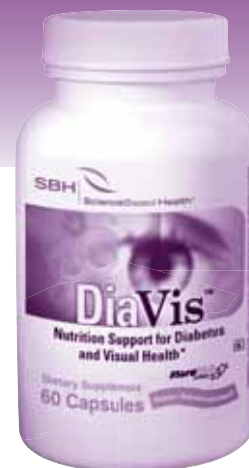


DiaVis[®] FAQs

Nutrition Support for Diabetes and Visual Health



What is DiaVis?

- ▶ *DiaVis* is a specialized oral formulation designed to provide nutritional support for those with diabetes mellitus or those highly at risk for this condition. It offers a unique blend of antioxidants and other key nutrients to help protect vision and promote overall health. *DiaVis* provides tailored support in two capsules daily.

What Does this Dietary Supplement Target?

- ▶ Observational and clinical studies have identified nutrients that may be low in diabetics due to altered requirements, inadequate intake, increased excretion or higher oxidative stress. Diabetics are at increased risk for vision loss, and oxidative stress is one contributing factor. *DiaVis* delivers nutrients that:
 - ▷ help combat oxidative stress and inflammation
 - ▷ can be marginally deficient and that play a role in normal glucose metabolism
 - ▷ may be affected by the use of diabetes-related medications
 - ▷ support retinal vessel health
 - ▷ promote a healthy equilibrium of fluids in the eye
 - ▷ are associated with a reduced risk of developing diabetes

Who Might Benefit from DiaVis?

- ▶ *DiaVis* is appropriate for use by adult men and women with, or at risk for:
 - ▷ type 1 or 2 diabetes
 - ▷ diabetes-related changes in retinal health
 - ▷ pre-diabetes or impaired glucose tolerance

Should DiaVis Be Taken with Supplemental Fish Oil?

- ▶ It is highly recommended that *DiaVis* be taken in conjunction with ScienceBased Health's **OmegaAdvance[®]**, a pharmaceutical grade fish oil supplement that provides a concentrated source of the omega-3 fats EPA and DHA, along with lutein and olive leaf extract. The ingredients in **OmegaAdvance** complement *DiaVis* by helping to guard against factors involved in detrimental changes to the retina's vessels and nerve cells. These factors include ischemia (inadequate blood supply), damage from light exposure, free radicals, inflammation and age-related retinal changes.
 - ▷ *EPA* and *DHA* may act against retinal vessel loss, growth of abnormal vessels, and inflammation
 - ▷ *EPA* and *DHA* offer well recognized support for cardiovascular health
 - ▷ *Lutein* has demonstrated anti-inflammatory properties, while the unique compounds in olive leaf extract act as potent antioxidants

How Do the Ingredients Provide Targeted Nutritional Support?

Ingredient(s)	Category	Rationale	Evidence*
Beta-Carotene, Vitamin C and Vitamin E	Antioxidants	Diabetics often have increased oxidative stress – a factor in many diabetic complications. Both type 1 & 2, and those with retinopathy, often have lower blood antioxidant levels.	<p>Evidence suggests antioxidants with different activities form a synergistic network against oxidative stress. <i>Vitamin C</i> highly concentrated in the eye; blood levels inversely associated with diabetes risk over long term. <i>Long-term C,E and/or multi</i> use reportedly linked to 2-fold lower retinopathy risk.</p> <p>Dietary <i>beta-carotene</i> found to be less bioavailable than previously known, particularly in women. Blood levels reportedly significantly lower in diabetics than controls.</p> <p>Evidence suggests <i>vitamin E</i> doses that can be obtained from the diet contribute to lower oxidative stress in diabetes</p>
Thiamin (B₁), Riboflavin (B₂), Niacinamide (B₃) Pyridoxine (B₆), Folic Acid, Cobalamin (B₁₂), and Biotin	B-vitamins	Ensure adequate intake and help maintain B vitamin balance	<p>Research shows type 1 & 2 excrete more <i>thiamin</i> and have low blood levels. <i>Thiamin</i> active in glucose metabolism; low levels raise risk of kidney, nerve and eye complications in animals.</p> <p>Diabetics have greater cataract risk; <i>riboflavin and thiamin</i> linked to decreased risk. Broad-spectrum antioxidant supplementation may be more effective than single nutrients. Some studies link multis with lower cataract risk; in AREDS analysis, long-term use lowered cataract risk</p> <p><i>Folic acid, B₆ and B₁₂</i> help maintain healthy homocysteine (HC) levels. Elevated HC observed in those with diabetic retinopathy. Older people at higher risk of low <i>B₁₂</i>, which plays critical role in nerve function. <i>Biotin</i>-containing enzymes involved in glucose metabolism.</p>
Vitamin D	Essential fat soluble vitamin	Ensures healthy blood levels and reduce risk of CVD	<p>Analyses find 1,000 IU daily needed to bring ½ of population into <i>vitamin D</i> blood level range linked with multiple health endpoints. Low <i>vitamin D</i> prevalent in type 2 diabetic adults and is strongly associated with narrowing of carotid artery. <i>Vitamin D</i> (and calcium insufficiency) also may harm glucose metabolism. Decreased <i>vitamin D</i> linked with CVD in type 2 patients with mild kidney dysfunction. For lowering risk of type 2 in women, evidence shows >800 IU is significantly better than 400 IU.</p>
Magnesium, Zinc, Chromium	Essential minerals	Offset increased urinary losses and ensure good status	<p>Those with poor glucose control often low in <i>magnesium</i>. Research consistently links <i>magnesium</i> intake with reduced hypertension, diabetes and metabolic syndrome.</p> <p><i>Zinc</i> active in insulin metabolism. Increased insulin secretion associated with greater urinary <i>zinc</i> loss in type 1 & 2. <i>Zinc</i> needed for activity of key antioxidant enzyme.</p> <p><i>Chromium</i> facilitates insulin activity. Evidence suggests chromium supports healthier blood glucose levels in those low in chromium who have impaired glucose tolerance.</p>

