



## **nutraMetrix® OPC-3™ Frequently Asked Questions**

**1. What is nutraMetrix® OPC-3™?**

**nutraMetrix OPC-3 is a dietary supplement that bears some of the most powerful bioflavonoids currently known to research scientists. These bioflavonoids are scientifically termed oligomeric proanthocyanidins, commonly abbreviated OPCs. The purest and best-researched OPCs chosen for OPC-3 are prepared from grape seed, red wine, bilberries, Pycnogenol from pine bark and citrus fruit. This combination of potent OPCs is unique to OPC-3, as is the isotonic delivery system, which enables rapid and highly efficient absorption of the OPCs. nutraMetrix OPC-3 has been shown to provide a variety of health benefits including but not limited to combating free radicals, demonstrating anti-inflammatory activity, helping maintain healthy cholesterol levels, helping maintain healthy circulation by strengthening capillaries, arteries and veins, helping maintain joint flexibility, helping promote/support cardiovascular health, helping reduce mild menstrual cramping and abdominal pain, helping support visual health/visual acuity, scavenging free radicals, promoting/supporting healthy blood vessel dilation, promoting/supporting healthy nitric oxide levels, supporting a healthy complexion, supporting healthy blood glucose levels, supporting healthy platelet activity and supporting healthy sperm quality.**

**2. What is a bioflavonoid?**

**Bioflavonoids are complex organic plant compounds. Plants and fruits differ in colors based on the specific bioflavonoids they contain. Bioflavonoids have always played an important nutritional role. A rapidly increasing number of clinical studies show how versatile bioflavonoids support health. Bioflavonoids found in OPCs play a key role for cardiovascular health and maintaining vascular integrity. Clinical studies have demonstrated support of healthy blood flow and enhanced cell vitality. Normal collagen renewal is promoted, with supports firmness of the skin, joint cartilage and connective tissue.**

**3. What sets nutraMetrix OPC-3 apart from other bioflavonoid products?**

**nutraMetrix OPC-3 offers scientifically supported OPCs, found to be the most potent for human health in adequate servings. In addition to being powerful antioxidants, the individual OPCs have been shown to provide a myriad of specific health benefits. This science-driven selection of OPCs is unique to OPC-3, as is the isotonic delivery system, which enables rapid and highly efficient absorption of the OPCs. The potent nutrients in combination with the highly effective delivery system make OPC-3 the most powerful free radical scavenging product available.**

**4. Is nutraMetrix OPC-3 safe?**

**Yes. OPCs are among the most valuable constituents of a healthy human diet. OPCs have been researched and used for over 30 years throughout Europe. Extensive safety studies were conducted and laboratory testing revealed no evidence for human toxicity or allergic reactions. OPC-3 contains pure OPCs in combination with carefully balanced quantities of potassium and fructose/glucose, which set up the isotonic delivery system. OPC-3 is free of harmful chemicals, preservatives and alcohol. OPC-3 should be taken as directed.**

**5. How long does it take to benefit from nutraMetrix OPC-3?**

**OPC-3 not only provides the most potent OPCs available, the unique isotonic delivery system ensures that the small intestine rapidly absorbs the OPCs, which are available in the blood stream within minutes. This is because the OPCs are delivered in liquid form. The liquid is isotonic, which means it duplicates the environment in our cells and blood stream regarding pH, electrolytes, etc. This enables**

the OPCs to transit into our body without barriers and with a high level of bioavailability. Because of the rapid absorbability, the body should benefit from nutraMetrix OPC-3 almost immediately.

**6. What is the advantage of taking nutraMetrix OPC-3 regularly?**

Many effects of OPC-3 start to work after a single serving. Studies with human volunteers have found that particular health merits of OPCs may take a while to develop until they reach full swing. This may be the case in health concerns resulting from everyday wear and tear, where time simply has taken its toll. Taking nutraMetrix OPC-3 daily enables the body to sustain a consistent antioxidant defense.

**7. Why should everyone take nutraMetrix OPC-3?**

Free radical damage and oxidative stress are a reality that everyone is subject. Free radicals develop as byproducts when cells of the body generate energy from burning calories with oxygen. These molecules behave somewhat like hot sparks, which destroy any other cell matter they meet by ridding the other cells of their excess energy. This damage does not at first cause noticeable harm, yet may add up over the years. This process is largely responsible for the aging process. Free radicals have been linked directly to premature aging, poor circulation, poor heart health and poor immune health. OPCs are the most powerful natural free radical neutralizers and you get the best of all OPCs by taking nutraMetrix OPC-3. This product should be taken for a long healthy life. Regular use every day is vital to keep free radicals in check. Laboratory studies have shown that OPCs are more powerful antioxidants than vitamin C and vitamin E.

