

totalhealth
Special Report

Pycnogenol

French Maritime Pine Bark



Pycnogenol

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Featuring

- 3 Nature's Super Antioxidant**
by Lyle Hurd, editor of *totalhealth*
- 4 Heart Health**
Bark for Your Heart
by Frank Schönlau, Ph.D.
and Steven Lamm, M.D.
- 5 Travel Health**
Deep Vein Thrombosis
Swollen Legs and Feet
- 7 Diabetes Health**
Diabetic Retinopathy
Glucose Reduction
- 9 Premenstrual Relief**
- 10 Immune System Enhancer**
Lupus
Asthma
Allergies and Hay Fever
- 12 Skin Health**
Sun Protection
Wrinkle Reduction
Wound Healing
Oral Health
- 14 Conclusion**
- 15 Writers' Profiles**

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Nature's Super Antioxidant

by Lyle Hurd, editor of *totalhealth*

Pine bark has been used in traditional medicine for as long as 2000 years. When French explorer Jacques Cartier and his crew arrived in Canada in 1534, many of them were suffering from scurvy. Local natives prepared teas and other concoctions using pine needles and tree bark to relieve the scurvy, improve wound healing and various other ailments. During times of famine, pine bark was also used as emergency food and added to flour for baking bread. Today pine bark is still utilized for its medicinal benefits, though in different ways than years ago. In fact, advanced scientific research on a certain type of pine bark has demonstrated remarkable all around health benefits for men and women, ranging from heart and circulatory health to eye health to asthma and allergy relief.

Pycnogenol® (pic-noj-en-all) originates from the bark of the French maritime pine tree that grows along the coast of southwest France. The pine trees from which Pycnogenol is produced are grown entirely without pesticides and represent Europe's largest forest. It's an ideal botanical source as the extracted components are not subject to seasonal variations like most other plants, which is important for having a high batch-to-batch consistency of the product. The patented extract adheres to the strict Good Manufacturing Practice (GMP) guidelines, ensuring its safety and efficacy.

What makes this popular antioxidant so special is the unique combination of procyanidins, bioflavonoids and organic acids which offer extensive natural health

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benefits. Dr. Lester Packer, a prominent researcher from the University of California, Berkeley, has remarked that Pycnogenol exhibited profound antioxidant activity and was superior to many other antioxidants he tested. Moreover, Dr. Packer demonstrated that Pycnogenol



can recycle oxidized (spent) vitamin C to the bioactive form and protects vitamin E from oxidation.

Researchers around the world continue to hold intrigue with Pycnogenol which has been widely studied for the past 35 years, resulting in four U.S. patents and more than 120 published studies and review articles ensuring the ingredients' safety and efficacy. As new research is published, consumers reap the health benefits of this superior flavonoid by incorporating it into their daily lifestyle routines. Men's health benefits span from heart health to fertility to eye health while women are taking notice for PMS relief, immune enhancer and skin health, among others. ▲

HEART HEALTH

by Frank Schönlau, Ph.D. and Steven Lamm, M.D.

Bark for Your Heart

With heart disease and stroke accounting for one million deaths annually in the United States, more individuals are becoming aware of the health risks and looking for safe and natural alternatives to medicines to help maintain and enhance overall heart health.

Recently, Pycnogenol® has been lauded due to the surge of research published demonstrating its significant benefit for heart and circulatory health. The majority of the research provides

solid evidence that this antioxidant is powerful in reducing inflammation in the body, strengthening the vascular system, lowering high blood pressure and cholesterol and fighting the effects of smoking, stress and other environmental risk factors on the heart.

A recently published review article on Pycnogenol and its effect on the cardiovascular system, in *Evidence-Based Integrated Medicine*, has concluded that the ingredient has the potential to counteract major cardiovascular risk factors, including reducing platelet activity, relaxing artery constriction and improving circulation. It also introduces the concept of Pycnogenol acting as a natural “polypill” for heart health. The author of the article, Dr. Ronald Watson at the University of Arizona, has discovered through years of research, that Pycnogenol tackles high blood pressure as well. Elevated blood pressure causes physical stress to blood cells and vessel walls, which in turn initiates an inflammatory process, leading to an increased risk of heart disease. A research study conducted by Dr. Watson demonstrated that subjects with mild hypertension showed a statistically significant reduction of blood pressure in response to supplementation with Pycnogenol.

