

Product Information for Doctors and Health Professionals.  
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## ENZO:PROFESSIONAL

### Enzogenol® Pine Bark Extract : Cardiovascular



#### Nutritional Benefits

Enzogenol® benefits cardiovascular health by supporting healthy endothelial function, supporting healthy blood pressure, and by maintaining healthy low oxidation and inflammation levels in the body.

#### ENZO Professional

Supplement facts per cap

**Enzogenol®** 240 mg  
 (Extract of *Pinus radiata* bark)

**Vitamin C** 30 mg

Other ingredients: Vegetable cellulose capsule, Tapioca starch

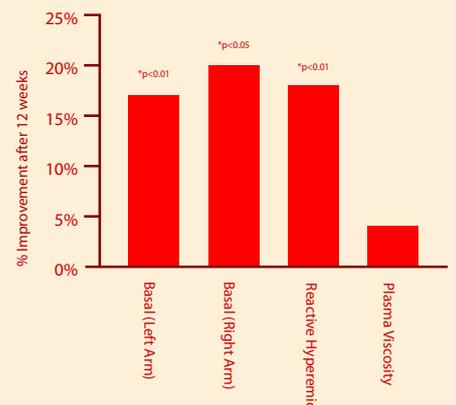
Suitable for vegetarians, and diabetics.

**Dose Recommendation - Adults:** For cardiovascular support take 2 capsules in the morning with a large glass of water, before or after food. For more intensive support, start with 2 caps/day, and dose up to 4 caps/day after one week. With increased health continue on 2 caps/day for ongoing support.

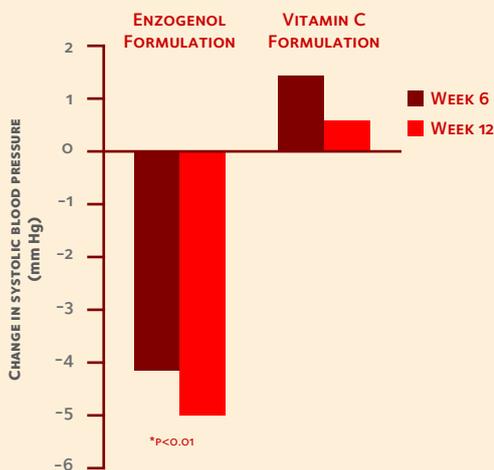
**Undesired effects:** No serious adverse effects are known for Enzogenol. Occasionally a bitter/acidic aftertaste, or a light stomach upset has occurred when taking the capsules with too little water. In rare cases, individuals taking 4 or more caps without dosing up slowly have reported a headache. Reducing the dose overcomes these complaints. Some people experience sleeplessness if taking the product in the late afternoon or evening due to increased levels of alertness. This can be avoided by taking capsules no later than 2 pm.

**Nutrition Research:** In a study of 55-75 year-old men and women, dietary supplementation with Enzogenol for 12 weeks improved several indicators of cardiovascular health<sup>1</sup>. Endothelial function, a measure of the elasticity and overall health of blood vessels, significantly improved. This was determined by analyzing basal blood flow in both forearms, and reactive hyperemic blood flow in the left forearm. Plasma viscosity improved, and average systolic blood pressure was reduced, indicating benefits for overall cardiovascular health.

#### Increases in Blood Flow and Improved Plasma Viscosity<sup>1</sup>



#### Meta-Analysis of Blood Pressure<sup>3</sup>

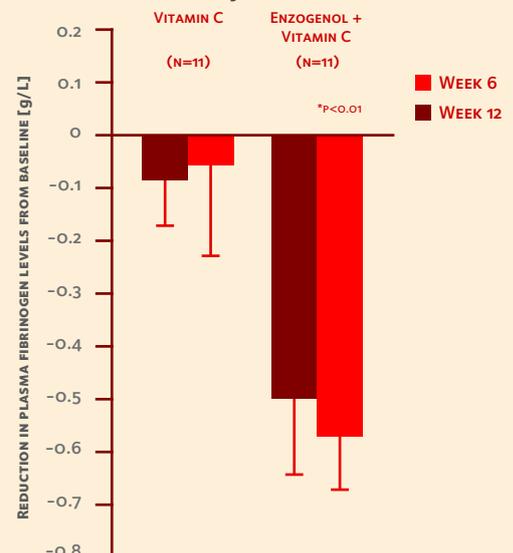


In two further studies in chronic smokers<sup>2</sup> and overweight but generally healthy volunteers<sup>3</sup>, reductions in systolic blood pressure were also observed. The meta-analysis of these results confirmed that taking 2 capsules of ENZO Professional per day can reduce systolic blood pressure significantly in comparison with controls that were taking Vitamin C.

In a RCT in chronic smokers, Enzogenol led to a significant decrease in fibrinogen levels in people with high cigarette consumption<sup>2</sup>.

Fibrinogen is a protein in the blood plasma that, when present in elevated levels, indicates increased inflammation in the body, and an increased risk of blood clotting. Lowering the fibrinogen levels indicated that Enzogenol can support a healthy inflammatory status.

#### Improved Inflammatory Status in Heavy Smokers<sup>2</sup>



1) Shand et al. 2003. Phytotherapy Research 17, p490.  
 2) Young et al. 2006. Free Radical Research 40, p85.  
 3) Pipingas et al. 2008. Phytotherapy Research 22, p1168