

Today, we find blood sugar disorders are found in more people than ever before, and at ever-younger ages. The concept is no longer apropos that only indulgent, over-sweetened, aging adults develop blood sugar disorders. And the problem has spread world-wide, to Jordan, India, Saudi Arabia, Argentina, South Africa and even Afghanistan to name a few of the countries afflicted.

As the epidemic expands, we find ourselves with 366 million diabetics worldwide at the end of 2011, and an annual death count of 4.6 million. The economic costs are astounding at an estimated 465 billion dollars per year. These are the latest Diabetes Atlas figures from the International Diabetes Federation (IDF). The period prior to, through and immediately after World War II saw tremendous advances in chemical medicine, in agricultural science and, quite significantly, in food processing. New technologies helped deliver the necessary C-Rations and K-Rations to millions of soldiers fighting across the globe. After the war, the new technologies were re-deployed against the consuming public at home. It is legitimate to propose that the incidence of blood

sugar disorders in the form of diabetes and hypoglycemia is accelerating because adults and children of today have been raised on post World War II diets that are too dependent on processed foods and too deficient, therefore, in trace nutrients. Most significantly, minerals in particular and phytochemicals we are only recently coming to understand, have been lost during the growing, washing, storing, hulling, drying, grinding, roasting, freezing, boiling, pressing, gassing, rolling and frying of our modern, convenience foods. Science has now identified specific roles for many of those lost nutrients in the regulation of normal blood sugar.

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Diets & Supplements

Attempts at holistic control of blood sugar and protection against complications can be made on several fronts. Exercise and weight reduction are of paramount importance in the battle to re-establish normal blood sugar control. A whole food diet is certainly mandatory. An organic, virtually grain and starch free diet that seeks to maximize trace nutrient content is ideal. Including sea vegetables liberally would be one way to assure continued presence of trace minerals key to balancing blood sugar. Dietary supplements ranging from simple but highly nutritious yeast through multiple vitamin and mineral tablets to specialized, sophisticated formulas could help body systems reorient themselves toward normal operation. These supplements and lifestyle changes could do much to lower elevated insulin and/or blood sugar levels, or raise lagging blood sugar. Given that we cannot expect a universal and instant awakening to the dangers of the modern diet, we must find other means to combat its ill effects.

A Five-Point Holistic Approach

1.) Diet can be modified to reduce the amount of glucose producing foods (i.e. starches and sugars.)

2.) The inflow of glucose can be inhibited by high fiber diets rich in protein and adequate in fat. All three macro-nutrients, protein, fat and fiber, are known to delay conversion of starch to glucose by the intestinal lining and to delay sugar absorption from the gut.

3.) We can suppress endogenous (inside the body) glucose production by the liver with supplements rich in caffeic and chlorogenic acids like blueberry leaf extract and blueberry leaf tea.

4.) We can stimulate intracellular (inside the cell) glucose metabolism with substances such as cinnamon and caffeic acid, found widely in plants.

5.) We can enhance the ability of insulin to stimulate glucose transporting proteins (GTPs) through supplementation with trace minerals and corosolic acid.

Trace Mineral Deficiency

Scientific literature repeatedly shows that dietary supplementation with any one alone of several trace minerals can help establish and support normal blood sugar levels. Copper, Vanadium, Zinc, Manganese, Lithium, and Chromium at sensible doses have all lowered elevated blood sugar in human trials. This indicates the important role of trace minerals in the management of blood sugar. Chromium arginate is a new form of supplemental chromium which gives indication of being the most effective potentiator of insulin yet devised.

Phytochemicals

Proteins, polysaccharides, alkaloids, polyphenols, glycosides and other classes of natural chemical agents from plants (phytochemicals) are the focus of intense worldwide research. Certain of these botanical phytochemicals can improve the function of insulin receptors on each cell membrane, thereby improving the efficiency of insulin. Other natural plant factors preserve critical beta-cells in the pancreas and can boost and enhance pancreatic function. Glycemic Vibrance H marries some of the newest and most effective standardized botanical extracts to the known trace minerals which science tells us will assist in managing blood sugar. Certain dietary fibers help in other ways. Fibers work primarily by slowing glucose absorption to a manageable rate. The effectiveness of fibers relate to the type of fiber and other factors such as the amount of carbohydrate eaten at a meal, a person's gut permeability, amount of insulin and its efficiency of use, plus the presence or absence of protein and fat at a meal.

