

# Metabolic Synergy™



Nutritional Support for Optimal Glucose, Insulin & Leptin Levels

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**Metabolic Synergy™** is an ideal formula for the *metabolic syndrome patient*. This multivitamin was originally designed by a diabetes specialist, Dr. Ron Rosedale, and was updated with the help of Dr. Bob Steinberg. It includes two more state of the art, newly researched anti-glycating agents *carnosine* and *benfothiamine* (a form of vitamin B1) for preventing diabetic complications.

The mineral forms of magnesium, chromium, zinc, manganese and vanadium are true chelates from Albion, the leader in the manufacture of mineral chelates with superior absorption. A few core nutrients have been added to make **Metabolic Synergy™** a complete multivitamin mineral.

Supplement Facts					
Serving Size 6 capsules					
Servings Per Container 30					
Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value		
Vitamin A	3000 IU	60%	Magnesium	100 mg	25%
(from Palmitate, fish, and mixed carotenoids from palm tree fruit)			(TRAACS® Magnesium LYSYL Glycinate Chelate)		
Vitamin C (as Ascorbic Acid)	500 mg	833%	Zinc	30 mg	200%
Vitamin D3 (as Cholecalciferol)	400 IU	100%	(TRAACS® Zinc Glycinate Chelate)		
Vitamin E	50 IU	90%	Selenium (as Selenium Glycinate Complex)	200 mcg	286%
d-gamma tocopherol	100 mg		Manganese	3 mg	150%
d-delta tocopherol	42 mg		(TRAACS® Manganese Glycinate Chelate)		
d-alpha tocopherol	22 mg		Chromium	500 mcg	333%
d-beta tocopherol	3 mg		(TRAACS® Chromium Nicotinate Glycinate Chelate)		
Vitamin B1	75 mg	5000%	Molybdenum	100 mcg	133%
(as Thiamine HCl 25 mg and Benfothiamine 50 mg)			(TRAACS® Molybdenum Glycinate Chelate)		
Vitamin B2 (as Riboflavin)	25mg	1471%	Potassium	200 mg	6%
Vitamin B3	50 mg	250%	(as Potassium Glycinate Complex)		
(as Niacinamide)			Alpha Lipoic Acid	600 mg	*
Vitamin B6	50 mg	2500%	Taurine	600 mg	*
(as Pyridoxine HCl and Pyridoxal-5-Phosphate)			Inositol	500 mg	*
Folates (NatureFolate™ blend)	400 mcg	100%	Green Tea (Camellia sinensis)(leaf [standardized to contain 95% polyphenols])	200 mg	*
Vitamin B12 (as Methylcobalamin)	1000 mcg	16667%	Carnosine	200 mg	*
Biotin (as d-Biotin)	4 mg	1333%	Vanadium	200 mcg	*
Pantothenic Acid	50 mg	500%	(TRAACS® Vanadium Nicotinate Glycinate Chelate)		
(as d-Calcium Pantothenate)					
Iodine (as Potassium Iodide)	75 mcg	50%			

Other Ingredients: Microcrystalline cellulose, silicon dioxide, vegetable stearate.

## The following has been added to this amazing formula:

- **600 mg lipoic acid + 4 mg biotin** - prevents the typical reduction in carboxylase enzymes seen in research when lipoic acid is given alone. These two nutrients together aid healthy insulin secretion and glucose metabolism.
- **600 mg taurine, 200mg EGCG from green tea and 400 IU vitamin D** - all of which help insulin to work better
- **50 mg benfothiamine, 200 mg carnosine and 50 IU of vitamin E** - to protect from neuropathy & kidney damage
- **3000 IU vitamin A** - important for immune system
- **75 mg vitamin B1 (as thiamine HCl)** - needed for energy
- **100 mcg molybdenum** - needed for detoxification
- **400 mcg NatureFolate™** - our proprietary blend of active isomer, naturally-occurring folates

Metabolic Synergy™ provides nutrients needed for the TCA (tricarboxylic acid) cycle. This is also known as the Krebs cycle or citric acid cycle. This cycle allows the body to burn food for energy by converting glucose into ATP. The more glucose burned, the less glucose in the bloodstream.

