BLOOD SUGAR SUPPORT

Berberine UltraSorb™

ENHANCED ABSORPTION BERBERINE

Berberine UltraSorb™ provides 550 mg of clinically studied Berbevis® berberine with enhanced absorption Phytosome™ technology. **Berbevis® berberine phytosome is four times more bioavailable than standard berberine.**[1]

Berberine has been studied in more than 60 human clinical trials and over 40 systematic reviews and meta-analyses to date. Multiple randomized, placebo-controlled clinical studies indicate that berberine **promotes healthy glycemic control by supporting insulin receptor function and signaling.**[2-8] Berberine also helps to maintain cholesterol levels already within the normal range.[3] Clinical studies show that daily doses of 1,000-1,500 mg of standard berberine **supports cardiometabolic parameters, including lipid and triglyceride metabolism, endothelial function and healthy blood flow.**[3-8]

- Promotes healthy glycemic control‡
- Helps maintain healthy blood glucose levels already within the normal range‡
- Supports endothelial function‡
- Helps to maintain a healthy lipid profile‡
- May support colorectal health‡

WHO IS THIS SUPPLEMENT FOR?

- Patients who want to support their metabolic health
- Patients seeking support for glycemic control, lipid profile and/or vascular function
- Patients who failed to respond to standard berberine HCl or cannot tolerate high doses

Why does bioavailability of berberine matter?

The intestinal absorption of standard berberine hydrochloride is extremely low, contributing to an absolute bioavailability of less than 1% in preclinical models.[9] This is why high doses (typically 1,000-1,500 mg/day), are often required for clinical efficacy. In this range, gastrointestinal adverse effects, although typically mild and transient, can limit patient acceptance and compliance. In one clinical trial, 14 out of 35 (24.1%) of subjects required a dose reduction due to poor GI tolerability.[5] Therefore, berberine bioavailability is an important consideration when selecting a supplement.

‡This statement has not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

pure encapsulations®

MECHANISMS OF ACTION‡

Bioavailability enhancement. Phytosomes are lipid-based carriers that increase the solubility, dispersion and membrane diffusion of phytochemicals that are normally difficult to absorb.[10] In a phytosome, berberine is complexed with the polar heads of phospholipids (Figure 1). This complex protects and stabilizes berberine while enhancing its solubility, dispersion and intestinal absorption (Figure 2).[8‡]

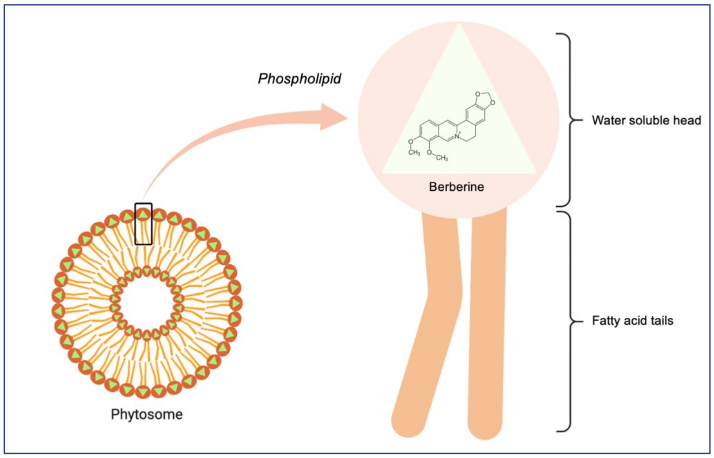

Figure 1. *Structure of berberine phytosome. Phospholipids (as phosphatidylcholine) are organized in a bilayer, forming vesicles with a water-soluble exterior that improves dissolution profile and dispersion, which are required for effective absorption. Berberine is bound to the water-soluble phospholipid head group.*

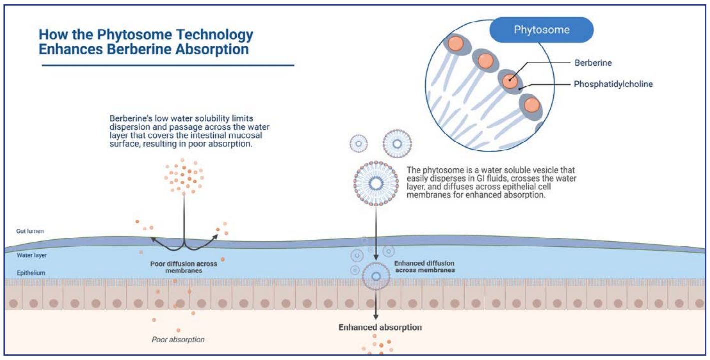

Figure 2. *How the phytosome technology enhances intestinal absorption of berberine.*

Glycemic control. Berberine increases insulin-dependent glucose uptake by supporting insulin receptor expression.[4] Berberine may also support insulin-independent glucose disposal by activating AMPK, which facilitates the recruitment of glucose transporters to the cell membrane.[2‡]

AMPK activation. Berberine mediates the activation of AMP kinase (AMPK), a central regulator of cellular energy homeostasis.[2] This master metabolic switch is involved with maintaining healthy cardiovascular function, insulin signaling and glucose metabolism, and helps maintain lipid levels already within the normal range.