In another clinical study recently published in *Life Sciences*, scientists confirm that participants who took prescribed high blood pressure medication were able to cut the dosage in half when they supplemented Pycnogenol. According to Peter Rohdewald, Ph.D.,



Institute of Pharmaceutical Chemistry, University of Munster and one of the authors of this study, high blood pressure affects one out of every four American adults due to stress, higher age and obesity. With statistics like these, heart specialists worldwide continue to turn their attention to the abilities of this powerful natural antioxidant and other natural alternatives.

An additional common heart health risk is increased “stickiness” of blood platelets, which increases the likelihood of a blood clot formation in the body. There are several reasons for blood platelets to get more “sticky” including stress, diabetes, smoking and aging. The event of blood clotting in a vessel can cut off tissue from oxygen supply and may cause heart infarction and stroke. Dr. Watson discovered that Pycnogenol inhibits platelet aggregation induced by cigarette smoking, without the adverse effect on bleeding time that characterizes aspirin use. This means it helps reduce the risk of blood clots restricting blood flow through the blood vessels, such as in thrombosis.

Most people recognize that high cholesterol levels inhibit one’s ability to keep the heart healthy, which is why preventive measures in managing cholesterol are important to consider. A clinical study at the University of California, Davis, published in *Lipids*, demonstrated that supplementation with Pycnogenol significantly reduced the LDL-cholesterol levels (“bad” cholesterol) in the blood, while the HDL-cholesterol (“good” cholesterol) was elevated. The finding that Pycnogenol reduced LDL while elevating HDL was particularly favorable and has rarely occurred in antioxidant studies of similar design. ▲

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TRAVEL HEALTH

Restlessness and the age-old question, “Are we there yet?” aren’t necessarily the only side effects of long trips. The dangers of travel related health problems and “economy class syndrome” has gained much media coverage in recent years. Several health complications may arise while on long airplane flights or car rides due to the body being in a cramped position for hours at a time. Complications can occur in just about any environment of prolonged sitting. ▲

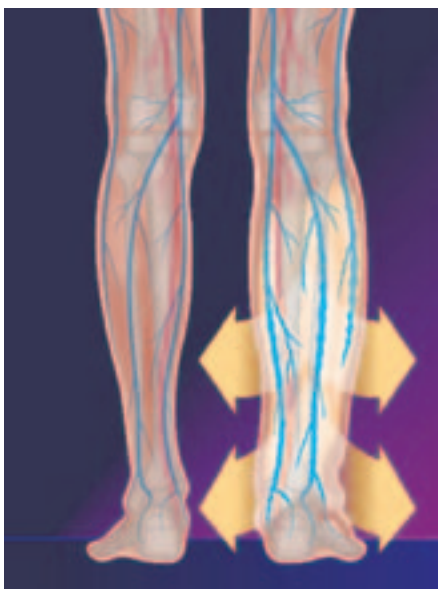
Deep Vein Thrombosis

Deep vein thrombosis is caused by formation of blood clots in the veins of the lower limbs, where blood flow is reduced by a prolonged sitting position. When the blood clot travels to an artery of the lung it may get stuck and block blood flow. This “pulmonary embolism” often has a fatal outcome. The search for natural alternative

options requires the understanding of the underlying mechanisms causing increased aggregation of blood platelets. Remaining in a sitting position reduces venous blood flow velocity while increasing venous blood pressure in the lower limbs, causing small capillaries to leak plasma into the surrounding tissue. In turn, this causes swellings of the legs and feet, a phenomenon well known to passengers when they put on their shoes at a destination, only to find them snug. ▲

Swollen Legs and Feet

Clinical studies on Pycnogenol® have demonstrated its ability to counteract swelling of the lower limbs and decrease platelet activity, preventing



aggregation. Two hours after taking a single 25 mg dose of Pycnogenol, platelet “stickiness” is lowered. Higher dosage of up to 200 mg of Pycnogenol

yields more pronounced effects, lowering the danger of clot formation. Another clinical study has shown that Pycnogenol inhibits production of thromboxane, a dangerous substance produced by activated platelets that can potentially cause a blood clot. While aspirin is commonly used for this purpose, Pycnogenol has the advantage of not sharing the side effect of blood thinning or increased bleeding time.

