BIOGENESIS
NUTRACEUTICALS

Presents for your consideration:

GlucoStat

(multivitamin/mineral glycemic support)

- **Complete multi-vitamin and mineral designed to support healthy blood sugar metabolism**
- **Reduces tendency to insulin resistance**
- **Provides necessary nutrients for the synthesis of Glucose Tolerance Factor (GTF)**
- **Provides necessary antioxidant cellular protection**

Consider GlucoStat when prescribing a product for your patient with impaired glucose metabolism. GlucoStat is designed to reduce insulin resistance and dysglycemic conditions. By supporting the endogenous production of glucose tolerance factor, GlucoStat assists in a healthy blood sugar balance. In addition, GlucoStat functions as a complete multivitamin/mineral and antioxidant support system.

Vitamin A, Beta Carotene, Vitamin C, Vitamin E, Riboflavin, Pantothenic Acid, Selenium, Manganese, Zinc, and Copper: provide broad antioxidant protective support.
Vitamin D: adds to the antioxidant support and along with **Calcium** contributes to healthy bone metabolism.
Thiamine: deficiency is associated with abnormal glucose tolerance. Supplementation shows evidence that it may help correct this abnormality. Preliminary evidence gives some support to thiamine's ability to prevent or delay plaque formation on vessel walls, a complication in some patients with a chronic history of elevated blood sugar and insulin resistance.
Niacin: is involved in the energy-generating metabolism of protein, fat and carbohydrates. Its biochemical effects are principally mediated by its metabolite nicotinamide adenine dinucleotide (NAD+). Adenosine triphosphate (ATP) production is enhanced with niacin/NAD.

GlucoStat	**Amounts per serving**
Serving size	6 veggie capsules
Number of servings per container	30
Vitamin A (Retinyl acetate, Beta carotene)	5000 IU
Vitamin C (Calcium ascorbate, Magnesium ascorbate)	300 mg
Vitamin D (Cholecalciferol)	300 IU
Vitamin E (d-alpha tocopheryl succinate)	300 IU
Thiamine (Thiamine HCl)	30 mg.
Vitamin B2 (Riboflavin, Riboflavin 5'phosphate)	20 mg
Vitamin B3 (Niacin, niacinamide)	150 mg
Vitamin B6 (Pyridoxine HCl, Pyridoxal 5' phosphate)	50 mg
Folic Acid (Calcium folinate)	800 mcg
Vitamin B12 (Cyanocobalamin)	50 mcg
Biotin	4000 mcg
Pantothenic Acid (Calcium pantothenate)	200 mg
Calcium (Ascorbate, citrate/malate)	200 mg
Magnesium (Ascorbate, citrate/malate)	400 mg
Zinc (citrate)	30 mg
Selenium (Selenomethionine)	150 mcg
Copper (Sebacate)	2 mg
Manganese (Aspartate)	10 mg
Chromium (polynicotinate)	1000 mcg
Potassium (Aspartate)	99 mg
Vanadium (Aspartate)	50 mcg
Alpha R-Lipoic Acid	20 mg
L-Carnitine	100 mg
Suggested Dose: Take 1-2 capsules with meals or as directed by your health care practitioner.	

Vitamin B6, Vitamin B12 and Folic Acid: assist in the healthy metabolism of homocysteine, supporting conversion of this inflammatory mediator to non- toxic "safe" by products. This triad of B vitamins is considered cardio protective.
Biotin: has been found to improve glucose tolerance and decrease insulin resistance in a diabetic mouse model.

Magnesium: deficiency has been shown to result in insulin resistance as well as impaired glucose tolerance in a few studies. Supplementation has reported benefits of improved insulin response in some studies. Magnesium may effect insulin signal transduction and alter insulin receptor binding.

Zinc: an adequate tissue status is required for healthy insulin function. Zinc deficiency may be associated with impaired glucose tolerance.

Chromium: supplementation may be beneficial for glucose regulation. In a double-blind crossover study: 8 female patients were supplemented with 200 mcg chromium chloride daily. By 3 months, low blood sugar symptoms were alleviated and the glucose nadir (lowest point) following a glucose load was raised at 2-4 hours. In addition, insulin binding to red blood cells and insulin receptor number improved significantly. Results suggest that impaired chromium nutrition and/or metabolism may be a factor in the cause of low blood sugar. Chromium may have glucose-regulatory activity.

Vanadium: has insulin-mimetic activity. Preliminary animal studies have shown that vanadium may improve glucose homeostasis and assist in achieving normoglycemia.

Alpha R-Lipoic Acid: is natural ALA. Regular ALA products are a racemic mixture of RS ALA. Alpha RS Lipoic Acid is synthetic just as DL alpha tocopherol is synthetic. ARLA is considered a much stronger antioxidant. ARLA enhances cellular energy production.

L-Carnitine: enhances energy production by improving the metabolism of long-chain fatty acids.

References:

Avena R, Arora S, Carmody BJ, et al. Thiamin (vitamin B1) protects against glucose- and insulin-mediated proliferation of human infragenicular arterial muscle cells. Ann Vasc Surg. 2000; 14:37-43.

Bakker SJL, Hoogeveen EK, Nijpels G, et al. The association of dietary fibres with glucose tolerance is partly explained by concomitant intake of thiamin: The Hoorn Study. Diabetologia. 1998; 41:1168-1175.

La Selva M, Beltramo E, Pagnozzi F, et al. Thiamine corrects delayed replication and decreases production of lactate and advanced glycation end-products in bovine retinal and human umbilical vein endothelial cells cultured under high glucose condtions. Diabetologia. 1996; 39:1263-1268.

Elam MB, Hunninghake DB, Davis KB, et al. Effect of niacin on lipid and lipoprotein levels and glycemic control in patients with diabetes and peripheral arterial disease: The ADMIT Study: A randomized trial. JAMA. 2000: 284:1263-1270.

Wang W, Basinger A, Neese RA, et al. Effects of nicotinic acid on fatty acid kinetics, fuel selection , and pathways of glucose production in women. Am J Physiol Endocrinol Metab. 2000; 279:E50-E59.

Paolisso G, Sgamabato S, Pizza G, et al. Improved insulin response and action by chronic magnesium administration in aged NIDDM. Diabetes Care. 1989; 12:265-269.

Durlach J, Durlach V, Bac P, et al. Magnesium and therapeutics. Magnes Res. 1994; 7:313-328.

Anderson RA et al. Effects of supplemental chromium on patients with symptoms of reactive hypoglycemia. Metabolism. 1987; 36(4):351-55.

Anderson RA et al. Chromium supplementation of humans with hypoglycemia. Fed Proc. 1984; 43:471.

Anderson RA. Chromium, glucose tolerance and diabetes. J Am Coll Nutr. 1998.; 17:548-555.

Anerson RA, Cheng N, Bryden NA, et al. Elevated intakes of supplemental chromium improve glucose and insulin variables in individuals with type II diabetes. Diabetes. 1997; 46:1786-1791.

Werbach MR. Nutritional Influences on Illness: A Sourcebook of Clinical Research, 2nd Ed. Third Line Press, Tarzana, CA. 1993.

Marz RB. Medical Nutrition From Marz, A Textbook in Clinical Nutrition, 2nd Ed. Omni Press, Portland, OR. 1999.

PDR For Nutritional Supplements, 1st Ed. Medical Economics/Thomson Healthcare, 2001.

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Is the logical choice!