RESEARCH HIGHLIGHTS‡

Superior pharmacokinetics

- In a randomized, double-blind, crossover pharmacokinetic study in healthy volunteers, Berberis® berberine phytosome (equivalent to 376 mg berberine) was four times more bioavailable compared to 500 mg standard berberine, as measured by area under the curve, from 0-24 hours after a single oral dose (Figure 3).[1]

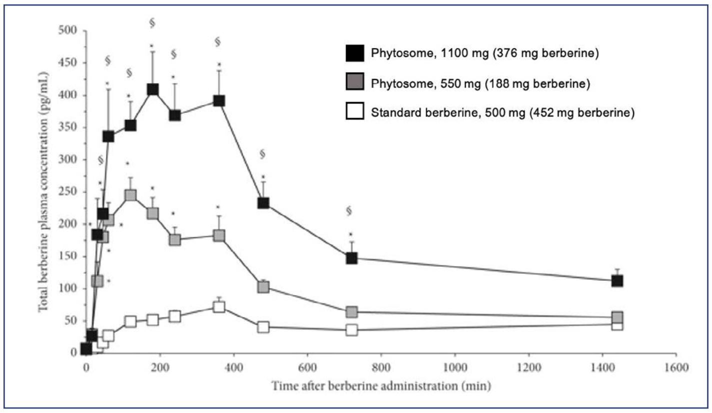

Figure 3. *Single-dose pharmacokinetic profile of berberine in a study of 12 healthy human volunteers. Data represent mean values (±standard deviation). *p<0.05 versus berberine chloride alone, 500 mg (open squares); §p<0.05 versus low dose berberine phytosome, 550 mg (grey squares).[1]*

Glycemic control

- In a small clinical trial of 12 women, Berbevis® berberine phytosome significantly improved glycemic profiles, including a reduction in mean HOMA Index, a measurement of insulin function. Clinical benefit was demonstrated after only 30 days at a lower dose than typically used, with no GI side effects.[8]
- In a clinical study of 36 adults, high-dose standard berberine HCl supplementation (500 mg 3 times a day) for 3 months promoted a healthy glycemic response (from 10.6+/-0.9 mmol/L to 6.9+/-0.5 mmol/L, P<.01), postprandial blood glucose (from 19.8+/-1.7 to 11.1+/-0.9 mmol/L, P<.01) and hemoglobin A1c (from 9.5%+/-0.5% to 7.5%+/-0.4%, P<.01).[5]

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- A systematic review and meta-analysis of 27 RCTs (2569 patients) concluded that berberine is safe and effective in supporting glycemic control, lipid profile and vascular function.[11]

Lipid profile

- In a randomized, double-blind, placebo-controlled trial, standard berberine (500 mg twice daily) for 3 months resulted in statistically significant support for lipid profile after 12 weeks.[6]

POTENTIAL INTERACTIONS

Berberine can significantly impact fasting and postprandial blood glucose when taken regularly. This may magnify the effects of antidiabetes drugs. Monitor for changes in glycemic control if you decide to proceed with this combination.

Although many studies have suggested potential influences of berberine on phase I drug metabolism (cytochromes p450) in vitro, only a few of these theoretical interactions have been demonstrated clinically. Berberine (300 mg, t.i.d.) for 2 weeks has shown clinically significant interactions with dextromethorphan, losartan and midazolam by inhibiting CYP2D6, CYP2C9, and CYP3A4.[12] Concurrent use may modify circulating levels of these medications, potentially magnifying their actions and side effects. It is not known whether berberine inhibits the metabolism of other drugs metabolized by these enzymes.

To check whether a medication may have clinically significant interactions with [nutrients and] ingredients based on doses commonly used in dietary supplements, visit our Drug-Nutrient Interaction Checker.

RELEVANT GENETIC POLYMORPHISMS

The rs7903146 variant in the TCF7L2 gene is associated with higher blood glucose and HbA1c.[13,14] Individuals carrying the variant (T allele) may benefit from further assessment and proactive nutritional strategies supporting metabolic health.

Learn about genetic testing and personalized nutrition at pureinsight.pureencapsulationspro.com

0.905 in

Supplement Facts

1 capsule, 1-2 times daily, with or between meals

One (size 00) capsule contains:	
Berbevis® berberine - Indena Phytosome™ complex (Berberine and sunflower phospholipid complex) (standardized to contain 28% berberine)	550 mg

Other ingredients: Berbevis® berberine - Indena Phytosome™ complex (*Berberis aristata* root extract, pea protein isolate, sunflower lecithin, grape seed extract, cellulose, silicon dioxide), vegetarian capsule (cellulose, water), hypoallergenic plant fiber (cellulose), ascorbyl palmitate

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Not to be taken by pregnant or lactating women.

Blood Sugar Support

NON GMO V VEG

Berberine UltraSorb™	Quantity	Order Code
	60	BUS6

Visit PureEncapsulationsPro.com/quality for more information on our GMO policy.

Certified Gluten-Free by the Gluten-Free Certification Organization, gluten.org

PEOP-BERBULT0325

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