



## Metabol X

Serving Size 2 level scoops (40.8 g)  
Servings Per Container 14

	Amount Per Serving
Calories	140
Calories from fat	32
Total fat	3.5 g
Saturated fat	1 g
Cholesterol	46 mg
Total carbohydrate	10 g
Dietary fiber	6 g
Sugars	2 g
Protein	14 g
Vitamin A (retinyl palmitate, 30% beta-carotene, 30% natural betatene mixed carotenoids)	3,000 IU
Vitamin C (ascorbic acid)	250 mg
Vitamin D (cholecalciferol)	200 IU
Vitamin E (d-alpha-tocopheryl acetate)	50 IU
Thiamin (mononitrate)	50 mg
Riboflavin	0.9 mg
Niacin (niacinimide)	10 mg
Vitamin B6 (90% pyridoxal 5'-phosphate, 10% pyridoxine HCl)	15 mg
Folate (folic acid)	200 mcg
Vitamin B12 (cyanocobalamin)	200 mcg
Biotin	6,000 mcg
Pantothenic acid (d-calcium pantothenate)	5 mg
Calcium (amino acid chelate)	350 mg
Phosphorus	360 mg
Iodine (potassium iodide)	75 mcg
Magnesium (glycinate)	200 mg
Zinc (citrate)	15 mg
Selenium (selenium-L-methionine complex)	100 mcg
Copper (gluconate)	1 mg
Manganese (gluconate)	2.5 mg
Chromium (chromium dinicotinate glycinate)	300 mcg
Molybdenum (sodium molybdate)	37.5 mcg
Sodium	110 mg
Potassium	780 mg
Vanadium (vandy sulfate)	500 mcg
<b>Branched Chain Amino Acids</b>	
L-leucine	225 mg
L-valine	175 mg
L-isoleucine	100 mg
<b>Specialty Nutrients</b>	
Lecithin	1,750 mg
Glycine	1,000 mg
Malic acid	600 mg
L-glutamine	400 mg
L-tyrosine	400 mg

# METABOL X

## NUTRITIONAL SUPPORT FOR CELLULAR ENERGY METABOLISM AND HEALTHY BLOOD SUGAR CONTROL

- Promotion of healthy blood sugar balance
- Insulin level regulation and enhanced receptor function
- Nutritional support for energy metabolism and the reduction of fatigue
- Adaptogenic support to help cope with stress and maintain cortisol balance

Metabol X is a complete functional food product designed to support efficient cellular energy metabolism and insulin performance for optimal blood sugar control. Metabol X provides a macronutrient balanced nutritional profile along with a full vitamin and mineral core to support healthy glycemic activity and efficient cellular energy metabolism.

**MACRONUTRIENT PROFILE** The favorable carbohydrate/fat/protein ratio in Metabol X is designed to promote consistent blood glucose levels and insulin control. In addition, the high dietary fiber content supports prolonged satiety along with optimal blood lipid levels and colonic function.

**MULTIVITAMIN/MINERAL** A full spectrum of essential micronutrients is provided to aid in the metabolism of macronutrients and to support the enzyme and receptor functions critical to maintaining proper glycemic control and hormone functions.

**HIGH QUALITY WHEY PROTEIN** has been shown to support weight control and promote feelings of satiety for appetite control in clinical trials. Metabol X now contains whey (100% casein-free) to promote healthy body composition, immune function, and detoxification.

**CHROMIUM AND VANADIUM** Chromium is essential for the production of the endogenous compound glucose tolerance factor which aids cellular uptake of glucose via the activity of insulin. Clinical trials have shown that increased intake of chromium supports healthy blood sugar activity as well as may reduce carbohydrate cravings. Vanadium has also been shown to support healthy carbohydrate metabolism.

## Amount Per Serving

Gamma oryzanol	100 mg
L-carnitine (L-carnitine L-tartrate)	100 mg
Fenugreek seed extract ( <i>Trigonella foenum-graecum</i> )(4:1)	100 mg
American ginseng root extract (5% ginsenosides)	60 mg
Choline (dihydrogen citrate)	50 mg
Inositol	30 mg
Ginkgo leaf extract ( <i>Ginkgo biloba</i> )(24% flavone glycosides)	20 mg
Coenzyme Q10	10 mg
Grape seed extract (95% proanthocyanidins)	10 mg

**Suggested Use:** Stir 2 level scoops of powder with 8-10 fl. oz. of water or beverage of your choice one to two times per day or as directed by your healthcare professional.

**REFERENCES:**

1. Amri H, Drieu K, Papadopoulos V. Ex vivo regulation of adrenal cortical cell steroid and protein synthesis, in response to adrenocorticotropic hormone stimulation, by the Ginkgo biloba extract *Egb 761* and isolated ginkgolide B. *Endocrinology*. 1997;138:5415-26
2. Campbell P. Effect of high dose vitamin C administration on cortisol secretion and immune parameters in stressed rats. *American Chemical Society Annual Meeting, New Orleans; 1999*.
3. Guengerich F. Influence of nutrients and other dietary materials on cytochrome P-450-enzymes. *Am J Clin Nutr*. 1995;61:651S-658S.
4. 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.
5. Anderson RA et al. Effects of supplemental chromium on patients with symptoms of reactive hypoglycemia. *Metabolism*. 1987; 36(4):351-55.
6. Boden G, Chen X, Ruiz J, et al. Effects of vanadyl sulfate on carbohydrate and lipid metabolism in patients with non-insulin-dependent diabetes mellitus. *Metabolism* 1996;45(9):1130-1135.
7. Rivellese A, Giacco A, Genovese S, et al. Effect of dietary fibre on glucose control and serum lipoproteins in diabetic patients. *Lancet*. 1980;2:447-449.

# METABOL X

**L-TYROSINE, IODINE, AND SELENIUM** are all essential components of thyroid hormone production. Supporting thyroid activity is essential for overall healthy metabolic function.

**L-GLUTAMINE** is the most abundant amino acid in the body and is essential for overall health. L-glutamine is also the primary fuel source for intestinal absorptive cells and therefore supports their healthy regeneration. Supporting the health of the intestinal lining is crucial to reducing intestinal hyperpermeability or leaky gut, a condition which promotes a high antigenic load, systemic toxicity, and inflammation.

**BRANCHED CHAIN AMINO ACIDS (LEUCINE, ISOLEUCINE, VALINE)** have been demonstrated to increase protein synthesis for healthy body composition.

**AMERICAN GINSENG, PANTOTHENATE, AND PYRIDOXINE 5' PHOSPHATE** all support proper functioning of the adrenal cortex. Stress has the ability to alter cortisol levels, leading to alterations in serum blood glucose control and overall metabolism. Adaptogenic herbs, such as American ginseng, along with B vitamins have been shown to have positive effects on serum cortisol homeostasis, therefore supporting healthy catecholamine levels and metabolic activity.

**ANTIOXIDANTS** Free radical damage is a common component of conditions related to poor blood sugar control. Grape seed extract, ginkgo, mixed carotenoids, coenzyme Q10, selenium, gamma-oryzanol, and vitamins C and E all have powerful, protective antioxidant functions. Reducing free radical damage promotes normalization of cellular activity and healthy aging.

**LECITHIN, CHOLINE, AND INOSITOL** all promote healthy cell membranes. Cell membrane health is essential for neurological function and overall body communication.