Nutrients needed for the TCA cycle include magnesium, manganese and lipoic acid. Vanadium and magnesium, due to their insulin mimicking action, help glucose get inside cells where this burning occurs. These two nutrients are also helpful for blood pressure problems.

Metabolic syndrome is a condition many people risk developing by the time they reach middle age. Metabolic syndrome is defined as a cluster of symptoms or disorders including insulin and leptin resistance, hyperlipidemia (elevated cholesterol and triglycerides), high blood pressure and overweight (weight gain in the belly region is a tell-tale sign). The factors that may lead to these conditions are:

- Excessive carbohydrate consumption, with especially damaging effects from fructose and galactose
- Excessive stored body fat, especially in the abdominal area, due to its active hormonal activity
- Nutrient deficiencies (inositol, chromium, vanadium, magnesium, zinc, omega-3 fatty acids, vitamin D, taurine, vitamin C, vitamins B1, B2, B3)
- High oxidative stress, which depletes antioxidants
- Prolonged demand on the pancreas to produce insulin
- Excessive stress (high adrenaline and cortisol)

A sustained program of lifestyle and diet changes combined with proper nutrient supplementation can reverse and correct most of the underlying causes of the metabolic syndrome (for more details, please see the Designs for Health metabolic syndrome support protocol at [www.designsforhealth.com](http://www.designsforhealth.com)).

**Metabolic Synergy™** is protective against many complications associated with out-of-control glucose levels by reducing its ability to glycate various body proteins in the bloodstream, which in turn has damaging effects on the eyes, brain, kidney, etc. This is achieved with the help of lipoic acid, carnosine and benfotiamine, which have been proven to reduce the risk of neuropathy/retinopathy along with support from vitamin B6, B12 and high gamma vitamin E. This formula has multiple antioxidants for controlling the oxidative stress common in a diabetic.

Excessive fructose consumption can lead to excessive glycation of proteins (up to 16 times faster), hypertension, impaired insulin function (via reduced tyrosine phosphorylation). **Metabolic Synergy™** reduces the damaging effects of fructose consumption through EGCg, zinc, and taurine.

The benefits of normalizing glucose, insulin, and leptin metabolism include: reduced risk of diabetes-related complications (neuropathy, kidney or vision damage), lower cardiovascular risk (lower blood pressure, triglycerides, increased HDL, better endothelial function), reduced cell proliferation (tumors), less water retention, less fat storage and easier fat release from the adipose cells.

***This product works well with Designs for Health PaleoGreens™, Endo Trim™, PaleoFiber™ and CLA***

## References

1. Hipkiss AR, Brownson . Reaction of carnosine with aged proteins: another protective process? Ann N Y Acad Sci. 2002 Apr;959:285-94.
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3. Jacob S, Ruus P, Hermann R, Oral administration of RAC-alpha-lipoic acid modulates insulin sensitivity in patients with type-2 diabetes mellitus: a placebo-controlled trial. Free Radic Biol Med. 1999 Aug;27(3-4):309-14.
4. Boucher BJ . Inadequate vitamin D status: does it contribute to the disorders comprising syndrome 'X'? Br J Nutr. 1998 Apr;79(4):315-27.
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## **Metabolic Synergy™ may help:**

- Support conversion of carbohydrates to energy
- Lower fasting and average glucose levels (hemoglobin A1C)
- Lower fasting and average insulin and leptin levels with improved tissue sensitivity
- Reduce risk of dysglycemia (blood sugar highs and lows)
- Support pancreatic sensitivity & ability to produce adequate amounts of insulin
- Help prevent problems associated with out-of-control sugar levels (glycation) such as:
  - neuropathy
  - retinopathy
  - kidney damage
  - blood vessel damage
  - pancreatic damage
- Prevent nutrient deficiencies induced by excessively high glucose/insulin levels
- Lower cardiovascular complications associated with diabetes and insulin resistance
- Protect from metabolic damage induced by excessive fructose consumption
- Lower homocysteine