**8. Can you take nutraMetrix OPC-3 in soda, juice, coffee, etc., rather than water?**

It is possible but not recommended. This product should only be taken as directed. In order to keep the product in an isotonic form and to achieve the maximum delivery speed, it needs to be taken on an empty stomach with 2 oz. of water per capful. Mixing the products with anything else besides other isotonics and water slows down the delivery time and may affect the percentage of uptake.

**9. I am healthy and athletic, why should I take nutraMetrix OPC-3?**

Everyone is vulnerable to the aging process caused by continuous free radical damage. Athletes tend to be exposed to elevated levels of oxidative stress. Free radicals develop as byproducts during metabolism when calories are processed with oxygen. Athletes inhale 10 to 20 times more oxygen during physical activity over rest periods. The increase in activity creates additional free radicals. In fact, these free radicals are known to limit performance, as free radicals appear to take their toll on muscle tissue. Studies on recreational athletes have shown a 20 percent endurance increase with OPCs, as compared to a control group receiving a placebo. Another study has shown that athletes using OPCs suffered significantly less muscle cramping during and after performing. nutraMetrix OPC-3 helps to maintain healthy blood flow and this supports oxygen supply to muscles.\*

**10. Does OPC-3 have visible benefits?**

As OPCs support collagen production in the skin, an increase of smoothness and elasticity is the natural result. Such an effect was objectively measured in women aged 40 years and older. Skin smoothness was increased after three months as measured by 3-dimensional topography. Likewise, increased skin elasticity was recorded with a special instrument (cutometer). It requires patience until skin cells have renewed significant amounts of collagen to show visible effects. It is essential to continuously take OPC-3 to keep skin cells at their peak vitality. On a short-term basis, many people notice a fresher-looking skin complexion. This is a result of healthy blood microcirculation, which helps detoxify the skin and improves the nutrient supply. Regular use of OPC-3 helps defy photo-aging of the skin.\*

**11. Does OPC-3 have a rejuvenating effect?**

The damage caused by free radicals adds up with time. A cause for more worry is the fact that your body's own mechanisms to keep free radicals in check decline with increasing age - when you need them the most. Suddenly, we find ourselves confronted with some typical age-related problems. Some cells of our body are more vulnerable to free radicals than others. OPC-3 has the ability to go in and

do a knockout job, cleaning and scavenging the free radicals that feast on cellular energy, and take it away from vital processes.

**12. What are the cardiovascular health benefits of OPCs?**

Scientist Albert Szent-Gyorgyi, who received the Nobel Prize for the discovery of vitamin C, discovered OPCs. Szent-Györgyi found that OPCs work in a similar fashion. They strengthen walls of arteries, veins and capillaries. In the past 20 years scientists discovered that OPCs bear a lot more benefits for the cardiovascular system. Epidemiological studies have shown that regular intake of powerful OPC antioxidants supports a healthy cardiovascular system. OPCs appear to be particularly helpful in maintaining healthy cholesterol levels and healthy arteries. Pycnogenol® in nutraMetrix OPC-3 plays a key role, as it stimulates an enzyme in the body to promote healthy nitric oxide (NO) levels. NO is a tiny molecule which serves as a key messenger molecule in the blood stream. It promotes relaxation of smooth muscle-surrounding arteries and supports normal artery diameter and blood flow. Healthy NO levels help maintain normal blood pressure. This benefit has been explicitly demonstrated with Pycnogenol in two clinical studies. NO also promotes healthy blood platelet activity thus preserving a normal, fluid environment. OPCs are especially helpful for smokers. OPC-3 packs a powerful punch when it comes to maintaining excellent cardiovascular health.

**13. How can OPC-3 help my eyes?**

Loss of eyesight is the disability people fear more than all others. nutraMetrix OPC-3 contains specific OPCs successfully tested for eye health. Pilots of the Royal Air force used bilberry OPCs during World War II for support of nighttime vision and adjustment to darkness. Bilberry extract was also shown to help maintain overall eye health in the vast majority of people in a study. Pycnogenol has demonstrated to support healthy capillaries in the eye. Pycnogenol was demonstrated to support healthy capillaries in the eye. nutraMetrix OPC-3 helps maintain visual health and supports visual acuity.\*

**14. Does OPC-3 have benefits specifically for women?**

Some OPCs were shown in clinical trials to help women who suffer from mild pain and cramping during the menstrual period. When women were supplemented with OPCs, starting at least a week before their menstrual period, pain values were found to be significantly lowered.

