

Nutrition Support for Diabetes and Visual Health



FAQ SHEET

WHAT IS DIAVIS?

DiaVis is a specialized oral formulation designed to provide nutritional support for those with type 1 or type 2 diabetes mellitus. 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
- support retinal vessel health
- support nerve and kidney health
- 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, as studies suggest that retinal vascular changes may occur in some prediabetic individuals



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 zeaxanthin. 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 play a role in cardiovascular health and help maintain healthy blood pressure
- The macular pigment, lutein, helps block blue-light damage, quenches oxygen free radicals, and has demonstrated antiinflammatory properties





HOW DO THE INGREDIENTS PROVIDE TARGETED NUTRITIONAL SUPPORT?

INGREDIENT(S)	CATEGORY	RATIONALE	EVIDENCE*
Vitamin C	Antioxidant	Diabetes is associated with higher oxidative stress – a factor in many diabetic complications. Type 1 & 2, and those with retinopathy, often have lower blood antioxidant levels.	Vitamin C is highly concentrated in the eye, and is part of a synergistic network that helps combat oxidative stress. Dysfunction of the endothelium (lining of the blood vessel) is common in diabetes, and some studies have associated endothelial dysfunction with diabetic retinopathy (DR). A meta-analysis of randomized trials found that vitamin C at levels of at least 500 mg daily supports endothelial function in diabetics and those with atherosclerosis.
Thiamine (B1), as Benfotiamine	B-vitamin	Ensure adequate intake and may help protect kidney & nerve tissue.	Research shows that type 1 & 2 diabetics excrete more thiamine and can have low blood levels of this nutrient. Thiamine is involved in glucose metabolism, and low levels raise the risk of kidney, nerve and eye complications in animals. In clinical trials, high-dose thiamine was found to improve markers of kidney function. Benfotiamine, a better absorbed and retained form of B1, has shown clinical promise in reducing discomfort from nerve complications in diabetics.
Vitamin D	Essential fat-soluble vitamin	Ensures healthy blood levels, which are associated with a reduced risk of CVD.	Recent findings suggest that maintaining healthy blood levels of anti-inflammatory vitamin D is important for those with diabetes. For example: The % of individuals with vitamin D deficiency increases with severity of DR. Patients with diabetes, especially those with proliferative DR, have lower vitamin D serum levels than non-diabetics. Experimental studies report that vitamin D interrupts key signaling pathways in angiogenesis (new vessel formation).
Alpha Lipoic Acid (ALA)	Antioxidant	May help protect microvessels.	ALA acts as an antioxidant and appears to regenerate other antioxidants such as glutathione. In animal models of DR, high doses protect against micro-vascular damage. Meta-analysis of controlled clinical trials found 600-1200 mg/day ALA reduces discomfort in diabetic neuropathy. Preliminary evidence suggests ALA may stabilize or improve visual function (contrast sensitivity) in types 1 & 2 with early-stage DR.

INGREDIENT(S)	CATEGORY	RATIONALE	EVIDENCE*
Polyphenol Blend:	Flavonoids, other polyphenols		
Whole Grape Extract & Trans Resveratrol		Clinically reduces inflammatory markers.	In long term trials, whole grape extract combined with resveratrol improves measures of inflammation and/or markers of oxidative stress and blood lipids better than whole grape extract alone in type 2s or pre-diabetics.
Curcumin (with enhanced bioavailability)		Antioxidant, anti- inflammatory & epigenetically important.	Anti-inflammatory curcumin has been shown to prevent DR in animal models & to inhibit VEGF expression in retinas of these animals. Epigenetically, curcumin has been reported to inhibit high blood glucose-induced increases in acetylation of histones in the retinas of diabetic rats. This is important because epigenetic processes may have a significant role in the development of diabetic complications, and the role for histone modifications in diabetic complications has been verified in genetic studies.
Myricetin, Quercetin & Anthocyanins		Lower risk of type 2; may reduce inflammation.	Higher myricetin & quercetin intake has been selectively linked to lower risk of type 2 in large-scale, long-term studies. In an in-vivo experimental study, anthocyanins + myricetin & quercetin were more effective together at reducing stress in the endoplasmic reticulum – a key risk factor in DR progression.
Pycnogenol		Small vessel health.	Contributes procyanidins for micro-circulatory support in patients with diabetes.
Lutein	Antioxidant, anti- inflammatory properties, component of macular pigment	Level in DiaVis® doubles average U.S. lutein intake to help support retinal and artery health.	Plasma lutein/zeaxanthin levels observed to be lower in those with DR than in those without. Lower macular pigment density has been observed in Type 2 patients with or without DR. Neuroprotective effects of lutein have also been found in animal models of DR. Some, though not all, epidemiologic studies link higher intakes of lutein with a lower risk of cataract.

^{*}References available at SBH.com/DVref

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CAN DIAVIS® BE TAKEN WITH DIABETES-RELATED MEDICATIONS?

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 of blood glucose levels is customary and always prudent.

An interaction chart, available at SBH.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.

CAN DIAVIS BE TAKEN WITH OTHER DIETARY SUPPLEMENTS?

DiaVis delivers select, cellular-protecting nutrients, and can be combined with a comprehensive daily multi-vitamin and mineral supplement such as ScienceBased Health's *OcularProtect*[®]. It is highly recommended that DiaVis be taken in conjunction with ScienceBased Health's OmegaAdvance®, a concentrated source of omega-3 fatty acids (see P.1).

WHAT ARE THE INGREDIENTS IN DIAVIS?

Supplement	Fac	ets
Serving Size 2 capsules Servi	ngs per Cont	ainer 30
	Amount per Serving	% Daily Value
Vitamin C (as ascorbic acid)	550 mg	611%
Vitamin D (as cholecalciferol)	25 mcg	125%
Benfotiamine (Pro-Vitamin B1, thiamin)	200 mg	†
Polyphenol Blend	670 mg	
VinCare® Whole Grape Extract (Vitis Vinifera) (80% polyphenols; 60% proanthocyanidins)	350 mg	†
Longvida® Optimized Curcumin Extract (from turmeric rhizome, 23% curcuminoids)	200 mg	†
Quercetin	50 mg	†
Bilberry Fruit Extract (25% anthocyanins)	25 mg	†
Pycnogenol® French Maritime Pine (<i>Pinus pina</i> Bark Extract (65-75% procyanidins)	aster) 20 mg	†
Myricetin (from Morella rubra bark extract)	15 mg	†
Trans-resveratrol (from <i>Polygonum cuspidatum</i> root extract)	10 mg	†
Alpha Lipoic Acid	300 mg	†
Lutein (FloraGLO®)	2 mg	†
Zeaxanthin (FloraGLO®)	120 mcg	
† Daily Value not established.		

Other Ingredients: Bovine Gelatin, Water, Rice Flour, Magnesium Stearate, and Silica.

Contains soy.

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