# **TECHNICAL DATA SHEET**





# ORGAN SUPPORT

Supports healthy blood sugar levels. Promotes metabolic processes.

Glycemic formula provides key nutrients that include bitter melon (Momordica charantia), Gymnema sylvestre, chromium, vanadium, and alpha-lipoic acid, which help to optimize healthy cellular metabolism of glucose.

# Supplement Facts

Serving size: 3 capsule

Servings per container: 50			
Amount per serving			%DV
Vitamin B6 (as Pyridoxal-5-Phosphate)	30	mg	1765%
Magnesium (as Citrate)	225	mg	54%
Zinc (as Methionine)	15	mg	136%
Copper (as Glycinate)	1	mg	111%
Chromium (as Nicotinate)	900	mcg	2571%
Gymnema sylvestre (leaf)(25% Gymnemic Acids)	450	mg	*
Bitter melon (fruit) (Momordica charantia L.)	450	mg	*
Vanadium (as Bis-Maltolato-oxovanad BMOV)	300	mcg	*
Alpha-Lipoic Acid	75	mg	*
* Daily Value not established.			

Other ingredients: silicon dioxide, vegetarian capsules (hypromellose, purified water)

#### INGREDIENTS:

#### Bitter Melon (Momordica charantia)

Bitter melon fruit and fruit extracts support healthy blood sugar levels (1). A double-blind, placebo controlled study found that Momordica charantia extract supported healthy blood sugar levels.

#### **Gymnema Sylvestre**

The applicable part of Gymnema is the leaf. Among the active constituents of Gymnema sylvestre are the gymnemic acids. Support of the pancreas to maintain healthy blood sugar balance is what gymnema provides nutritionally. Preliminary research involving human volunteers in two separate trials suggests that Gymnema sylvestre promotes healthy pancreatic cell function (2). Gymnema supports normal blood glucose in several ways. Gymnemic acids seem to reduce intestinal absorption of glucose and may stimulate pancreatic beta cell growth (3).

#### Alpha-Lipoic Acid

Alpha-lipoic acid was identified as a vitamin when it was isolated 50 years ago, but was reclassified as a nutrient upon finding that it is synthesized in humans and animals (4). Alpha-lipoic acid is both water and fat-soluble and can regenerate endogenous antioxidants, such as Vitamin E, Vitamin C, and glutathione, and prevent oxidative damage (5). By reducing oxidative stress, patients can maintain healthy blood sugar levels. Alpha-lipoic acid has been shown to increase glucose tolerance and glucose metabolism via potentiation of the Krebs cycle. Alpha-lipoic acid reduces oxidative stress. Unlike most anti-oxidants that work in either the fatty parts of the body (including the outer layers of cells) or the watery parts (including the blood), alpha-lipoic acid works in both. This ability allows alpha-lipoic acid to protect cells throughout the body.

# <u>Chromium</u>

Chromium is an essential trace element. The activity of chromium depends on its valance state. Metallic chromium, or chromium 0, has no activity. Chromium III (Cr III) is the form found in food supplements. Chromium is sometimes referred to as glucose tolerance factor (GTF), but GTF is actually a complex of molecules found in the body that includes chromium bound to single molecules of glycine, cysteine, glutamic acid, and two molecules of nicotinic acid. Chromium is thought to be the active component of the complex. Studies have shown a correlation between chromium and insulin function.

# <u>Vanadium</u>

Vanadium is a trace mineral and can mimic the action of insulin. Vanadium activates the receptor; stimulates glucose oxidation and transport; inhibits lipolysis in adipose tissue; stimulates glycogen synthesis in the liver; inhibits hepatic gluconeogenesis; inhibits intestinal glucose transport; and increases glucose uptake, utilization, and glycogen synthesis in skeletal muscle (6).

# <u>Zinc</u>

Zinc is a biologically essential trace mineral and is the second most abundant trace element in the body. It is a cofactor in many biological processes including DNA, RNA, and protein synthesis. Zinc deficiency may be correlated with insulin levels (7).

#### **Copper**

Copper is an essential trace mineral and is required to absorb and utilize iron. It is also a part of the antioxidant enzyme superoxide dismutase (SOD). Copper is needed to make adenosine triphosphate (ATP).

### Vitamin B6 (Pyridoxal-5-Phosphate)

Vitamin B6 is included to support the nervous system. Because the signs of Vitamin B6 deficiency and neuropathy are very similar, every patient with neuropathy should supplement with B6. We chose to use the more expensive raw material, the biologically active form of B6, pyridoxal-5-phosphate, rather than just pyridoxine because there appears to be a problem with the body (especially with women) converting pyrodixine into pyridoxal-5-phosphate. Vitamin B6 may also support renal function because of its ability to prevent the glycosylation of proteins.

### <u>Magnesium</u>

Magnesium is the second most plentiful cation in the intracellular fluid and the most plentiful cation in the body. Magnesium is involved with more than 300 enzyme systems and plays an essential role in more than 300 cellular reactions (8). Magnesium is required for the formation of cyclic AMP (cAMP) and is involved in ion movements across cell membranes.

Patients: Consult with your healthcare professional for the proper use of this formula.

*For more information about this and other Condition Specific Formulas® please visit our website at:* 

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### **REFERENCES**:

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