A recent study of 211 passengers on a “long-haul” flight (7–12 hours) further demonstrated that the ingredient helps prevent thrombosis in passengers during these long flights. The passengers were required to take two 100 mg capsules two to three hours prior to departure and another two capsules six hours later during the flight. Another capsule was taken the following day after arrival. While there were five cases of thrombosis in the control group taking the placebo, none of the passengers supplemented with Pycnogenol developed thrombosis during the flight.

In addition to preventing thrombus formation, taking a single dose of 200 mg Pycnogenol two hours prior to take-off will bring an immediate noticeable benefit to flight passengers by helping to reduce leg swellings. Lack of movement inhibits back-flow of blood through veins, causing accumulation of blood in lower extremities. Furthermore, gravity force lets liquid seep out of fragile capillaries into the tissue. Pycnogenol helps to prevent the swellings as it decreases the permeability of blood vessel walls. The ability of Pycnogenol to stabilize fragile capillaries is the rationale for using Pycnogenol to overcome venous insufficiency, which has been demonstrated in more than 15 clinical studies and over 500 participants. ▲

DIABETES HEALTH

Diabetic Retinopathy

Diabetic retinopathy is the leading cause of blindness in people under the age of 60 in the U.S. and affects more than 5.3 million Americans, according to the American Diabetes Association. The disease occurs because elevated glucose levels in the blood react within the capillaries of the retina, resulting in swollen and brittle walls. This subsequently leads to blood leaking into the retina, which limits oxygen and nutrients from reaching the retina and lowers the sensitivity of the eye to light, causing gradual vision loss. Diabetic retinopathy develops without symptoms or pain. Very rarely are there any signs of this debilitating disease until it has progressed to a point where a patient notices his or her vision is getting worse, with the result being irreversible damage.

There is strong evidence that the protective action of Pycnogenol® helps keep blood vessels and capillaries in diabetics functioning efficiently. Without protection, diabetics often develop retinopathy. Pycnogenol binds to certain proteins, such as those exposed in damaged areas of capillaries and seals them to suppress further outflow of blood. Intake of Pycnogenol has been found to reduce the micro bleedings in the retina and studies have shown improvement in eyesight.

Five clinical studies in Europe, with more than 1000 patients, have consistently demonstrated that Pycnogenol seals leaky capillaries. Progression of www.pycnogenol.com

vision loss was stopped, blood leakage in the eye was significantly reduced and in some cases visual acuity



Healthy eye (retina)



Retina with diabetic retinopathy areas with defective capillaries shown in tiny spot-like red bleeding and yellow fat deposits.



Proliferative stage of diabetic retinopathy growth of new blood vessels causes severe bleeding into the eye.

improved a little. In a double-blind, placebo-controlled clinical study by



Spadea and Balestrazzi, Pycnogenol treated patients showed no deterioration of retinal function and obtained a significant recovery of visual acuity in comparison with the progressively worsened condition of the placebo-treated group.

Some 1169 patients with diabetic retinopathy were enrolled in a 1988 multi-center field study in Germany. Patients were treated with daily doses of 20–160 mg of Pycnogenol for six months. In response to treatment with Pycnogenol, the deterioration of visual acuity of patients was not only successfully stopped, but visual acuity improved to some extent. The report concluded that Pycnogenol had a considerable therapeutic benefit for patients suffering from diabetic retinopathy.

The efficacy of Pycnogenol was compared in a double-blind study design with a drug widely used to slow down the progression of diabetic retinopathy: Dexium. The six-month Pycnogenol treatment, which consisted

of 120 mg a day for six days, then 80 mg a day for the remainder of the study, showed Pycnogenol to be at least as effective as Dexium.

