

## PINE TREE BARK REDUCES DIABETIC LEG ULCERS

Study reveals 74 percent decrease in ulcer size

November National Diabetes Month

HOBOKEN, NJ - September 5, 2006 - Untreated diabetic leg ulcers may result in amputations.

According to the Center of Disease Control, one out of six diabetics will require an amputation (below the knee) during their lifetime.

A study published in the July journal of Clinical and Applied Thrombosis/Homeostasis shows that Pycnogenol (pic-noj-en-all), an antioxidant plant extract from the bark of the French maritime pine tree, heals leg ulcers in patients who suffer from diabetic leg ulcerations. The most significant findings were patients treated with oral and local Pycnogenol resulting in a 74.4 percent decrease in ulcer size within six weeks.

According to Dr. Gianni Belcaro, a lead researcher of the study, the majority of diabetic leg amputations common to the lower leg and feet, begin with the formation of skin ulcers. Impaired blood circulation in diabetics may cause tissue necrotization and discoloration which leads to development of ulcers. The open ulcer is prone to infection and difficult to heal.

The study sampled thirty diabetic patients at the Chieti-Pescara University in Italy, who suffer from severe microangiopathy causing leg ulcerations. Patients were randomly assigned to four groups. Treatment was provided daily for six weeks.

After six weeks of treatment results showed the most significant ulcer healing for patients who supplemented with combined oral and local treatment. Group 1 patients supplemented with oral and local Pycnogenol experienced a 74.4 percent decrease in leg ulcer size. Group 2 patients supplemented with local Pycnogenol experienced a 41.3 percent decrease in leg ulcer size. Group 3 patients supplemented with oral Pycnogenol experienced a 33 percent decrease in leg ulcer size. Group 4, the control group, experienced a 22 percent decrease, from disinfecting the ulcers on a daily basis. Eighty-nine percent of the patients treated with oral and local Pycnogenol were completely healed.

Group 1 participants received 150 mg Pycnogenol as oral treatment and 100 mg from capsules as powder placed on the ulcerated area (local); Group 2 participants received oral treatment Pycnogenol with 150 mg; Group 3 received 100 mg of local treatment and Group 4 received no medical care, other than the same ulcer care as the other subjects (washed and cleaned with warm water and local disinfectant).

Ulcers were washed and medicated every day for six weeks. The area of the ulceration was copied on a transparent plastic sheet and the relative integral was recorded in a computerized system. A microcirculatory evaluation was performed at inclusion of the study and repeated after six weeks.

Direct questioning was used to evaluate tolerability and compliance, particularly gastrointestinal problems, systematic and local skin

alterations, signs of allergic reaction and any other manifestation. No side effects were reported.

Over 35 years of research on Pycnogenol demonstrate the antioxidant's ability to improve blood flow, encouraging improved circulation. "The Pycnogenol-treated groups all showed a significantly increased oxygen presence in the skin and a significantly lowered carbon dioxide level. These findings suggest that Pycnogenol helps to resolve the underlying micro-angiopathy with an improved blood micro-circulation carrying more oxygen to the feet," said Dr. Belcaro. "Better circulation decreases the chance of developing ulcers."

Previous research shows Pycnogenol may be helpful in controlling an array of problems prevailing in diabetics. Clinical studies which sampled more than 1,200 patients, demonstrated Pycnogenol treatment to be highly effective for prevention of diabetic retinopathy—bleeding capillaries in the eye that causes irreversible vision loss. Other studies show Pycnogenol to be effective in lowering glucose levels and increasing the health of blood vessels in patients with type II diabetes, after supplementation of 50-200 mg Pycnogenol.

"If left untreated, damage to blood vessels from diabetes then manifests in typical circulatory problems such as hypertension, from which 50 percent of type II diabetics suffer. Solid evidence shows that Pycnogenol effectively reduces high blood pressure, platelet aggregation, LDL cholesterol and enhances circulation," said Belcaro.

About Pycnogenol®

Pycnogenol® is a natural plant extract originating from the bark of the Maritime pine that grows along the coast of southwest France and is found to contain a unique combination of procyanidins, bioflavonoids and organic acids, which offer extensive natural health benefits. The extract has been widely studied for the past 35 years and has more than 220 published studies and review articles ensuring safety and efficacy as an ingredient. Today, Pycnogenol® is available in more than 500 dietary supplements, multi-vitamins and health products worldwide. For more information or a copy of this study, visit [www.pycnogenol.com](http://www.pycnogenol.com).

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Contact:  
Melanie Nimrodi  
[mnimrodi@mww.com](mailto:mnimrodi@mww.com)  
MWW Group

312.546.3508