OF MGN-3,AN ARABINOXYLAN COMPOUND, ON SERUM LIPIDS IN STREPTOZOTOCIN-INDUCED DIABETIC RATS.

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MGN-3,a natural food supplement, is used for general health-promotion benefits. The present study was designed to examine the curative effect of MGN-3 on diabetes.

Male Sprague Dawley rats were divided into control and diabetic groups. The diabetic group received 65 mg/kg streptozotocin (STZ).Rats were given free access to the commercial diet and water for 2 months, and MGN-3 (0.25 or 0.5g/kg body weight)was administered daily by stomach tube. Two-bottle choice preference tests between aqueous solution, either of 0.82 mM saccharin,0.016 mM quinine,5 mM citric acid,21 mM monosodium glutamate, and deionized water were conducted in the experimental period.The trunk blood was collected and serum levels of insulin,glucose,triglyceride,total cholesterol,HDL -cholesterol,total protein,albumin,urea N,amylase and zinc were measured.

MGN-3 reduced the rise in serum triglyceride and total cholesterol,althogh serum insulin and glucose remained high levels.Water intake was also reduced by by the addition of MGN-3,suggesting polyuria induced by STZ is improved. The diabetic rats showed significant aversion to citric acid compared with the control rats.

Results suggest MGN-3 can be used as dietary fiber supplement in the treatment of dibetes.