Based on this scientific evidence, advanced eye health supplement formulas are now available to consumers. TwinLab's DIA-BALANCE™ for Eye Health formula contains 40 mg of Pycnogenol and 6 mg lutein. Pycnogenol is included in other key eye health formulas including Dr. Andrew Weil's Vision Support Formula and Novartis' Picno 30™, a product containing Pycnogenol in combination with vitamin E, designed to help treat diabetic retinopathy. ▲

Glucose Reduction

Seventeen million Americans living day-to-day with type II diabetes, caused by a resistance to insulin, require a careful daily routine including blood sugar monitoring, physical exercise and counting carbohydrates. Many patients look for complementary therapies such as natural ingredients to further reduce their risk of long-term complications from this condition. According to a new clinical diabetes study, printed in *Diabetes Care*, published by the American Diabetes Association, scientists discovered that type II diabetes patients had lower blood sugar and healthier blood vessels after supplementing with Pycnogenol. The open, controlled, dose-finding study demonstrated that patients with mild type II diabetes, subscribing to a regular diet and exercise program, were able to significantly lower their glucose levels when they supplemented with 50–200 mg of Pycnogenol. ▲

PREMENSTRUAL RELIEF

As many women know firsthand, menstrual cramps can be a monthly discomfort. Nowadays, women are trading in their hot water bottles for other remedies, including natural ingredients, to alleviate pain. In some cases, women suffer from severe pain during their menstrual period, and this is due to endometriosis, which causes the cell layer that is rejected during menstruation to get inflamed and become painful. Endometriosis is a common gynecological disorder with varied symptoms including chronic pelvic pain, dysmenorrhea and infertility. Pycnogenol® has pronounced anti-inflammatory activity which helps prevent endometrial cells from getting inflamed and thus relieves pain.

Japanese gynecologists researched women with either endometriosis or severe menstrual pain in absence of the disorder. Their research found a clear improvement in terms of reduction of menstrual cramps and pain in 73 percent of women following administration of 30 mg Pycnogenol daily for one month, in addition to those with endometriosis. The majority of women in both groups experienced a significant improvement when they received the 30 mg Pycnogenol starting at least two weeks before menstruation and in several cases the dosage was increased to 60 mg. Menstrual pain appears to be soothed by virtue of phenolic acids contained in Pycnogenol, which reduce uterine cramping. Moreover, Pycnogenol is understood to support relief of tiny blood vessels ruptured during the menstrual period.

According to the study published in www.pycnogenol.com

the *European Bulletin of Drug Research*, abdominal pain due to endometriosis was reduced in 80 percent of the patients



and cramps disappeared in 77 percent of the women taking Pycnogenol. This study was submitted as part of the patent application and Pycnogenol was awarded a U.S. patent (#6,372,266) for use in the reduction of the pain and discomfort associated with menstruation (PMS).

The Japanese gynecologists Dr. Takafumi Kohama and Dr. Nobutaka Suzuki carried out a second study to test pain-lowering effects of Pycnogenol in menstruation. In 47 women Pycnogenol significantly lowered abdominal and back pain, as compared to the pre-treatment menstrual cycle. Interestingly, the longer Pycnogenol is taken, the better the results. During the second menstrual cycle with Pycnogenol regimen, the pain was even lower than the month before. According to the study published in *Journal of Reproductive Medicine*, most women experienced fewer days of pain and took fewer painkillers. ▲

IMMUNE SYSTEM ENHANCER

Optimal performance in daily life depends upon our body's ability to fight off germs and infection, keeping us healthy. No matter what the season, keeping our immune systems strong is essential.

Increased oxidative stress, production of free radicals and lack of antioxidants are known to drive the over-reaction of the immune system resulting in auto-immune diseases. This heightened oxidation also deprives the immune system of the ability to efficiently counteract infections. Each individual has a unique lifestyle plan that contributes to maintaining health; that may include incorporating physical activity into daily routine, eating a healthy diet or increasing the intake of natural antioxidants through dietary supplements. ▲

Lupus

Unfortunately, our immune system is not flawless. Sometimes, it mistakenly perceives the body-own tissue as foreign and attacks it. These autoimmune diseases are quite common nowadays: multiple sclerosis, lupus erythematosus and diabetes type I are typical examples. There is increasing epidemiological evidence that children who are raised in a rural environment are less prone to develop autoimmune diseases. It appears that keeping the immune system "busy" fighting-off minor infections prevents it from over-reacting against body-own tissue.

Pharmacological as well as clinical studies show that nutritional approaches allow improvement of

immune functions. Dr. Ronald Watson at the University of Arizona, Tucson, has researched the effect of supplementation with Pycnogenol® on the immune system. He illustrated that mice infected with a virus showed a more potent immune response when they had been fed Pycnogenol, which is known as one of the most powerful antioxidants.

