



K01

GLYSEN®

For Healthy Response to Insulin Resistance

**DIETARY
SUPPLEMENT**

BENEFITS OF PRODUCT

- Supports healthy blood-sugar levels
- Supports healthy insulin and glucose levels

USE OF PRODUCT

This product is designed to support normal insulin receptor site sensitivity and intercellular signaling alterations. Insulin disorders are estimated to impact 20% of the population and are associated with many diseases, obesity, essential fatty acid defects, and alterations in metabolism. This product contains herbs, vitamins, and minerals to support healthy insulin receptor sensitivity and blood-sugar metabolism.

Supplement Facts

Serving size 2 vegetarian capsules Servings per container 90

Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value
Vitamin E (mixed tocopherol)	90 IU	300%	300%
Thiamin (thiamin HCl)	12 mg	800%	800%
Riboflavin	12 mg	700%	700%
Niacin (niacinamide, nicotinic acid)	44 mg	220%	220%
Vitamin B6 (pyridoxine HCL)	4 mg	200%	200%
Folic acid	160 mcg	40%	40%
Vitamin B12 (cyanocobalamin)	8 mcg	132%	132%
Biotin	600 mcg	200%	200%
Pantothenic Acid (calcium pantothenate)	60 mg	600%	600%
Magnesium (citrate)	50 mg	12%	12%
Zinc (glycinate)	8mg	50%	50%
Selenium (l-selenomethionine)	32 mcg	44%	44%
Manganese (aspartate)	4 mg	200%	200%
Chromium (polynicotinate)	280 mcg	233%	233%
Vanadium (vanadyl sulfate)	20 mcg		
Alpha Lipoic Acid	80 mg		
Inositol	16 mg		
N-Acetyl L-Cysteine	300 mg		
L-Carnitine	20 mg		
PABA	12 mg		
Choline (bitartrate)	80 mg		
Green Tea leaf extract	24 mg		
Poria root extract	26 mg		
Gymnema Sylvestre (extract, powder)	140 mg		
Proprietary Blend: 212 mg of Dioscorea root*, Betaine HCL*, Glucoamylase (plant enzyme)*, Amylase (plant enzyme)*, Invertase (plant enzyme)*, Maltase (plant enzyme)*.			
*Daily Value (DV) not established.			
Other ingredients: vegetable cellulose (vegetarian capsule), silicon dioxide.			

DIRECTIONS

Take 2-4 capsules, 3 times a day, or as directed by your healthcare practitioner.

OTHER PRODUCTS TO CONSIDER

Other formulas can be used in conjunction with Glysen® to support insulin receptor site sensitivity. Insulin resistance is associated with elevated cortisol and adrenal dysfunction. AdrenaCalm™ (K16) can be used to support healthy cortisol levels. Adaptocrine® (K02) is a source of herbal adaptogens that support the proper feedback loops necessary for healthy adrenal function. OmegaCo3™ (K07) is a broad-spectrum blend of essential fatty acids and cofactors designed to support healthy fatty-acid metabolism. Particularly useful with insulin resistance.

KEY INGREDIENTS RESEARCH COMMENTARY:

The research information presented here should not be construed as claims regarding performance of this product.

CHROMIUM is an essential nutrient for insulin resistance, especially when one considers the evidence that chromium deficiencies are common in the United States and that chromium levels are depleted by a diet of refined carbohydrates and sugars. There is evidence that chromium deficiency results in insulin resistance.^{7 8 9} Chromium, also known as "glucose tolerance factor", appears to optimize the impact of insulin on receptor sites and therefore improve glucose uptake.^{10 11} Studies have demonstrated that chromium normalizes postprandial glucose and insulin levels, glycated hemoglobin, and hypercholesterolemia.^{12 13 14 15 16}

VANADIUM is an important mineral when it comes to managing insulin resistance. It appears to have insulin-like impact on receptor sites and improves the transport of glucose transporter to the cell membrane to allow cells to intake serum glucose.^{17 18 19} This physiologic impact is of great importance because most defects in insulin resistance involve intercellular transduction reactions that vanadium appears to enhance. Numerous studies have demonstrated the positive role vanadium plays in managing insulin resistance.^{20 21 22}

ALPHA-LIPOIC ACID is a sulfur-containing substance that seems to improve insulin resistance by increasing the activation of glucose transporters (GLUT1 and 4) which enhance glucose disposal by sensitizing tissues to insulin and by restoring proper intracellular redox states which then reset signaling and response to insulin.^{23 24 25 26} Alpha-lipoic acid has also shown to improve glucose metabolism, reduce serum lactate and pyruvate and improve mitochondrial oxidative phosphorylation.²⁷ Alpha-lipoic acid is also a powerful antioxidant that can help quench insulin-induced oxidative stress patterns.^{28 29} Numerous studies have shown the positive impact of alpha-lipoic acid for insulin-resistant disorders.^{30 31 32}

MIXED TOCOPHEROLS - Vitamin E (Tocopherols) has been shown to improve insulin sensitivity, improve serum triglycerides, and LDL and aid not only in the oxidative complications of diabetes, but also in the prevention of the disease.^{33 34 35 36 37 38}

MAGNESIUM has been shown to improve insulin resistance. It appears to optimize insulin secretion, activate glucose transport for insulin-mediated glucose uptake and to improve insulin intercellular transcriptional response.^{39 40 41} Furthermore, insulin resistance has been reported in individuals with low magnesium status.^{42 43 44}

BIOTIN supplementation has been shown to improve insulin response to glucose load, lower post-prandial glucose levels, and up-regulate the enzyme glucokinase which is responsible for the first step in glucose utilization by the liver.^{45 46 47 48}

ZINC is an important mineral in the management of insulin resistance. Zinc has protective effects against beta-cell destruction, improves insulin sensitivity, and plays an important role in insulin metabolism.⁴⁹ There have been strong correlations with low zinc status and increased risk for insulin resistance as well as evidence that diabetics excrete large amounts of zinc and therefore require supplementation.^{50 51 52}

INOSITOL has shown the ability to re-establish normal myoinositol levels in deficient neurons and therefore may be helpful in cases of diabetic neuropathy.⁵³

GYMNETA SYLVESTRE has demonstrated positive impacts in managing insulin resistance. It has demonstrated the ability to reduce insulin requirements, decrease fasting blood sugar, enhance the action of insulin and even the ability to regenerate pancreas beta-cells.^{1 2 3 4} It does not encourage the endogenous production of insulin and if given to healthy volunteers does not produce any blood sugar-lowering or hypoglycemic effects.^{5 6}

**Formula
Info Page**

Statements in this flyer 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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