**15. What exactly is Pycnogenol?**

Pycnogenol is the registered trademark of Horphag Research (UK) Ltd. for a standardized extract of bark of the French maritime pine tree. Pycnogenol is particularly renowned for its extensive clinical research with more than 120 studies published in peer-reviewed medical journals. The flavonoids in Pycnogenol are particularly powerful as antioxidants and, furthermore, stimulate an enzyme, which generates nitric oxide (NO). NO plays a key role in regulating cardiovascular health. Nitric oxide triggers the relaxation of arteries, restoring the normal diameter of blood vessels and supports healthy blood pressure and circulation. NO allows platelets to be less "sticky" allowing the blood to maintain a normal, fluid viscosity. Pycnogenol has been awarded various patents for its ability to influence platelet activity. In addition, in one of the few clinical trials of Pycnogenol, it dramatically inhibited smoking-induced platelet aggregation for longer than three days at a 200 mg dose.

**16. How do I take OPC-3?**

Each capful of nutraMetrix OPC-3 contains 125 milligrams of bioflavonoids, of which 75 milligrams are oligomeric proanthocyanidins in an isotonic-capable base. That means that the OPC-3 active ingredients will be delivered in the highest concentration to the small intestine, where most absorption of nutrients occurs. To start using nutraMetrix OPC-3 for its benefit as an antioxidant and free radical scavenger, take two level capfuls for every 150 pounds of body weight for the first seven days. This is referred to as the saturation serving. Then, switch to a daily serving of one capful, per 150 lbs. of body weight, as a maintenance dose. For example, if you weigh 190 pounds, you would take three servings of nutraMetrix OPC-3 per day for seven days, and then switch to two servings per day for long-term health maintenance. nutraMetrix OPC-3 has a pleasant natural grape flavor, is a

vegetarian product and mixes instantly when added to water. This product should be taken on an empty stomach for the fastest, most effective delivery of the active ingredient. OPC-3 is a natural food supplement that should be taken for a lifetime. Any excess of OPC-3™ will not be of any negative consequence, since OPC-3™ is non-toxic.

**17. What is the history of OPCs?**

In 1534, French explorer Jacques Cartier was leading an expedition up the St. Lawrence River. Trapped by bad weather, Cartier and his crew were forced to survive on a ration of salted meat and biscuits. Cartier's crew began to suffer from severe deficiency of vitamin C and showed symptoms of scurvy. Many crewmembers died before the surviving members encountered a friendly Native American who saved most of their lives. He told them to make a tea from the bark and needles of the pine tree to cure their malady. They complied and, as a result, Cartier and many crewmembers survived. Some 400 years later, Professor Jacques Masquelier of the University of Bordeaux, France, read a book by Cartier detailing their expedition. He concluded that pine bark not only contained some vitamin C, but obviously was a good source of bioflavonoids, whose effects are similar to those of vitamin C. Further studies and research revealed that the pine bark contained an array of proanthocyanidins complexes. These compounds were also found in a variety of plants, including grape seeds, cranberries, peanut skin, lemon tree bark and citrus rinds. Masquelier termed the active ingredients of the pine bark "pycnogenols", which today are referred to in the scientific community as oligomeric proanthocyanidins, or OPCs.

**18. How does OPC-3™ Work?**

Our bodies are made up of billions of molecules held together by electromagnetic forces. These chemical bonds are created with paired electrons. Free radicals are unstable molecules that have lost an electron and are unbalanced. Free radicals seek to replace the lost electron by randomly attacking nearby molecules and extracting desired electrons. One free radical can damage a million or more molecules in a chain reaction referred to as radical propagation, which leads to oxidative stress. Uncontrolled oxidation is very destructive. It is analogous to effects we see in our environment, such as the rusting of metal, the rotting of meat, the browning of apples or the hardening of old rubber. Oxidation in our body by free radicals is thought to be responsible for premature aging, wrinkling of skin, hardening of arteries, stiffening of joints, formation of cataracts, the initiation of cancer and much more. We are constantly exposed to free radicals via such processes as antimicrobial activity by white blood cells and the absorption of chemical additives in our foods. Our ability to fight free radical damage effectively is compromised by our inadequate nutritional choices or diets that contain limited amounts of antioxidants. Antioxidant supplementation is necessary if we are unable to reduce our exposure to free radicals, but wish to counter their effect. OPCs should be taken in conjunction with foods or dietary supplements rich in vitamin C, vitamin e, beta-carotene, and selenium, to name a few antioxidants.

**19. How safe are OPC's ?**

OPCs have been used in Europe under medical supervision for over 30 years with no reports of adverse effects. Over one million people worldwide utilize these valuable bioflavonoids daily. OPCs have been tested time and time again for safety by conventional, scientific methods at leading research centers worldwide including the Pasteur Institute. OPCs have been found to be non-toxic, non-antigenic, non-teratogenic, non-mutagenic, and non-carcinogenic.