It is common knowledge that the immune system progressively gets weaker with increasing age. The vast majority of immune cells originate from the bone marrow where stem cells divide and give rise to the many subsets of immune cells. These cells lose the ability to produce new immune cells as a result of cumulative damage caused by free radicals.

Dr. Benjamin Lau of Loma Linda University in California, measured the output of new immune cells from the bone marrow in a special strain of mice that aged very quickly. He discovered that feeding mice with Pycnogenol for two months dramatically increased the number of immune cells generated in their bone marrow as compared to their non-treated littermates.

A clinical pilot study in Europe investigated the possibility of using Pycnogenol to ease symptoms of the autoimmune disease lupus erythematosus. The cause of the disease is unknown and it affects women primarily. The immune system of individuals with lupus generates antibodies recognizing body-own tissues as foreign and consequently destroying these tissues. Pycnogenol was given to lupus patients in addition to their primary medication, while another group received placebos



Asthma

Asthma is believed to result from inflammatory processes of the bronchi that cause them to constrict and swell, aggravating airflow and in many patients causing an obstruction of the airways. A clinical study carried out by Dr. Ronald Watson at the University of Arizona showed that after taking Pycnogenol, asthmatics noted improvement of their breathing ability, while the placebo group did not experience improvement. This was a result of Pycnogenol's capability to significantly reduce inflammatory mediators in the blood stream of the patients. ▲

Allergies and Hay Fever

Allergies are an overreaction of the body's immune system toward substances it mistakenly perceives as harmful. Allergens causing these reactions are most commonly pollen, dust, certain metals, animal hair or food additives. When an allergic person comes into contact with an allergen, a particular subset of the immune system releases histamine. During this immediate reaction, histamine triggers symptoms common to allergies: sneezing, nasal congestion, coughing, skin rashes and swelling. Inflammatory mediators may cause these symptoms to persist.

According to several clinical studies, Pycnogenol inhibits the release of histamine, thus preventing the immediate reaction towards a challenge with an antigen. Since this powerful antioxidant is an anti-inflammatory, it inhibits production of pro-inflammatory mediators. Pycnogenol relieves the swelling, reduces hives and helps make breathing easier. ▲

but continued cortisone steroids to down-regulate the immune system in total, thus sparing one's tissues.

The group receiving Pycnogenol had significantly lower quantities of antibodies directed against body-own tissue than the control group. Furthermore, the aggressiveness of the immune cells was noticeably reduced by Pycnogenol. Of course Pycnogenol does not heal lupus, but research shows that it significantly reduces symptoms. It is not yet known whether Pycnogenol may be beneficial in other autoimmune diseases as well.

These studies show that powerful super-antioxidants like Pycnogenol have a profound effect on normalizing functions of the immune system and alleviating toxic stress in the body caused by environmental factors. Incorporating antioxidants into your daily routine provides health benefits, makes you feel good and can help you maintain a healthy immune system. ▲

SKIN HEALTH

Scientists have found the antioxidant activities from the French maritime pine bark extract Pycnogenol® dramatically protects collagen and binds to elastin, saving it from destruction, demonstrating the natural botanical's abundant benefits for skin health. This inhibits collagen and elastin degradation by destructive enzymes as well as by free radicals. These contributions are the basis for maintaining skin elasticity and smoothness and preventing wrinkles. ▲

Sun Protection



While basking in the sun may not be harmful in moderation, overexposure of the skin to UV light causes increased production of highly reactive free radicals, which

harm collagen fibers and skin cells. The sudden burst of UV generated free radicals are largely responsible for sunburn. In fact, sunburn is actually inflammation caused by free-radical-induced damage of tissue. Research indicates that Pycnogenol may reduce damage to the skin cells caused by UVB radiation by effectively neutralizing the free radicals originating from UV rays striking skin tissue. Moreover, Pycnogenol, as a powerful anti-inflammatory, efficiently counteracts inflammation at its onset.

Studies have shown Pycnogenol's anti-inflammatory properties, via

inhibiting release of pro-inflammatory mediators preventing activation of immune cells, helping protect skin from photo-aging and extending the skin's resistance from sunburn. Dr.



