

GlucoSupreme™ Herbal



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GlucoSupreme™ Herbal is a synergistic formula that has been designed to help maintain healthy blood sugar levels, and is ideal for individuals with insulin and glucose-related conditions such as metabolic syndrome and diabetes.

GlucoSupreme™ Herbal contains standardized compounds, which include:

- Corosolic acid from Banaba
- Isoflavones from Kudzu
- Ginsenosides from American Ginseng
- Saponins from Fenugreek
- Gymnemic acid from Gymnema



Supplement Facts

Serving Size 4 capsules
Servings Per Container 30

Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value
Berberine (as Berberine HCl) (<i>Berberis aristata</i>) (bark)	500 mg *	Banaba Extract (<i>Lagerstroemia speciosa</i>) (leaf) [standardized to contain 1% corosolic acid]	200 mg *
Fenugreek Extract (<i>Trigonella foenum-graecum</i>) (seed) [standardized to contain 60% saponins]	200 mg *	Kudzu Extract (<i>Pueraria lobata</i>) (root) [standardized to contain 40% isoflavones]	200 mg *
American Ginseng (<i>Panax quinquefolius</i>) (root) [standardized to contain 5% ginsenosides]	200 mg *	Cinnamon Extract (<i>Cinnamomum cassia</i>) (bark)	200 mg *
Gymnema Extract (<i>Gymnema sylvestris</i>) (leaf) [standardized to contain 25% gymnemic acid]	200 mg *		

*Daily Value not established.

Other Ingredients: Cellulose (capsule), microcrystalline cellulose, silicon dioxide, vegetable stearate.

Berberine

Berberine (*Berberis aristata*) is a compound highly regarded for its efficacy in improving blood glucose regulation and insulin sensitivity. Evidence indicates berberine is as effective as metformin in lowering fasting blood glucose and HbA1c, LDL-C, triglycerides, and fasting insulin.¹ When added to the existing medication regimens of patients with poorly controlled diabetes, berberine significantly reduced fasting and postprandial blood glucose, insulin, HbA1c and HOMA-IR after just five weeks of supplementation.¹ There are multiple mechanisms behind berberine's efficacy, such as increased endogenous insulin secretion (evidenced by increased fasting and postprandial C-peptide) and increased insulin receptor expression.² Berberine has inhibitory effects on intestinal carbohydrate-digesting enzymes, helping to moderate post-prandial blood glucose.³ Additionally, berberine is a natural inhibitor of dipeptidyl peptidase IV (DPP IV), an enzyme that degrades incretin hormones. Incretins stimulate post-prandial insulin secretion, so increasing the half-life of incretins may help increase endogenous insulin secretion in response to a meal.⁴ Finally, berberine's blood glucose lowering effects also stem from stimulating glycolysis via inhibition of mitochondrial glucose oxidation (specifically at complex I of the electron transport chain), and by increasing cellular glucose uptake independently of insulin.⁵ Berberine increases phosphorylation of AMP-kinase (AMPK), a process that occurs naturally in response to physical exercise, fasting, and caloric restriction.⁶ In this sense, berberine may be thought of as a "calorie restriction mimetic," which again mirrors the multifactorial effects of metformin.

Fenugreek⁷⁻¹⁰

Fenugreek (*Trigonella foenum-graecum*) has a long history of many uses in Indian and Chinese medicine. Data from pre-clinical studies and small human investigations suggest that fenugreek possesses both acute and chronic hypoglycemic properties. Concomitant use with other hypoglycemic agents may lower serum glucose more dramatically and levels should be monitored closely. A study in trained male cyclists revealed that fenugreek seeds may increase muscle glycogen concentration immediately post exercise, thereby lowering serum glucose by stimulating muscle glucose uptake. Fenugreek may also slow the absorption of glucose, and other simple carbohydrates, due to its mucilaginous fiber content and high viscosity in the gut. Based on animal and in vitro studies, fenugreek may lower triglycerides, total cholesterol, and low density lipoprotein (LDL) levels.

American Ginseng¹¹⁻¹³

Various studies report a blood sugar-lowering effect of American ginseng (*Panax quinquefolium*) in individuals with type 2 diabetes, both on fasting blood glucose and on postprandial glucose levels. Research is ongoing to evaluate long-term efficacy of American ginseng in treating type-2 diabetes compared to standard oral hypoglycemic drugs. American ginseng is difficult to cultivate, however, Canada now grows more American ginseng than any other country. In the US, most American ginseng is cultivated in Wisconsin.

Gymnema

Gymnema (*Gymnema sylvestris*) leaves have been used for more than 2,000 years in India to treat madhu meha, or "honey urine." Preliminary human evidence suggests that gymnema may be efficacious for the management of serum glucose levels in type 1 and type 2 diabetes and as an adjunct to conventional drug therapy. Gymnema appears to lower serum glucose and glycosylated hemoglobin (HbA1c) levels following chronic use, but may not have as significant acute effects.¹⁴⁻¹⁶ There is also early evidence suggesting possible efficacy of gymnema as a lipid-lowering agent.¹⁷

Banaba

Banaba (*Lagerstroemia speciosa*) is a medicinal plant that grows in India, Southeast Asia, and the Philippines. The main mechanism of the hypoglycemic effect of banaba leaf extract is similar to that of insulin, in that it induces glucose transport from the blood into body cells to be burned as energy. Currently, research suggests that orally administered banaba extract, standardized to 1% corosolic acid, lowers blood sugar in people with type 2 diabetes.^{18, 19} The Banaba chosen for GlucoSupreme™ Herbal is standardized to 1% corosolic acid.

Kudzu

Kudzu (*Pueraria lobata*) originated in China and was brought to the United States from Japan in the late 1800s. It is distributed throughout much of the eastern US and is most common in the southern part of the country. Type 2 diabetes is typically preceded by insulin resistance, so reversing insulin resistance may lessen chances of developing type 2 diabetes. In a recent study of seventy-six patients with coronary heart disease the authors concluded that kudzu may improve insulin resistance and insulin resistance-related lipid and fibrinolytic activity abnormality.²⁰

Cinnamon

Our specially chosen *Cinnamomum cassia* extract is bio-assayed for alpha-amylase inhibition, and is standardized to a significant content of bioactive polyphenols. It is also kosher certified. Some of the best research was done using the cassia type cinnamon. The chromium and polyphenols naturally found in cinnamon have been shown to have the following mechanisms of action:

- Trigger insulin cascade by initiating phosphorylation at the insulin receptor
- Improve insulin-regulated glucose utilization
- Enhance insulin signaling in skeletal muscle
- Aid glucose to glycogen conversion

The antioxidant properties of cinnamon also make it efficacious for subjects with metabolic syndrome and diabetes, both of which are inflammatory disorders resulting in excessive oxidative stress.^{21, 22}

Who should take GlucoSupreme™ Herbal? Those who would benefit from proactively maintaining optimal blood sugar and those with dysglycemic conditions including metabolic syndrome, diabetes and polycystic ovary syndrome. GlucoSupreme™ Herbal may be helpful for patients needing to lose weight and/or control lipids. Caution: This product should only be used under the supervision of a qualified health care practitioner who can actively monitor a patient's blood sugar levels if they are diabetic and/or are using blood sugar modulating medication or insulin.

Who should not take GlucoSupreme™ Herbal? This product should not be taken by pregnant or nursing women or by patients with known allergies to any of the herbs found in this formula.

How to Take:

- As a dietary supplement, take four capsules per day with meals, or as directed by a health care practitioner (divided dosing recommended).

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