Ingredient(s)	Category	Rationale	Evidence*
Pine Bark Extract	Polyphenols	Strengthens leaky capillaries	<p><i>Pine bark</i> components tested in 1200 people with retinopathy and diabetic retinopathy (open and controlled trials); results indicate delay of progression. Clinically reported to protect retinal function in retinopathy caused by diabetes, other causes. Preliminary clinical results suggest improved microcirculation and symptoms in diabetes, neuropathy and edema. In type 2 patients on ACE inhibitors, clinical reports improved blood pressure control.</p> <p>In animals, inhibits diabetic retinopathy progression, may reduce retinopathy and cataract formation. Human study indicates components exert anti-inflammatory effects through pro-inflammatory gene inhibition.</p>
Quercetin	Flavonoid	Clinically, reduces oxidative stress	<p>In diabetics fed high or low <i>quercetin</i> diet, significantly reduced DNA damage in lymphocytes ex-vivo. A potent antioxidant, <i>quercetin</i> shown to inhibit enzyme mediating Vascular Endothelial Growth Factor (VEGF) – VEGF induces vascular permeability, plays role in retinopathy development. In vitro, <i>quercetin</i> shown to protect retinal pigment epithelial and cortical cells from oxidative stress.</p> <p>Large-scale studies link <i>quercetin</i>-rich diets with lower CVD risk. Shown to accumulate in atherosclerotic lesions where it plays role in reducing LDL buildup.</p>
Lutein	Antioxidant with anti-inflammatory properties, component of macular pigment	Doubles average U.S. lutein intake to help support retinal and artery health	<p>Several studies report low plasma <i>lutein</i> in patients with coronary artery disease or progressive thickening of carotid artery lining.</p> <p>In animal diabetes model, <i>lutein</i> reportedly lowers retinal oxidative stress. Some, though not all, epidemiologic studies link higher intake with lower cataract risk.</p>
Alpha Lipoic Acid (ALA)	Antioxidant	May help protect micro-vessels	<p>ALA acts as antioxidant, appears to regenerate other antioxidants like <i>glutathione</i>. In diabetic retinopathy animal models, high doses protect against micro-vascular damage. Numerous well-controlled trials show <i>ALA</i> reduces sensory symptoms in diabetic neuropathy with 600-1200 mg/day.</p>

*References available at ScienceBasedHealth.com/DVref

Can DiaVis be Taken with Diabetes-related Medications?

- ▶ Yes, though as with any dietary supplement, patients with medical conditions and/or using prescription medications should inform their primary care doctor when adding *DiaVis* to their daily regimen. While potential interactions between medications and *DiaVis* ingredients appear to be minimal, routine monitoring is prudent.

Continues on page 4

Can DiaVis be Taken with Diabetes-related Medications? (Cont.)

- ▶ An interaction chart, available at ScienceBasedHealth.com/DVMed, provides information about potential interactions of *DiaVis* ingredients with common anti-diabetic medications and tests, and takes into account other drugs used to prevent or treat diabetic complications such as cardiovascular, kidney, eye and peripheral nerve disease.
- ▶ Some diabetes-related medications can also interfere with metabolism of certain nutrients, which may need to be supplemented. These ingredients are included in *DiaVis*, and are also identified within the chart.

Can DiaVis be Taken with other Dietary Supplements?

- ▶ *DiaVis* can be used as a stand-alone formula, though those who don't meet recommended calcium intake may need supplemental calcium. It is highly recommended that *DiaVis* be taken in conjunction with ScienceBasedHealth's **OmegaAdvance**[®], a concentrated source of omega-3 fatty acids (see P.1). *DiaVis* may also be combined with most modest potency, one-a-day multi-nutrient supplements without exceeding the Upper Intake Level of essential vitamins and minerals.

What Are the Ingredients in DiaVis?

Supplement Facts	
Serving Size 2 capsules	Servings per Container 30
	Amount per Serving % Daily Value
Vitamin A (50% from retinyl palmitate, 50% from beta-carotene)	1000 IU 20%
Vitamin C (as ascorbic acid)	250 mg 417%
Vitamin D (as cholecalciferol)	800 IU 200%
Vitamin E (from d-alpha tocopheryl succinate and mixed tocopherols)	60 IU 200%
Thiamin (from thiamine hydrochloride)	18 mg 1200%
Riboflavin	3.4 mg 200%
Niacin (from niacinamide)	20 mg 100%
Vitamin B6 (from pyridoxine hydrochloride)	10 mg 500%
Folic Acid	200 mcg 50%
Vitamin B12 (as cyanocobalamin)	50 mcg 833%
Biotin	200 mcg 67%
Magnesium (from magnesium oxide, gluconate)	200 mg 50%
Zinc (from zinc oxide)	7.5 mg 50%
Chromium (from chromium picolinate)	200 mcg 167%
Alpha Lipoic Acid	300 mg †
Quercetin	110 mg †
Pine Bark Extract (95% procyanadins)	125 mg †
Pycnogenol [®] French Maritime Pine Bark Extract (65-75% procyanadins)	20 mg †
Lutein (FloraGLO [®])	2 mg †
Zeaxanthin (FloraGLO [®])	120 mcg †

† Daily Value not established.

Other Ingredients: Gelatin, Water, Magnesium Stearate and Silica.

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