Lester Packer (University of California, Berkeley) and Dr. Ron Watson (University of Arizona, Tucson) together conducted a study demonstrating that oral supplementation with Pycnogenol protects humans against sunburn. It took about twice as much UV irradiation of 21 healthy volunteers until their skin reddened.

Additional research carried out by Dr. Suzann Sime at the University of Sydney, Australia, demonstrated that Pycnogenol applied topically subsequent to UV exposure significantly reduced swelling of irradiated skin and sunburn. Pycnogenol lotion was also found to reduce long-term UV damage to the skin. It's impor-

tant to note that using Pycnogenol does not act as a sunscreen, but it helps the skin cope with damage caused by exposure to UV light. ▲

Wrinkle Reduction

As mentioned above, Pycnogenol acts as a collagen stabilizer by binding to collagen in the skin, maintaining elasticity, keeping skin firm and preventing wrinkles. The ingredient also improves microcirculation of tiny skin capillaries, supporting better oxygen and nutrient supply and better hydration. These actions work in sync to give skin a healthier look and vibrant glow. A variety of cosmetic products, as well as skin nutrition supplements, contain Pycnogenol as part of their healthy skin formulas. Moisturizers and gels are taking advantage of the antioxidant's photo-aging defying and collagen-renewal effects. ▲

Wound Healing

While bandages may cover wounds and help them to heal from the outside, Pycnogenol protects and rejuvenates the skin, helping wounds heal from the inside out.

In a recent clinical study, published in *Free Radical Biology & Medicine*, scientists demonstrated that supplementing with Pycnogenol generated powerful metabolites in the body, effectively protecting the collagen matrix and lending stability to tissue. Notably, the study showed that metabolites produced after supplementation are more effective in repairing damaged skin than the body's most powerful anti-inflammatory, hydrocortisone. Treating wounds with Pycnogenol was shown to speed up the healing process considerably. ▲

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Oral Health

Pycnogenol promotes a healthy smile. According to recent studies, the antioxidant's anti-inflammatory and sealing effect on fragile oral capillaries helped reduce gingival bleeding in participants.

During a study led by Benjamin Lau, M.D., Ph.D., of Loma Linda University,



results yielded a reduction in plaque accumulation associated with common gingivitis. Participants did not receive the typical oral supplement, instead, they were administered 5 mg of Pycnogenol in chewing gum. The subjects taking Pycnogenol chewing gum showed more than a 50 percent reduction of gum bleeding, while regular chewing gum proved to be ineffective. The group chewing Pycnogenol gums developed no plaque. ▲

CONCLUSION

As mentioned earlier, Pycnogenol® has been extensively researched for its safety, a registration prerequisite in some European countries to become a pharmaceutical drug. Pycnogenol is GRAS (generally recognized as safe), approved for applications in various foods and beverages. The GRAS process allows individual groups, such as a



panel of toxicology experts, to come together to evaluate the safety of food components. Pycnogenol may be used as a functional food and beverage ingredient in most countries of the world, with few exceptions. Approved applications for Pycnogenol in func-

tional foods and beverages include baked goods, breakfast cereals, breakfast bars, processed fruits and vegetables, jams and jellies, soft candy, chewing gum, margarine, sauces, fats and oils and alcoholic and non-alcoholic beverages. Pycnogenol waters and juices have made their debut in Europe and Asia and it's only a matter of time before they hit U.S. stores.

You can find Pycnogenol product formulas in your local health food store, drugstore, grocery store or on the Internet. There are a wide variety of brands and formulas to choose from since the ingredient is included in more than 140 dietary supplements, multi-vitamins and health products worldwide. When choosing a product, look on the label for the pine tree logo which is the official Pycnogenol trademark and quality guarantee. While no set guidelines exist for recommended dosages, standard product formulas range from 25 mg–50 mg per capsule or tablet and science tells us that anywhere from one to two capsules (or up to 100 mg) of Pycnogenol can be taken daily for maximum effectiveness.

Pycnogenol French maritime pine bark extract is unique amid the vast sea of dietary supplements, multivitamins and natural products lining store shelves because it is an evidence-based antioxidant. Millions of dollars in scientific research and clinical evidence have been utilized to ensure the safety and efficacy of Pycnogenol as a dietary supplement. ▲

To learn more about Pycnogenol visit www.pycnogenol.com.

