SUSTAINED RELEASE

DIHYDROBERBERINE SR

WITH GLUCOVANTAGE®

May help promote glucose balance, lipid metabolism & heart health

endurance products COMPANY

Since 1978

WHAT IS IT?

Dihydroberberine SR is a sustained-release dietary supplement featuring GlucoVantage® dihydroberberine, a highly bioavailable form of berberine. The wax-matrix tablet is formulated for a slow, steady release of dihydroberberine over 5 to 7 hours.

HOW DOES IT WORK?

The ability of berberine to regulate blood glucose has been widely studied. Its insulin-independent, hypoglycemic effect is mainly attributed to its ability to inhibit oxidation in the mitochondria, stimulate glycolysis, and activate the AMPK pathway that transports glucose into peripheral tissues.

Berberine also inhibits alpha-glucosidase, an intestinal enzyme that breaks down carbohydrates into monosaccharides. In newly diagnosed patients with type 2 diabetes, berberine is reported to lower blood insulin levels via enhancing insulin sensitivity. However, in patients with poor beta-cell function, berberine may improve insulin secretion via resuscitating exhausted islets.[1]

WHO CAN BENEFIT?

For adults who need nutritional support for glucose balance, lipid metabolism and cardiovascular health. Formulated to complement diet and lifestyle changes.

PRODUCT AVAILABILITY

Bottle Size(s):
60, 180 tablets

PRACTITIONER DISTRIBUTION

- Emerson® Ecologics (www.emersonecologics.com)
- Fullscript™ (www.fullscript.com)
- WholeScript™ (www.wholescript.com)

Supplement Facts

Serving Size 1 Tablet

Amount Per Serving		% DV
GlucoVantage® Dihydroberberine	150 mg	*

* Daily Value (DV) not established.

Other Ingredients: Vegetable wax (rice bran and/or carnauba), isomalt (vegetable), stearic acid (vegetable), magnesium stearate (vegetable), and silica.

Directions: As a dietary supplement for adults, take one (1) tablet, twice daily with food, or as directed by your healthcare professional.

1. Yin J, et al. *Acta Pharm Sin B.* 2012:2(4):327-334.

RESEARCH HIGHLIGHTS

Berberine is an effective therapy for type 2 diabetes

One meta-analysis[2] of 27 randomized controlled clinical trials included a subgroup analysis of 5 trials that compared the effect of berberine (n=169 patients) on blood glucose and glycosylated hemoglobin vs. control (n=162 patients) in patients with type 2 diabetes. In the subgroup analysis, berberine was significantly more effective in reducing blood glucose and glycated hemoglobin levels compared to controls.

Dihydroberberine helps combat oxidative and nitrosative (O/N) stress. O/N stress is reported to be a causative factor for type 2 diabetes. For people with type 1 diabetes, insulin needs to be used to control blood glucose levels.[3]

Berberine is an effective therapy for dyslipidemia

Clinical research supports the use of berberine for the treatment of dyslipidemia. Berberine has been shown to lower total and LDL cholesterol and triglycerides and raise HDL cholesterol in patients with dyslipidemia.

Results from two recent meta-analyses[4,5] investigating cardiovascular effects show berberine significantly decreased levels of total cholesterol, LDL cholesterol and triglycerides and significantly increased the level of HDL cholesterol and was well tolerated. Dosages of berberine ranged from 600 mg to 2,700 mg/day, and treatment durations lasted from 1 to 24 months.

A 2017 consensus-based position statement[6] of an international panel of lipid experts provides clinical recommendations for the use of berberine to lower elevated LDL cholesterol. Berberine is recommended and indicated for dyslipidemia in the range of 500-1,500 mg/day.

Berberine reduces high blood pressure

At least three randomized controlled trials confirm the blood pressure benefits of berberine in patients with high blood pressure. The 2015 meta-analysis by Lan et al[2] includes a subgroup analysis of these three trials, which compared the effect of berberine (n=168 patients) on blood pressure to controls (n=162 patients). Compared to controls, berberine was significantly more effective in reducing blood pressure (-5.97 mmHg systolic; P=.0003 and -2.69 mmHg diastolic; P=.03).

Dihydroberberine is absorbed better than berberine

Based on animal (rat) data, dihydroberberine has an intestinal absorption rate 5-fold higher than that of berberine and rapidly converts to berberine in solution and in blood.[7] The pharmacokinetic characteristics of berberine in humans is reported to be similar to those observed in animal studies.[8] This suggests oral absorption in humans from 300 mg of dihydroberberine would be similar to that from 1,500 mg of berberine. The clinical research described above indicates similar amounts of berberine are well tolerated in humans with side effects mostly related to dose-related, mild-to-moderate digestive upset.

Berberine can inteact with certain drugs

Berberine has been reported to interact with several clinically important drugs (i.e., cisplatin, cyclosporin-A, doxorubicin, fluconazole, hydroxy-camptothecine, L-DOPA, tetrandine, warfarin, thiopental, β-lactam antibiotics) resulting in either antagonistic or synergistic effects.[9]

2. Lan J, et al. *J Ethnopharmacol.* 2015;161:69-81.
3. Van Dyke K. *Clin Res Immunol.* 2018;1(2):1-3.
4. Ju J, et al. *Phytomedicine.* 2018;50:25-34.
5. Lan J, et al. *J Ethnopharmacol.* 2015;161:69-81.
6. Cicero AFG, et al. *Arch Med Sci.* 2017;13(5):965-1005.
7. Feng R, et al. *Sci Rep.* 2015;5:12155.
8. Liu CS, et al. *Fitoterapia.* 2016;109:274-82.
9. Kumar A, et al. *Eur J Pharmacol.* 2015;761:288-97.