BH Blood Sugar Support®
Banaba Extract

Properties:¹³

- Hypoglycemic, insulin like activity – blood glucose and lipid regulation
- Antioxidant affects
- Decrease in blood pressure
- Weight management

Clinical Study Findings:

- Exhibited a 13.5 % average decrease in blood glucose levels (N=24, Type 2 diabetes).
- Significant decrease in fasting glucose (16.6%) and significant improvement in glucose tolerance and glycated albumin (N=15, 1 year open label).
- 30% decrease in blood glucose levels (N=10, Type 2 diabetes, 2 week interventional).
- 12% decrease in fasting and postprandial glucose (N=12, non diabetic, 2 week open label).
- Lower glucose levels than control (p<0.05) (N=31, Double blind crossover)

BH Blood Sugar Support®
Bitter Melon

Properties:

• Contains active substances with anti-diabetic and appetite suppressing properties:
  • Charantin - blood glucose lowering effect
  • Vicine – glycol alkaloid shown to induce hypoglycemia
  • Polypeptide-p. 1 - an insulin-like compound (lower blood sugar)
  • Lectin - Suppresses appetite (hypoglycemic effect)

Clinical Study Findings:

• Daily dose of bitter melon significantly reduced blood glucose levels (T2D, 4 weeks).
• Resulted in statistical significance in MetS improvement (N=42, 3 month, open label).
• Daily dose resulted in statistical significance in glucose reduction (N=26, randomized, 4 weeks).
• Statistically significant hypoglycemic effect (N=19 DM, controlled).

BH Blood Sugar Support®
Licorice

Properties:

- Contains amorfrutins shown in vitro $^{20,21}$
  - To reduce blood sugar levels and inflammation
  - Prevent the development of a fatty liver
  - Weight management

Clinical Study Findings:

- Daily dosage reduced body fat and suppressed aldosterone (N=15, 2 weeks).$^{22}$
- Licorice flavonoid oil daily for 8 weeks reduced body fat, body weight, body mass index, and LDL cholesterol levels.$^{23}$

BH Blood Sugar Support®
Cinnamon

Properties:

- Increase insulin sensitivity 24
- Improve glucose and lipids in Type 2 diabetes 25

Clinical Study Findings:

- Improved hemoglobin A1C levels (p<.001), blood sugar levels and lipid levels (N=109 T2D, 90 days). 24
- Resulted in significantly reduced fasting blood glucose levels and no change in placebo group (N=66 subjects T2D, 3 month, randomized double blind study). 26
- A review of six clinical trials with doses of cinnamon from 1–6 grams per day showed a “significant decrease” in average HbA1c levels of 0.09% (N=435, 40 days and 4 months). 27
- A review of clinical trials associated a “statistically significant” decrease in fasting blood sugar, total cholesterol, LDL, and triglyceride levels, but not HbA1c (N=543, 4-18 weeks). 28

BH Blood Sugar Support®
Gymnema Sylvester

Properties:

- Insulin secretion
- Control hyperglycemia
- May regenerate/repair beta cells
- Appetite suppressant

Clinical Studies Findings:

- Lowered blood glucose levels by 11% and increased glycemic control (N= 65, 90 days).
- As a supplement to conventional oral drugs, resulted in significant reduction in fasting blood glucose levels (p<0.001), hemoglobin A1c levels and glycosylated plasma protein levels. 5 patients stopped conventional drugs and maintained normal glucose and hemoglobin levels (N=22, T2D, 18-20 months).
- Appeared to enhance endogenous insulin and possible regenerate residual beta cells (N=27 with ISSM, 10-12 months).

BH Blood Sugar Support®
Yarrow, Cayenne and Juniper Berry

Yarrow Properties:
- ß-cell protective 36 and anti-inflammatory effect 38,39
- Anti-oxidant (may be due to high content of flavonoids and phenolics) 37,40
- Reduce blood sugar 41

Cayenne Properties:
- Contains capsaicin
  - Increase insulin and decrease blood glucose levels 42,43
  - Improve pain status in diabetic neuropathy 44
  - Attenuate postprandial hyperinsulinemia 45

Juniper Berry Properties: 46,47
- Anti-obesity effects
- Antioxidant
- Reduce blood sugar levels
- Increase insulin sensitivity and production

BH Blood Sugar Support®
Huckleberry

Properties: 48-52

- Contains
  - Anthocyanins – Antioxidant and improve retina problems
  - Chromium – Lowering glucose levels
  - Flavonoids – Improve blood circulation

Clinical Study Findings:

- Resulted in a significant reduction of glucose compared with the diabetic control as well as glibenclamide treatment (Controlled study, 4 weeks). 48
- Significant improvements in the ophthalmoscopic parameters or in angiographic parameters in subjects with diabetic and/or hypertensive retinopathy (N=14, diabetic and/or hypertensive) double blind placebo control, 1 month). 49
- Significant improvement in subjects with polyneuritis due to vascular insufficiency was noted in microcirculation (N=15). 50
- Effective in rapidly decreasing symptomology and improving both venous microcirculation and lymph drainage (N=568, review of uncontrolled studies). 51
BH Blood Sugar Support®
Alpha Lipoic Acid

**Properties:**
- Antioxidant
- Helps turn glucose into energy
- Slow down cellular damage
- Improve insulin sensitivity
- Protect against metabolic syndrome
- Decrease side effects of peripheral neuropathy

**Clinical Study Findings:**
- Increased insulin sensitivity in diabetic patients (N=24, Controlled study, 4 weeks).
- Improved diabetic neuropathy and increased serum antioxidant capacity (N=46 T1D, 60D).
- Significant improvement in neuropathic symptoms (N=120 T2D, Placebo controlled, 3 weeks).

---

BH Blood Sugar Support®
L-Taurine

Properties 61, 62, 66

- Essential amino acid
  - Cytoprotective
  - Antioxidant
  - Retinopathy, nephropathy, neuropathy, atherosclerosis and cardiomyopathy benefits
- Hyperglycemia suppression

Clinical Studies:

- Improved carbohydrate metabolism and decreased triglyceride (N=10 with IDDM, 30 days). 63
- Improved impaired insulin sensitivity and prevented the rise in lipid peroxidation products in plasma in normal, overweight subjects (N=6, 2 weeks). 64
- Exhibited protective role on endothelium (N=9, 2 weeks, crossover study). 65

BH Blood Sugar Support®
Vanadyl Sulfate

Properties: 67-72
• Trace mineral
  • Improves insulin sensitivity
  • Improve glycemic control

Clinical Study Findings:
• Shown to reduce hyperglycemia, improved liver and muscle insulin sensitivity, significantly improved glycemic control and reduced cholesterol levels (LDL) (N=11 T2D, controlled 6 weeks). 68
• Resulted in significantly improved fasting plasma (3 weeks). 70
• Decrease in mean fasting blood sugar and daily doses of insulin (N=14 T1D, 30 months). 72