Gluco-Mend
Nutritional Support for Glucose Metabolism

DESCRIPTION
Gluco-Mend, provided by Douglas Laboratories® is a synergistic blend of herbs designed to offer nutritional support for healthy glucose support.

FUNCTIONS
Glucose metabolism that is associated with abnormally high blood glucose can lead to high levels of glycation. Glycation is the non-enzymatic attachment of sugars to major molecules in the body, including proteins, lipids, and nucleic acids. Glycation reactions generate advanced glycation end-products (AGEs) and glycotoxin intermediates. AGEs cause abnormal and destructive functioning of body proteins, lipids, and nucleic acids. AGE-associated damage is suspected in the pathogenesis of many diseases and age-related deteriorations, such as atherosclerosis, Alzheimer’s disease, and severe diabetic complications, including neuropathy, nephropathy, retinopathy, and cataracts.

Gymnema sylvestre is an Ayurvedic botanical that may assist in the regeneration and repair of pancreatic beta cells. Gymnema is also suspected of reducing intestinal glucose absorption.

Bitter melon (Momordica charantia) grows in tropical areas, including parts of East Africa, Asia, the Caribbean, and South America, where it is used as a food as well as a medicinal remedy. The fruit of this plant lives up to its name—it tastes very bitter. At least three different groups of constituents in bitter melon have been reported to have hypoglycemic (blood sugar lowering) or other actions of potential benefit in diabetes mellitus. These include a mixture of steroidal saponins known as charantin, insulin-like peptides, and alkaloids.

Research shows that (-) hydroxycitric acid helps maintain a healthy balance of hepatic lipogenesis and gluconeogenesis, thus preventing excessive conversion of glucose from carbohydrate into body fat. It is found in Garcinia cambogia, a tropical fruit grown in Asian rain forest area. Research also indicates that (-) hydrocitric acid plays an important role in the regulation of a normal appetite. Alpha-lipoic acid is a fat- and water-soluble, sulfur- containing coenzyme. It functions in the body much like a B-vitamin, since it is involved in energy production. As part of several multi-enzyme complexes located in the mitochondria, alpha-lipoic acid is essential for metabolizing carbohydrates, proteins, and fats, and for the conversion of their energy into ATP. Two of these enzyme complexes, PDH (pyruvate dehydrogenase) and alpha-KGDH (alpha-ketoglutarate dehydrogenase) are part of the citric acid cycle (Krebs cycle), and as such assume a central role for general energy production. Another lipoic acid containing enzyme complex, BCKADH (branched-chain keto-acid dehydrogenase), is involved in deriving energy from the branched chain amino acids, leucine, isoleucine, and valine. A related metabolic function of alpha-lipoic acid is its role in blood glucose disposal. This important coenzyme appears to be necessary for the normal transport of blood glucose into the cell. This may be explained by its functions in the glucose-metabolizing enzymes, PDH and alpha-KGDH, but some researchers suspect a more direct role in cellular glucose uptake at the cell membrane. Chromium is an integral component of the glucose tolerance factor (GTF), a naturally occurring compound of chromium, nicotinic acid, and amino acids that is essential for proper glucose metabolism. Adequate chromium nutrition is essential for the formation of GTF and subsequent control of blood glucose levels.

INDICATIONS
Gluco-Mend may be a useful dietary supplement for those who wish to support nutritional control of blood sugar metabolism and protect against the harmful effects of excess blood sugar.
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FORMULA (#80442)
3 Vegetarian Capsules Contain:
Gymnema sylvestre
(min. 25% gymnemic acids).........................200 mg
Bitter Melon extract...........................................200 mg
Fenugreek Seed extract.....................................150 mg
(continued on reverse)
Garcinia cambogia extract.................................835 mg
(supplying 500 mg of HCA)
Alpha Lipoic Acid...............................................100 mg
Chromium GTF..................................................200 mcg
Vanadium..........................................................2.5 mg
(Vanadyl Sulfate)

SUGGESTED USE
Adults take 3 capsules daily in divided doses or as directed by healthcare professional.

SIDE EFFECTS
The ingredients in Gluco-Mend are generally well-tolerated and do not cause side effects.

HOW SUPPLIED
Supplied in bottles of 90 capsules.

STORAGE
Store in a cool, dry place, away from direct light. Keep out of reach of children.

REFERENCES
NF-kappaB is suppressed by alpha-lipoic acid in cultured endothelial cells. Diabetes 1997;46:1481-90.
McCarty MF. Utility of metformin as an adjunct to hydroxycitrate/carnitine for reducing body fat in diabetics.
Raman A, Lau C. Anti-diabetic properties and phytochemistry of Momordica charantia L (Cucurbitaceae).
Shanmugasundaram ER, Rajeswari G, Baskaran K, et al. Use of Gymnema sylvestre leaf extract in the control
of blood glucose in insulin

For more information on Gluco-Mend visit douglaslabs.com

† These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.