

# **The Best Kept Secrets to Healthy Aging**

**Presented by the  
Purity Research Department**

**Co-Authors Dr. Neil Levin DC  
Jason Kam, Dr. Irfan Qureshi ND**

**Foreword by  
Dr. Barry S. Kendler, PhD, FACN, CNS**

# Pycnogenol® – Clinically Tested Breakthrough from France

(and air traveler's best friend)

The phytonutrients in **pine bark** have a long tradition of use in “folk medicine.” The French explorer Jacques Cartier was introduced to tea made from boiling pine bark when Native Americans saved most of his crew from death by scurvy during the winter of 1534. In particular, the bark of the **French maritime pine tree** contains a distinct group of potent health-enhancing phytonutrients. These beneficial compounds, which include procyanidins, bioflavonoids and organic acids, are extracted from the bark by an automated, patented, multi-step procedure that avoids the use of potentially toxic solvents. The resulting water extract, patented and available as **Pycnogenol®**, is pure and contains no additives. Because the bark is grown layer by layer over a period of more than 30 years before it is harvested, there are neither seasonal nor annual variations in the composition of its ingredients, in contrast to other herbal extracts. Its purity, potency and consistency is thus unmatched by other phytonutrient-rich extracts. Pycnogenol® also has a tremendous amount of published research highlighting its many potential benefits.

## The Link between Tree Bark and Human Health

The phytonutrients in Pycnogenol® are absorbed into the human bloodstream very rapidly and once there act as a team of very efficient antioxidants. While certain compounds may be absorbed unmodified, several of these nutrients are acted upon by the beneficial bacterial population of the gut and are absorbed into circulation. The antioxidant prowess of Pycnogenol® is evident from the fact that the consumption of as little as 50 mg of Pycnogenol® three times daily substantially increases the total antioxidant capacity (oxygen radical absorbance capacity; ORAC) of the blood of healthy adults. The measurement of ORAC capacity in human serum is a good indicator of the ability of nutrients to perform antioxidant functions in living systems - meaning the antioxidants are likely to have an effect where they are intended. New research published in *BMC Clinical Pharmacology* shows that five days of dietary supplementation with 200 mg of Pycnogenol® daily will stabilize elevated concentrations of antioxidants in the blood and that this increase in circulating antioxidant capacity can be maintained by continued supplementation with 200 mg daily.<sup>1</sup> In addition, research findings published recently in *Biomedicine and Pharmacotherapy* demonstrate that consuming 300 mg of Pycnogenol® even once produces powerful inhibition of cyclooxygenase enzymes in humans<sup>2</sup>, supporting our normal inflammatory response and providing yet another explanation for the benefits of Pycnogenol®.

Pycnogenol® also recycles **vitamin C** and **vitamin E** after those vitamins have become loaded with stray electrons, preserving their essential antioxidant functions. Vitamin C is a major antioxidant inside and between cells and in the blood, and vitamin E is the single most important lipid-based antioxidant that is present in every membrane in every cell. The ability of Pycnogenol® to recharge these antioxidant vitamins gives you a huge advantage in your battle to control and minimize the effects of free radicals. Research also shows that, in addition to replenishing vitamins C and E, Pycnogenol® stimulates the

production of antioxidant enzymes in cells themselves, which serves as an important first line of defense for them against free radical attack.

## **Pycnogenol Maintains Strong Antioxidant Protection and Vision**

Enormous numbers of free radicals are produced within the eye (especially the retina) during the chemical conversion of light to sight. If free radical production remains unopposed, the normal processes of vision can lead to free radical overload, causing damage to the retina and cornea, which are particularly sensitive to oxidative damage. For this reason, structural components of the eyes are naturally rich in antioxidant nutrients. Often, these antioxidant stores may decline with normal aging, leading to changes in eye health. Pycnogenol®'s antioxidant abilities serve as an important buttress by shielding the eyes from the effects of excessive oxidative stress.

*"...research shows that dietary supplementation with 50 mg of Pycnogenol® three times daily enhances retinal function and promotes visual acuity in the eyes of adult men and women, thus supporting healthy ocular function."*

In research published recently in the *Journal of Ocular Pharmacology and Therapeutics*, supplemental Pycnogenol® increased the activities of several antioxidant enzymes within the retinas of rats whose eyes were in a highly oxidizing environment.<sup>3</sup> Since Pycnogenol® was effective in animals. It is likely that Pycnogenol® will also have protective properties in healthy humans. Previous research had shown that Pycnogenol® protected fat molecules within the retina from oxidation by the free radicals produced during the visual cycle. By supporting retinal health, Pycnogenol® was shown to be a very powerful promoter of healthy eyes. In fact, research shows that dietary supplementation with 50 mg of Pycnogenol® three times daily enhances retinal function and promotes visual acuity

in the eyes of adult men and women, thus supporting healthy ocular function.

## Happy Blood Vessels and Well-Supported Peripheral Circulation

The circulation in the lower limbs can be effected over time as a result of free radical damage to the walls and valves of healthy arteries and veins. This may result in inefficient flow through these vessels back to the heart and throughout the body. The supply of oxygen and nutrients to the tissues may be disrupted and affecting the body's natural healing abilities.

Pycnogenol's antioxidants absorb and quench free radical electrons with great efficiency and can vastly maintain the resistance of small blood vessels and capillaries throughout the body to oxidative damage. The results of human clinical trials published recently in *Angiology*<sup>4</sup> and *Clinical Applications in Thrombosis and Hemostasis*<sup>5</sup> showed clear improvements in the ability of veins to expand and dilate, and blood flow and nutrient delivery to the lower legs with the consumption of 50 mg of Pycnogenol® three times daily for 4 to 6 weeks.

