

# Protocol for Nutritional **CARDIOVASCULAR** Support

Practitioner Information - Protocol For Life Balance™ Supplements

This protocol focuses on supporting regulatory mechanisms that underlie control of inflammatory factors and blood lipids along with those linked to the endothelial nitric oxide metabolism and resistance to the actions of collagenase/elastase. The individual components can be combined for more complete support.

## Ultra Omega-3 (Molecularly Distilled)

Omega-3 Fatty Acids (FAs) found in fish oils are widely recognized for a variety of health benefits. The most important omega-3 fatty acids are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Studies have demonstrated that omega-3 FAs are important in numerous signaling pathways. Most notably, EPA is a precursor of certain prostaglandins and leukotrienes, molecules that are involved in modulating inflammatory responses (1). These two classes of signaling molecules are critical for the maintenance of cardiovascular health and immune system function. Even at levels of intake that do not significantly modulate cytokine levels, omega-3 fatty acids can positively influence plasma concentrations of soluble vascular cell adhesion molecule-1 and soluble E-selectin, factors important to endothelial function (2). Recent clinical studies have emphasized the beneficial impact of omega-3s on serum lipid metabolism. The FDA allows the claim that the consumption of omega-3 fatty acids may reduce the risk of coronary heart disease.

### Cautions and interactions

Omega-3 fatty acids may interact with aspirin or warfarin. In addition, omega-3 fatty acids may interact with cholesterol-lowering statin medications. Omega-3 fatty acids may be used as a dietary supplement if taking certain medications, including cyclosporine, and may interact with topical corticosteroid treatment.

## Ortho-E™

Vitamin E is essential for maintaining the integrity, function, and flexibility of cell membranes. Vitamin E is also an important fat-soluble antioxidant. This formula supplies all four major dietary tocopherols, *alpha*-, *beta*-, *gamma*-, and *delta*-. This is important in that emerging research demonstrates that *gamma*-tocopherol serves to detoxify and remove reactive nitrogen species (RNS) from the body (3, 4). RNS are especially destructive forms of free radicals.

This formula also supplies balanced tocotrienols. This is important because recent research indicates that these isomers work best as a team to quench the lipid and nitrogen free radicals known to cause injury to cells and tissues. Aside from its antioxidant properties, vitamin E may support normal cell division and immune health, influence blood coagulation speed, and provide protection to neural tissues.

### Cautions and interactions

May interact with anticoagulant therapy.

## CoQ10

CoQ10, also called ubiquinone, is present in almost all cells, and is necessary for mitochondrial energy production. The body's highest concentrations of CoQ10 are found in the heart, where constant chemical energy availability is imperative. In addition to its benefits for cardiac function through energy production, CoQ10 also acts as a powerful fat-soluble antioxidant that provides protection against free radical attack of vascular structures and other tissues.

It has been suggested that CoQ10 is a conditionally essential nutrient. Conditionally essential nutrients are organic compounds that ordinarily are produced by the body in amounts sufficient to meet physiological requirements. However, under physiologically stressful conditions, the biosynthesis of conditionally essential nutrients may be inadequate. Under these circumstances, such conditionally essential nutrients may become essential nutrients, comparable to vitamins (5). In a journal article entitled, "Systematic review of effect of coenzyme CoQ10 in physical exercise, hypertension and heart failure," trends toward improvements in all the areas mentioned were noted (6).

These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any disease.

### Cautions and interactions

CoQ10 may affect the anticoagulant effect of warfarin. In addition, CoQ10 may interact with certain blood pressure medications, including diltiazem, metoprolol, enalapril, and nitrate. Statin medications have been shown to decrease CoQ10 levels in the body and CoQ10 supplementation may be beneficial when taking these drugs (7).

## Pycnogenol®

Pycnogenol® is a proprietary and patented water extract of the bark of the French maritime pine, which is grown in coastal south-west France. Pycnogenol® contains oligomeric proanthocyanidins (OPCs) as well as several other bioflavonoids, including catechin, epicatechin, ferulic acid, caffeic acid and taxifolin. Pycnogenol® has been shown to support cardiovascular and vein health, cognitive function, balanced inflammatory response and healthy respiratory function. Several mechanisms underlie the benefits of Pycnogenol®. The supplement significantly increases antioxidant capacity of plasma, as determined by ORAC, and exerts favorable effects on the lipid profile (8). It supports venous circulation and integrity, which benefits are improved by concomitant ingestion of rutin (9 - 11). There is an inhibition in the rate of degradation of tissues by elastases and collagenases (12, 13). Oligomeric procyanidins of French maritime pine bark extract (Pycnogenol®) also effectively inhibit alpha-glucosidase, hence may slow the rate of production of glucose from ingested carbohydrates (14).

### Cautions and interactions

Pycnogenol® is generally well tolerated. Because of its astringent taste and occasional minor stomach discomfort, it may be best to take Pycnogenol® with or after meals. No serious adverse effects have been reported in the available literature. However, caution should be exercised when taken in conjunction with blood thinners or diabetic medications.

## Additional Support

### Nattokinase, Vein Integrity™, Alpha Lipoic Acid, CoEnzyme B Complex, Vitamin C

Nattokinase, an enzyme isolated from Natto, a traditional Japanese fermented soy food, recently in both clinical and non-clinical studies has been demonstrated to support heart health and promote circulation.

The horse chestnut and butcher's broom extract found in Vein Integrity™ complement Pycnogenol® in supporting venous function.

Alpha-lipoic acid, the universal antioxidant, Vitamin C and B vitamins are other supporting nutrients.

References available at [www.protocolforlife.com](http://www.protocolforlife.com)

<b>Ultra Omega-3</b> (Suggested: 4 softgels or 1 tsp. Liquid Omega-3 daily)	_____ <b>X</b> _____
<b>Ortho-E™</b> (Suggested: 1 daily)	_____ <b>X</b> _____
<b>CoQ10, 600 mg</b> (Suggested: 1 daily)	_____ <b>X</b> _____
<b>Pycnogenol®</b> (Suggested: 1 twice daily)	_____ <b>X</b> _____
<b>Additional Support Products:</b>	
<b>Nattokinase</b> (Suggested: 1 three times daily)	_____ <b>X</b> _____
<b>Vein Integrity™</b> (Suggested: 1 twice daily)	_____ <b>X</b> _____
<b>Alpha Lipoic Acid</b> (Suggested: 1 daily – 250 mg)	_____ <b>X</b> _____
<b>CoEnzyme B Complex</b> (Suggested: 1 twice daily)	_____ <b>X</b> _____
<b>Vitamin C</b> (Suggested: 2 three X daily)	_____ <b>X</b> _____

Please note the instructions, cautions and interactions on each product package, and begin each new product separately, in turn. Use only under the supervision of a qualified health practitioner.