



Available in 60 capsules

### Discussion

Diosmin is a well-researched citrus flavonoid that has been utilized for decades to support healthy capillary and vein function as well as healthy microcirculation throughout the body. Diosmin fundamentally helps maintain the structure and function of the circulatory system, especially vein strength and competence.<sup>[1]</sup> The most promising research results come from a micronized purified flavonoid fraction comprising 450 mg of diosmin and 50 mg of hesperidin (hesperidin is a precursor to diosmin). This is the same ratio and dose found in each DioVasc capsule. The process of micronization (reducing particle size to less than two micrometers in diameter) improves diosmin absorption.<sup>\*[2]</sup>

Micronized purified flavonoid fraction (MPFF) appears to support vein health by prolonging the normal effect that the catecholamine norepinephrine has on the vessel wall; and this, therefore, promotes venous tone.<sup>[3]</sup> Research also suggests that MPFF affects the synthesis of prostaglandins and free radicals, as well as leukocyte activation, trapping, and migration. Ultimately, MPFF supports antioxidant systems and eicosanoid balance.<sup>\*[4-7]</sup>

Pharmacological and clinical studies suggest that MPFF—on its own and in conjunction with standard therapy—promotes normal lymph drainage, healthy capillary permeability, and favorable microcirculation. Multicenter, prospective, randomized, controlled studies document the effect of MPFF on maintaining healthy venous sufficiency.<sup>[8]</sup> Two randomized, double-blind, placebo-controlled studies conducted over a two-month period demonstrated the venotropic nature of DioVasc's main component. Significant support of organic and functional parameters occurred along with significant support of venous hemodynamics.<sup>[9]</sup> Some studies indicate that favorable results can be achieved within two hours of administration.<sup>\*[10]</sup>

A review of the literature suggests that health-related quality-of-life parameters were found to improve with the use of MPFF and were associated with the formula's support of microcirculation and vein function.<sup>[2]</sup> A single-center, double-blind, placebo-controlled study suggested that MPFF had a positive and protective effect on five study variables (red blood cell aggregation, red blood count, microcirculatory blood flux, and amplitude and frequency of vasomotion).<sup>[11]</sup> A double-blind placebo-controlled trial of MPFF

### Clinical Applications

- » Supports Veins, Capillaries, and Circulation\*
- » Helps Promote Normal Lymphatic Drainage\*
- » Supports Antioxidant Activity\*
- » Supports Blood Glucose Metabolism\*
- » Supports Healthy Eicosanoid Metabolism\*

*DioVasc™ contains well-researched, citrus-based flavonoids in a unique micronized form for enhanced absorption and bioavailability. Research suggests that these compounds support healthy veins, capillaries, and blood flow; promote healthy lymphatic drainage; and enhance antioxidant activity; and support healthy eicosanoid metabolism. More recent research suggests that the components in DioVasc also support blood glucose metabolism.\**

over a six-week period suggested that the formula, administered twice daily, significantly ( $p < 0.001$ ) supported capillary structure and health and was well tolerated throughout the study.<sup>[12]</sup> A double-blind randomized study of 104 subjects over a three-month period revealed that MPFF at various doses (500 mg, 1000 mg, or 2000 mg per day) significantly supported transcutaneous oxygen pressure and venous competence.<sup>\*[13]</sup>

A meta-analysis of five prospective, randomized, controlled studies employing a total of 723 subjects suggested that MPFF promoted healthy tissue integrity when combined with conventional therapy (compression and local care).<sup>[14,15]</sup> Similar results were obtained in a multicenter, double-blind, randomized, controlled study of 107 individuals.<sup>\*[16]</sup>

The worldwide RELIEF program (Reflux assessment and quality of life improvement with micronized flavonoids) studied the effects of MPFF on more than 5000 participants in 23 countries. A variety of subjects taking MPFF over a six-month period showed clinically significant improvements that indicated MPFF's supportive effect on microcirculation and vein health and function. These improvements continued throughout the study.<sup>\*[17]</sup>

Placebo-controlled human trials support the use of MPFF for the maintenance of healthy metabolic parameters, microcirculation, fluid balance, lymph system function, and albumin retention.<sup>[18-20]</sup> Results suggest that MPFF specifically supports normal capillary filtration, lymphatic albumin resorption, and fluid balance at the cellular level. Research on MPFF suggests that its positive effects may be extended to various parts of the body.<sup>\*[21,22]</sup>

Ongoing animal studies suggest that diosmin, the major component found in MPFF, significantly supports blood glucose and insulin levels already within the normal range and exerts favorable effects on maintaining healthy serum hemoglobin.<sup>[23,24]</sup> Results from a double-blind placebo-controlled study support the use of MPFF for maintaining healthy glucose metabolism in humans as well.<sup>\*[25]</sup>

**DioVasc™ Supplement Facts**

Serving Size: 1 Capsule

	Amount Per Serving	%Daily Value
DioVasc Proprietary Blend	500 mg	**
Micronized diosmin (<4 microns) (from <i>Citrus sinensis</i> )(fruit) and hesperidin (from <i>Citrus sinensis</i> )(fruit)		
** Daily Value not established.		

**Other Ingredients:** Capsule (hypromellose and water), magnesium stearate, and silica.**DIRECTIONS:** Take one capsule twice daily, or as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

**STORAGE:** Keep closed in a cool, dry place out of reach of children.**FORMULATED TO EXCLUDE:** Wheat, gluten, corn, yeast, soy, animal and dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, and artificial preservatives.**References**

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Additional references available upon request

All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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