WRITERS' PROFILES



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Director of Scientific Communications
Horphag Research Ltd.

Frank Schönlau, Ph.D. is a biochemist and accomplished researcher with several clinical studies on Pycnogenol® published worldwide. He is considered one of the foremost experts in the industry on this antioxidant ingredient and his realm of expertise includes vascular diseases, chronic inflammation, autoimmune diseases and diabetic retinopathy. During the past five years with Horphag Research, the original developers of Pycnogenol, Frank has worked as director of

scientific communications and is responsible for managing and executing research projects with Pycnogenol brands. He also communicates published research results and updates globally to all Horphag and Natural Health Science offices. Schönlau graduated from the University of Münster Germany with a degree in chemistry and subsequently earned a Ph.D. in biochemistry.



Steven Lamm, M.D.

Steven Lamm, M.D., nationally known health expert, is a widely respected medical practitioner and professor of medicine. Currently, Dr. Lamm serves as clinical assistant professor of Medicine at New York University, Bellevue, is a best-selling author and has conducted several clinical trials. He graduated from Columbia University with a B.A. and earned his M. D. from the New York School of Medicine. Dr. Lamm has logged more than 250 national TV network appearances including ABC's "The View" and discussed a variety of health and medical topics. Next year his new book on men's health, called *The Hardness Factor*, will be published.

Pycnogenol® is a registered trademark of Horphag Research Ltd. Use of this product is protected by one or more of U.S. patents #4,698,360 / #5,720,956 / #6,372,266 and other international patents.



Pycnogenol originates from the bark of the French maritime pine tree that grows along the coast of southwest France. The pine trees from which Pycnogenol is produced are grown entirely without pesticides and represent Europe's largest forest. It's an ideal botanical source as the extracted components are not subject to seasonal variations like most other plants, which is important for having a high batch-to-batch consistency of the product.

THE FIRST STEPS TOWARD IMPROVING YOUR QUALITY OF LIFE

NATURE'S SUPER ANTIOXIDANT

Pycnogenol[®], fights harmful free radicals in our body to help defend against the damage caused by cell oxidation.*

CIRCULATORY HEALTH

Pycnogenol[®] helps improve circulation by preventing the constriction of arteries and other blood vessels.*

HEART HEALTH

Pycnogenol[®] can help maintain healthy platelet aggregation while protecting the inner lining of blood vessels. It also supports healthy blood pressure and healthy cholesterol levels.*

ECONOMY CLASS SYNDROME

Pycnogenol[®] has been shown to counteract swelling in the lower limbs and decreased platelet activity that can occur as a result of prolonged sitting and decreased air pressure prevalent in airplane cabins. This syndrome is known as "economy class syndrome" or Deep Vein Thrombosis.*

SKIN HEALTH

Pycnogenol[®] gives your skin a healthier, more vibrant look by helping to improve micro-circulation and protecting against the damage of sunburn and photo-aging.*

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Today, accepting the responsibility for your health is the first step toward improving your quality of life. You can help attain your goals by understanding the importance of adding Pycnogenol[®] (pic-noj-en-all), nature's super antioxidant, to your wellness program.

Pycnogenol's[®] benefits extend beyond fighting free radicals. Scientific studies have demonstrated Pycnogenol's[®] effectiveness in improving blood circulation, the key to a better quality of life.

*Pycnogenol[®] and Improved Circulation can help to improve the function of your heart, help nourish and defend skin from the inside out, help support healthy eyesight, help control certain body discomforts and restore body balance.**


Pycnogenol[®] is patent-approved and one of today's most thoroughly researched and exciting health advances. Taking it everyday can help you simply feel better. And that can make your life happier and more rewarding.†

Ask your Health Food Retailer for patent-approved



PYCNOGENOL[®]

LOOK, FEEL, AND LIVE BETTER

Pycnogenol[®] Nature's Super Antioxidant French maritime pine bark extract is distributed exclusively by  in North America. It's all natural, science based, clinically tested, proven safe, and consistent in quality. NHS Inc. 225 Long Avenue Hillside, NJ 07205

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†For a complete list of scientific research and to learn more about all the remarkable benefits of Pycnogenol[®] and what it can do for you contact: NHS at 877.369.9934 or visit our website www.pycnogenol.com