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Doctor's Corner

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Pycnogenol®: Heart, Blood Sugar and Cellular Health

Pycnogenol® (pronounced pic-noj-en-all) is a natural plant extract originating from the bark of the Maritime pine that grows along the coast of southwest France. Pycnogenol® consists of particularly bioactive flavonoid species and its purity is in strict accordance with the United States Pharmacopoeia. Pycnogenol® was initially developed 35 years ago in Europe. During the past years it evolved as one of the most thoroughly researched nutritional supplements, with over 200 studies published in peer-reviewed journals. Seventy of these studies were clinical with in total more than 4,000 patients. Pycnogenol® taken in dosages from 25 mg to 300 mg is well tolerated and Pycnogenol® was attributed “generally recognized as safe” (GRAS) by the FDA.

Pycnogenol® supports healthy capillaries

The “career” of Pycnogenol® began in Europe, where it was first used to maintain vein and capillary health. Pycnogenol® has been shown to strengthen blood vessel walls, with 15 clinical trials showing fast relief

from ankle and foot discomfort. A recent study with 200 passengers on long-haul flights showed that Pycnogenol® taken before departure and again during the flight supports foot comfort and healthy circulation. Travelers typically comment that with Pycnogenol® it is much easier to put shoes on again upon arrival.

Clinicians in Germany discovered that Pycnogenol® also supports healthy capillaries in the eyes. Retinal capillaries may be affected by imbalanced blood sugar levels. In a multicenter field study with 1169 subjects Pycnogenol® supported healthy capillaries in the retina and improved visual acuity to some extent.

Pycnogenol® benefits the cardiovascular system

More detailed investigation of the interaction of Pycnogenol® with blood vessel walls at the University of Florida, Tampa led to an amazing discovery. Pycnogenol® stimulates an enzyme in blood vessel walls that is responsible for generating the most important vascular mediator, known as “nitric oxide” (NO). NO triggers relaxation of the arteries and supports clear blood flow. Hence, NO is the body's mediator for main-

taining healthy blood pressure levels and circulation. NO plays such an important function for cardiovascular health that Dr. Louis Ignarro (UCLA) and his co-workers received the Nobel Prize for its discovery in 1987.

A number of factors, including aging, can interfere with the body's efficient production of NO. Supplementation with Pycnogenol® for four weeks was shown to restore NO production and improve blood supply to the fingertips of elderly people in a Japanese study. Microscopic evaluation of blood vessel diameter at the root of fingernails showed an increased diameter of capillaries allowing better blood perfusion. Specific sensors applied to the legs showed increased oxygen and decreased carbon dioxide presence. Better blood, nutrient and oxygen supply with Pycnogenol® benefits everybody. Italian researchers were able to show that regular intake of Pycnogenol® helps defy muscle cramps and minor pain in athletes.

The relaxation of arteries has a favorable effect on blood pressure. In two clinical studies Pycnogenol® taken for at least eight weeks was



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found to significantly support normal blood pressure.

Pycnogenol®-stimulated NO generation directly translates into clear blood flow. This was first demonstrated at the University of Arizona, Tucson in smokers. Pycnogenol® dose-dependently, starting at a single dose of 25 mg, countered the typical effects of cigarette smoking on the blood. Also, Italian vascular specialists found that Pycnogenol® supported the circulation of individuals on flights between New York and London.

Pycnogenol® supports healthy blood sugar levels

Pycnogenol can support normal glucose levels when taken as part of a healthy diet and lifestyle plan. A clinical investigation has confirmed the significant glucose-lowering effect of Pycnogenol®. It was noted that Pycnogenol® did not affect insulin levels. Pycnogenol® appears to facilitate previously insulin-resistant cells to uptake sugar from the blood stream by yet unknown mechanisms.

Pycnogenol® limits cellular irritation.

Two clinical studies carried out in Germany this year with student volunteers demonstrated that Pycnogenol® has a potent effect in preventing cellular irritation. Pycnogenol® inhibits a molecular “main-switch” in immune cells that triggers the onset of cellular irritation in any part of the body. Moreover, Pycnogenol® was found to inhibit so-called COX

enzymes, which are involved with minor pain-sensation related to cellular irritation.

Pycnogenol® soothes menstrual pain

Japanese gynecologists discovered in 1999 that regular supplementation with Pycnogenol® soothes the normal discomfort of menstrual pain, particularly during cramping. Another clinical investigation of 47 women in year 2004 confirmed the effect of Pycnogenol® in addressing menstrual pain. This year a double-blind, placebo-controlled, multi-center field study with 116 women again confirmed these results. Pycnogenol® is not suitable for on-demand relief during menstruation. The studies show that Pycnogenol® reached highest efficacy when taken regularly for months.

Pycnogenol® helps to support respiratory health

Challenges to normal respiratory function may result from incidents the immune system perceives as harmful. Pycnogenol® offers valuable help in supporting respiration due to its immune-modulating effect and its ability to limit cellular irritation. A study at the University of Arizona found that Pycnogenol® supports clear breathing and lowers mediators of cellular irritation in the blood stream. More recently, a

placebo-controlled clinical study at the University of California, Loma Linda described how Pycnogenol® supported healthy respiration in 60 children aged 6-18 years. Pycnogenol® needs to be taken continuously for prolonged periods of time for maximum benefit to the respiratory system.

Pycnogenol® is investigated in clinical trials all over the world. New findings are posted on the website www.Pycnogenol.com.

Frank Schönlaue Ph.D. is a biochemist who has spent nine years in medical research at the University Clinic of Münster Germany. His area of expertise covers vascular disorders, inflammation and dermatology. He has published more than 20 studies and review articles in the medical literature. Since entering the dietary field in 1999 he was involved in numerous studies on Pycnogenol® and communication of new health discoveries.

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