

# Grape Seed Supreme™

Protective polyphenols and anthocyanins to help support cardiovascular, metabolic, and brain health\*



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Grape Seed Supreme™ employs a combination of grape seed and grape skin extracts that contain protective polyphenols and anthocyanins that have been shown to provide multiple benefits related to cardiovascular health and brain function while supporting various body proteins (collagen, lipoproteins) and inhibiting damaging enzymes.\*<sup>1</sup>

Two of the extracts in Grape Seed Supreme™—BioVin® (standardized to contain 75% polyphenols) and MegaNatural®-BP (standardized to contain 90% polyphenols)—have been validated by published research performed on these raw materials.<sup>2-5</sup> The composition and benefits of various grape seed/skin extracts greatly depend on extraction methods used to derive the compounds, as well as on molecular weight which influences the extracts' efficacy. BioVin® and MegaNatural®-BP have been studied for their absorption and bioactivity, total antioxidant capacity, effects on cardiovascular markers (LDL oxidation and blood pressure maintenance effects), and their bioactive constituent composition.<sup>2-5</sup>

The various benefits observed in trials using wine, grapes and grape seeds are likely to be reproduced by using grape seed/skin proanthocyanidins extracts (GSPE) in supplemental form as long as the wide array of phenolic compounds remain intact. The BioVin® component of this formula is a water-soluble grape extract with a wide array of polyphenols including trans-resveratrol, quercetin, catechin, epicatechin, and more.

## Cancer Risk Reduction

Grape seed extracts inhibit aromatase enzyme, which converts intracellular testosterone into estrogen, and reduce excessive cell proliferation. Due to these functions, resveratrol may reduce the risk of breast, uterine, and prostate cancer similar to prescription aromatase inhibitors or SERMs (selective estrogen receptor modulators).<sup>6,7</sup> In addition, resveratrol was shown to reduce breast cancer initiation by blocking the DNA binding of mutagens such as those from burned meats (heterocyclic amines)<sup>7</sup> as well as cancer cell proliferation (via down-regulation of NF- $\kappa$ B).<sup>6</sup>

## Cardiovascular Health

BioVin® was shown to reduce the oxidation of the protein portion of the LDL by 13%.<sup>2</sup> MegaNatural®-BP given at 300 mg/day for six weeks also reduced LDL oxidation.<sup>8</sup> Grape seed extract is able to help maintain blood pressure levels already in the normal range, and also shown to significantly reduce systolic and diastolic blood pressure in pre-hypertensive patients compared to placebo.<sup>9</sup> In a human study using a dose of 150 mg/day for six weeks, MegaNatural®-BP reduced blood pressure (SBP/DPB) by 12/8 mmHg.<sup>8</sup> Wine phenolics such as resveratrol and quercetin have been shown to inhibit platelet aggregation and suppress the secretion of APOB100, thus likely reducing the number of LDL particles that may lead to a less atherogenic profile.<sup>10</sup>

## Diabetes

Both human and animal models support the hypoglycemic effect of proanthocyanidins, which are shown to tissues and mechanisms involved in blood glucose regulation.<sup>11</sup> Proanthocyanidins help modulate glucose uptake in insulin-sensitive tissues, and help modulate insulin secretion and production in the pancreas.<sup>11</sup> Resveratrol and GSPE inhibit advanced glycation end products (AGEs)-induced proliferation in vascular smooth muscle cells.<sup>12,13</sup> In obese patients with type II diabetes at high risk of cardiovascular events who were given 600 mg/day GSPE for 4 weeks, blood sugar levels and markers of inflammation and oxidative stress were significantly improved compared to the placebo group.<sup>14,15</sup>

### May be beneficial for\*:

- Supporting connective tissues (skin, blood, joints) and wound healing
- Normal cognitive function and brain health
- Cardiovascular health
- Blood lipid metabolism
- Supporting normal cholesterol metabolism
- Supporting healthy platelet aggregation
- Supporting normal vessel elasticity
- Supporting a healthy inflammatory response
- Inhibiting formation of AGEs
- Reducing cell proliferation and protect DNA from mutagens
- Supporting healthy aging
- Supporting hormonal health
- Modulation of estrogen and aromatase activity

## Brain Health

Grape extracts, in general, are shown to have promise for reducing the progression and pathology of neurodegenerative diseases<sup>16,17</sup> and brain aging in general.<sup>18</sup> Catechin-rich GSPE intake is associated with decreased amyloid-beta protein concentrations and reduced cognitive decline.<sup>18</sup> The results from an *in vitro* study demonstrated GSPE to inhibit tau aggregation as well as dissociate preformed tau peptide aggregates.<sup>17</sup> They are thought to work through three mechanisms: by increasing intracellular glutathione, reducing cellular calcium flux, and through their antioxidant effects.<sup>19,20</sup>

## Collagen Protection

Grape seed extract was shown to reduce the breakdown of collagen by inhibiting a number of enzymes, such as collagenase, elastase, and hyaluronidase. This is beneficial for skin protection, wound healing, vessel elasticity and joint damage prevention.<sup>21,22</sup>

## Supporting a Healthy Inflammatory Response

A systematic review and meta-analysis of RCTs found markers of inflammation (fasting blood glucose, total cholesterol, LDL-C, triglycerides, and C-reactive protein concentrations) were significantly reduced following GSE therapy.<sup>23</sup> Oligomeric proanthocyanins have been shown to exert anti-inflammatory action through various mechanisms: inhibiting NF- $\kappa$ B, TNF- $\alpha$  various pro-inflammatory cytokines, and phospholipase A2.<sup>24-30</sup>

In an animal model fed a high-fat diet, GSE was shown to counteract the oxidative stress and inflammation in the pancreas via inhibiting inflammatory markers TNF- $\alpha$ , IL-6, and IL-1 $\beta$ .<sup>31</sup> Another animal study of mice fed a high-fat diet showed GSPE to ameliorate inflammation and adiposity via modulating gut microbiota compositions.<sup>32</sup> It has been determined that muscadine grape seed oil (MGSO) contains between 40-50 mg of  $\alpha$ - and  $\gamma$ -tocotrienols per 100 g of oil.

When human adipose-derived stem cells were exposed to MGSO (and its tocotrienol rich fractions) adipogenesis mRNA/protein expressions (e.g., PPAR- $\gamma$ ), proinflammatory gene expression and cytokine secretions (IL-6/IL-8) were significantly reduced compared with rice bran and olive oils.<sup>5</sup>

## Supplement Facts

Serving Size 2 capsules  
Servings Per Container 30

Amount Per Serving	% Daily Value
Grape Extract (BioVin®) ( <i>Vitis vinifera</i> )(pulp: skin and seeds) [standardized to contain 75% polyphenols]	200 mg *
Grape Seed Extract (MegaNatural®-BP) ( <i>Vitis vinifera</i> )(seed) [standardized to contain 90% polyphenols]	200 mg *
Muscadine Grape ( <i>Vitis rotundifolia</i> )(skin and seeds)	200 mg *

\*Daily Value not established.

**Other Ingredients:** Cellulose (capsule), microcrystalline cellulose, vegetable stearate

### Recommended Use:

- Take two capsules per day with meals, or as directed by your health care practitioner.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/techsheet-references/grape-seed-supreme-references.pdf>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Healthcare practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities. Individual monitoring, including liver function tests, may be appropriate.



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\*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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