

GlucoSupreme™ Herbal



By David Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

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Supplement Facts

Serving Size 4 capsules
Servings Per Container 30

Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value
Salacia Extract (<i>Salacia oblonga</i>) (root and stems)	500 mg *	Banaba Extract (<i>Lagerstroemia speciosa</i>)(leaf) [standardized to contain 1% corosolic acid]	400 mg *
Fennugreek Extract (<i>Trigonella foenum-graecum</i>)(seed) [standardized to contain 60% saponins]	500 mg *	Kudzu Extract (<i>Pueraria lobata</i>)(root) [standardized to contain 40% isoflavones]	400 mg *
American Ginseng (<i>Panax quinquefolius</i>)(root) [standardized to contain 5% ginsenosides]	400 mg *	Cinnamon Extract (<i>Cinnamomum cassia</i>)(bark)	400 mg *
Gymnema Extract (<i>Gymnema sylvestris</i>)(leaf) [standardized to contain 25% gymnemic acid]	400 mg *		

Other Ingredients: Microcrystalline cellulose, vegetable stearate.

This synergistic product was designed to maintain steady blood sugar levels. GlucoSupreme™ Herbal is ideal for patients with insulin and glucose-related conditions. It combines some of the most well-researched botanicals for blood sugar management (Gymnema, Fennugreek, Banaba, Cinnamon, and American ginseng), with unique herbals (Salacia and Kudzu), which have more recently emerged in the literature demonstrating impressive efficacy in the optimization of blood sugar control in both normal subjects and those with metabolic syndrome and diabetes.

It contains standardized compounds such as corosolic acid from Banaba, ginsenosides from Ginseng and saponins from Fennugreek. Cinnamon naturally contains chromium and polyphenols proven to have direct effects on insulin signaling and glucose control. Our specially chosen Cinnamon cassia extract is bio-assayed for alpha-amylase inhibition, as is the Salacia, and is standardized to a significant content of polyphenols. It is even kosher certified. *Salacia oblonga*, an ayurvedic herb, exerts an effect on both leptin and insulin signaling. Leptin (from the Greek word *leptos* meaning thin) is a hormone that plays a key role in regulating energy intake and energy expenditure, including appetite and metabolism.



More about Salacia

Salacia (*Salacia oblonga*) roots have been used in Ayurvedic medicine for diabetes and obesity since antiquity. Recent pharmacological studies have demonstrated that Salacia roots modulate multiple targets: peroxisome proliferator-activated receptor-alpha-mediated lipogenic gene transcription, angiotensin II/angiotensin II type 1 receptor, alpha-glucosidase, aldose reductase and pancreatic lipase. These multi-target actions may mainly contribute to the reported Salacia root-induced improvement of type-2 diabetes and obesity-associated hyperglycemia, dyslipidemia and related cardiovascular complications.

A large body of data from cellular, biochemical, mouse and human genetic and chemical inhibitor studies have identified Protein Tyrosine Phosphatase 1B (PTP 1B) as a major regulator of both leptin and insulin signaling. Available research evidence suggests that **leptin and insulin action can be enhanced by the inhibition of PTP 1B**. Consequently, PTP 1B has emerged as an attractive novel target for the treatment of both obesity and type-2 diabetes. The link between PTP 1B, obesity and diabetes has led to an avalanche of research dedicated to **finding inhibitors of this 1 phosphatase enzyme, including Salacia**.

Fennugreek

Fennugreek (*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 fennugreek 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 fennugreek seeds may increase muscle glycogen concentration immediately post exercise, thereby lowering serum glucose by stimulating muscle glucose uptake. Fennugreek 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, fennugreek may lower triglycerides, total cholesterol, and low density lipoprotein (LDL) levels (10-13).

American Ginseng

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 United States, most American Ginseng is cultivated in Wisconsin (14-16).

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 (17-19). There is also early evidence suggesting possible efficacy of gymnema as a lipid-lowering agent (20).

A partial summary of mechanisms

by which Salacia exhibits its effects include:

- PPAR alpha agonism (1,2,3)
- Angiotensin II / angiotensin II type 1 receptor modulation (1)
- Aldose reductase inhibition (1,4,7)
- Lipase inhibition (1,5)
- Antioxidant activity (1,6)
- Alpha glucosidase inhibition (1,7)
- Alpha amylase inhibition (1,8)
- PTP 1B inhibition (9)

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 (21-22).** 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 United States and is most common in the southern part of the continent. 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 (23).**

Cinnamon

Our specially chosen **Cinnamon cassia** extract is bio-assayed for alpha-amylase inhibition, as is the Salacia, 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 (24-25).

Who should take GlucoSupreme™ Herbal? Those wishing to proactively maintain 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. This product should be taken under the guidance of a qualified health care practitioner. Consult with your health care provider before taking this product along with a blood sugar or diabetes medication.

How to take GlucoSupreme™ Herbal: As a dietary supplement, take four capsules daily, two capsules twice a day with meals, or as directed by your health care practitioner.

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 GlucoSupreme™ Herbal.

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