

Pine Bark Extract Boosts Nitric Oxide Production

A recent study has found that Pycnogenol, which is an antioxidant plant extract from the bark of the French maritime pine tree, helps individuals by enhancing the production of nitric oxide (NO), which in turn leads to an increase in blood flow and oxygen supply to muscles. Nitric oxide is a key cardiovascular chemical that is produced by the body. It increases blood flow which allows more nutrients and oxygen to be delivered to the muscles. This helps muscles to cope with increased physical activity. The study also suggests that taking Pycnogenol provides more NO in response to neurotransmitters which allows for better expansion of arteries, which can then carry more blood. This process meets the enhanced oxygen demand of muscles and helps to avoid anaerobic metabolism. The results of this study also lead researchers to believe that Pycnogenol can be a natural alternative therapy in diseases involving oxidative stress.

The study was held at the Hiroshima University Graduate School of Bio-medical Sciences in Japan. Each day for two weeks, healthy, young men were given either 180 mg of Pycnogenol or a placebo. In order to identify Pycnogenol's effect on the release of nitric oxide, patients were infused with an inhibitor of L-arginine, which restricts arteries from expanding in response to the neurotransmitter acetylcholine. After two weeks of supplementation, the results revealed that blood flow had increased by forty two percent. Additionally, the group receiving a placebo did not show a significant blood flow increase at all. NO causes the muscle surrounding the arteries to relax, resulting in an increase in the diameter of the blood vessel, while acetylcholine stimulates the cells of arteries to produce NO from L-arginine faster. When the subjects being tested had taken Pycnogenol, the arteries relaxed and blood flow increased by Forty two percent, as compared to the placebo group.

Although more research is warranted, this breakthrough is especially encouraging to athletes since Pycnogenol seems to allow people to move faster when they are exercising. It does this by satisfying the enhanced muscle oxygen demand and also increases the blood flow to the active muscles. People who are performing heavy physical activity experience the release of acetylcholine by nerves to arteries that are supplying the active muscles. This acetylcholine makes them expand, while the whole process requires that there is an enhanced production of nitric oxide.

A great variety of studies about Pycnogenol and sports nutrition have been conducted over the past years. The most recent one occurred a year ago. In this study, Pycnogenol was found to improve blood circulation even in extended aerobic muscle activity. Pycnogenol also enhanced sports endurance by alleviating the cramping and muscular pain that occurs in the majority of athletes. To sum it up, Pycnogenol is not only effective for enhancing and prolonging the performance of muscles during support, but it also supports muscle adaptation to a higher workload and allows the body to recover from physical faster.

When shopping for a good pycnogenol supplement, look for a standardized extract that guarantees that each capsule or tablet contains a specific amount of active ingredients per serving, otherwise you might be purchasing something that is ineffective.

About the Author

More information on [Pycnogenol Pine Bark Extract](#) is available at VitaNet, ®, LLC Health Food Store. <http://vitanetonline.com/>

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