Further research shows that dietary supplementation with 150 mg of Pycnogenol® daily promotes optimal microcirculation in capillary networks of the lower legs in men and women.<sup>6</sup> A recently published study also found that taking 200 mg of Pycnogenol® daily was effective for reducing muscle cramps in healthy adults who experienced occasional cramps while consuming placebo.<sup>7</sup> These researchers yet again confirmed previous findings that consuming Pycnogenol® daily facilitates healthy blood flow and nutrient supply throughout the body.

*"...consuming Pycnogenol® daily facilitates healthy blood flow and nutrient supply throughout the body."*

## Stay Healthy in the Air

Prolonged air travel has been associated with cardiovascular issues caused by inactivity (sitting in one place for extended periods of time) and dehydration.<sup>8</sup> Compression of veins by the edge of a seat could contribute to slowing of venous return of blood to the heart and pooling of fluid in the lower legs. Dehydration in an aircraft cabin also can cause some swelling in the lower legs. The inability to move freely combined with the subnormal air pressure and oxygen content within an airplane can also interfere with healthy circulation. Long airplane flights are especially concerning because of their prolonged nature and potential to have a greater impact on cardiovascular health.

Effective preventive measures while traveling include standing and stretching exercises, drinking copious amounts of water, and avoidance of tightly-fitting clothes, salty foods and alcoholic beverages.

Dietary supplementation with Pycnogenol®, which is rich in veno-supportive nutrients, can be highly beneficial. The results of a placebo-controlled clinical trial published recently in *Clinical Applications in Thrombosis and Hemostasis* suggest that every traveler should add Pycnogenol® to their travel preparations. In this study, 200 mg of Pycnogenol® or of placebo were consumed 2 to 3 hours before take-off and again after 6 hours in the air.<sup>8</sup> As opposed to the placebo, Pycnogenol® was found to be highly supportive of venous circulation during the flights – an indication that Pycnogenol® promoted circulation while supporting healthy vascular function within the adverse environment of an aircraft at high altitude for many hours.

### Pay Attention, Please!

Several studies in recent years have looked at Pycnogenol®'s ability to support cognitive function, mood, and attention and concentration. A double-blind, placebo controlled pilot study was conducted in which 61 children aged six to fourteen years were given a daily dosage of 1 mg of Pycnogenol® per kilogram

body weight or a placebo for four weeks.<sup>9</sup> The researchers found that Pycnogenol® intake for one month significantly enhanced concentration and attentiveness in these children. Scientists have suggested that these effects may be due to the antioxidant activity of Pycnogenol® and may also be a result of Pycnogenol®'s ability to enhance the production of nitric oxide, a molecule that supports increased circulation through arteries and veins, thus making it easier for nutrients to reach organs and systems, including brain tissue. In fact, further research on Pycnogenol® in children found that the same dose (1 mg per kilogram body weight) given over a one-month period increased total antioxidant status and was able to induce a highly significant increase in the level of reduced to oxidized glutathione in the blood.<sup>10</sup> As is widely known, glutathione is one of the most abundant antioxidants in cells throughout the body. What is interesting is that research shows that the lower the intracellular glutathione concentrations go, the faster cells (and hence tissues!) age. Glutathione is the key antioxidant protector of proteins, fats and DNA in cells. Maintaining glutathione concentrations in cells is critical for healthy aging. Even more important is ensuring that there is a healthy balance of the reduced glutathione to oxidized glutathione. The reduced form is crucial for glutathione's free-radical scavenging capability. Pycnogenol® recycles glutathione and keeps more of it in the free-radical attacking reduced form.

Pycnogenol® also has shown the ability to support memory function in the elderly. A study published in the *Journal of Psychopharmacology* highlighted research looking into the effects of Pycnogenol® supplementation over a three-month period on cognitive function and memory.<sup>11</sup> In this placebo-controlled trial, healthy elderly individuals were asked to take Pycnogenol® at a daily dose of 150 mg per day or placebo. The results of the trial showed significant benefits in memory function in the Pycnogenol® group after 3 months, indicating Pycnogenol®'s beneficial effect on cognitive function. Once again, researchers attribute this benefit of Pycnogenol® to its powerful antioxidant

functions and its ability to protect brain cells from free radical damage.

### **Tree Bark and Human Health – Strong Links**

Pycnogenol® - the unique water extract from the French maritime pine tree - has numerous tonic effects for the human body. This well-researched product deserves to be included as a core component of everyone's health and wellness armamentarium. Pycnogenol® reinforces the establishment of a healthy balance between oxidative stress and antioxidant capacity throughout the body. By doing so, Pycnogenol® is a strong and potent ally of visual health, vascular health, immune wellness and in the management of the inflammatory response, cognitive function and memory, and as a key nutrient for Healthy Aging.

### **Pycnogenol**

- Pycnogenol® enhances protectin against the oxidative stress that accompanies aging.\*
- Pycnogenol® supports healthy blood pressure levels already within the normal range.\*
- Pycnogenol® supports healthy cholesterol levels already within the normal range.\*
- Pycnogenol® promotes healthy circulation.\*
- Pycnogenol® supports immune and respiratory health.\*
- Pycnogenol® supports joint and skin health.\*
- Pycnogenol® enhances cardiovascular function and circulation.\*

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