



HerbClip™

Darren Early
Heather S Oliff, PhD

Shari Henson

Brenda Millot, ELS
Densie Webb, PhD

Executive Editor – Mark Blumenthal *Consulting Editors* - Steven Foster, Roberta Lee, MD, Allison Turner, MS

Managing Editor – Lori Glenn

Funding/Administration – Wayne Silverman, PhD *Production* – George Solis/Kathleen Coyne

**FILE: ■ Prickly Pear Cactus (*Opuntia ficus-indica*)
■ Platelet Function**

HC 040442-265

Date: September 30, 2004

RE: Prickly Pear Consumption Improves Platelet Function

Wolfram R, Budinsky A, Efthimiou Y, Stomatopoulos J, Oguogho A, Sinzinger H. Daily prickly pear consumption improves platelet function. *Prostaglandins Leukot Essent Fatty Acids*. 2003;69:61-66.

Pima Indians show the highest prevalence of diabetes mellitus in the world, and the prickly pear cactus (*Opuntia ficus-indica*) is traditionally used by this population as a natural treatment against the disease. Prickly pear is well-known for its antidiabetic and lipid lowering properties. Research indicates that prickly pear was widely consumed about 6,000 years ago by Native American populations and is used in the traditional medicine practices of Native Americans, particularly in Northern Mexico and Arizona areas. It is known to lower LDL-cholesterol, most likely as a consequence of its pectin content.

Disturbances in glucose and lipid metabolism are also linked to impaired platelet function, which is thought to contribute to the initiation and progression of atherosclerosis. However, no research has been available on the influence of prickly pear on platelet function.

The current study examined the effect of daily consumption of 250 g of prickly pear in 8 healthy volunteers and 8 patients with mild familial heterozygous hypercholesterolemia (FH) (4 male and 4 female in each group) on various parameters of platelet function. None of the subjects had been given dietary counseling or antilipidemic medications. Food records were collected and intake was controlled so that macronutrient, energy, and dietary fiber intake did not change throughout the course of the study. All subjects were nonsmokers and none had any established risk factors for the development of atherosclerosis. All were given extensive dietary counseling. Before starting prickly pear consumption, a basic investigation consisting of lipids and lipoproteins (LDL, HDL) as well as platelet function parameters was performed in the morning after a 12-hour fast.

Four weeks of dietary intervention exhibited no significant effects on lipids and lipoproteins or ADP- and collagen-induced platelet aggregation in either volunteers or patients. However, the regular consumption of prickly pear resulted in significant decreases in total- and LDL-cholesterol and significantly reduced platelet aggregability in both groups. HDL, in contrast, revealed no differences. The findings were similar for men and women.

This study showed that the ingestion of prickly pear both by healthy individuals and by patients with mild FH, results in a significant improvement in platelet function, a benefit which may partly explain the clinical successes previously reported. Prickly pear seems to possess significant antiplatelet activity, which may be of particular significance in patients with prothrombotic conditions such as diabetes and hyperlipidemia, the conditions for which prickly pear has traditionally been used.

Amazingly, the authors do not state whether the pads (succulent stems) or fruit were used in the study since both plant parts are available commercially and in local markets as foods. In a personal communication with Dr. Sinzinger (email 7.05.04), he states that the pulp of the cactus' fruit was used. References relative to consumption of both the fruits and vegetative plant parts are cited in the citation.

--Densie Webb, Ph.D.

Enclosure: Referenced article reprinted with permission from Elsevier Science.