Botanical Components

Research into folk remedies (e.g. blueberry leaves [chlorogenic acid] and banaba leaves [corosolic acid]) bear out the presence of unknown phytochemicals that can help influence blood sugar balance. Modern testing of ancient medical practices (Ayurveda) has verified the efficacy of many of

their time-honored phyto-medicines. Finally, new discoveries have led to modern plant derivatives of value. Each of these developments through science broadens our understanding of the aberrant biochemistry at work when blood sugar control goes awry. Glucose has a stimulatory effect on the diabetic liver. It causes the enzyme glucose-6-phosphatase (G6P) inside each cell of the liver to overproduce even more glucose, raising blood sugar levels higher! This effect is largely responsible for unusually sustained blood sugar levels between meals in some persons. It has been shown in human clinical trials that caffeic acid and chlorogenic acid can help regulate G6P function.

Modern investigations have brought to light phyto nutrients that support normal cellular functions. Banaba leaf extract contains some of those phyto nutrients that help keep blood glucose in the healthy range. Its normalizing influence is seen through beneficial effects on insulin, triglycerides, cholesterol, and urinary excretion of glucose. At the same time, Banaba leaf extract also serves as a strong antioxidant, scavenging free radicals to prevent cell membrane oxidative damage. Cinnamon bark powder increases cellular glucose oxidation. Data indicates that the increase can be twenty times normal. Methyl hydroxychalcone polymer (MHCP) has been identified as the active agent in cinnamon that accelerates the burning of blood sugar. It not only increases glucose oxidation, but also improves the efficiency of insulin receptors on cell membranes while working as an antioxidant as well. 200 mg per day of silymarin extract can reduce both fasting and postprandial (after a meal) blood glucose, in addition to significantly reducing glycosylated hemoglobin. Continued over time (e.g. 120 days), obesity is also reduced. It is postulated that these improvements may be related to increased insulin sensitivity in peripheral tissues brought on by the milk thistle extract. Nerve tissue, kidney tissue and eye tissue lack barriers to blood sugar. One of the effects of high blood sugar in these tissues in these tissues is to suppress cellular generation of the protective antioxidant enzymes, superoxide dismutase, catalase, and glutathione peroxidase. Silymarin, a free radical scavenger, seems to have a positive effect on the production of the three enzymes, constitute some of the most important defense mechanisms against free radical damage.

Antioxidants

A reduction in quantity and effectiveness of cellular antioxidant enzymes results in what is called "reduced antioxidant status." Reduced antioxidant status brings more lipid peroxidation within cells and their membranes, thereby setting the stage for complications in cellular functions. Antioxidant supplements can reduce peroxidation and improve overall antioxidant status, helping raise levels of cellular antioxidant enzymes normally suppressed by elevated blood sugar. Some key antioxidants identified by science with application in protecting against the effects of elevated blood sugar are in Glycemic Vibrance H.

We believe specialized supplements should include specific dietary fibers, trace nutrients, new bioactive botanical extracts, and key trace minerals support normal insulin and blood sugar metabolism. Nutrients in Glycemic Vibrance H have been selected for their role in supporting normal insulin uptake at the cellular level by providing a correct balance of nutrients associated with normal glucose metabolism within cells. Glycemic Vibrance H is a formula designed to help restore missing nutrients required for normal blood sugar and to correct the biochemical confusion that leads to blood sugar disorders.



HEALTHY BLOOD SUGAR Management



New & Improved



Version 1.0
Natural
Orange-Mango
Flavor

Look What's Inside

METABOLIC VIBRANCE™

► **Directions** One, two or three times each day, or as directed by a health professional, mix one level scoop (enclosed) of Metabolic Vibrance into six (6) or more ounces of cool blueberry leaf tea, water or diluted juice of your choice, and drink. This product can be taken at any time of day, either with or between meals. Keep out of reach of children. Store in a cool dry place.

► **NOTE** Control of blood sugar is highly individualized. One, two or three servings may be required to provide adequate nutritional support for blood sugar in the normal range. This product may be used with or in place of Metabolic Vibrance Capsules.

WARNING: Metabolic Vibrance (MET) may improve insulin efficiency. Diabetics on insulin should consult their doctor before taking MET, and monitor blood glucose carefully when using MET. You may need to adjust personal insulin dosages to compensate for improved utilization. DO NOT exceed three (3) scoops per day except on the advice of your health professional.*

Our Mission Optimum Health

To assist through supplemental nutrition the healing of illness and the establishment of optimum health. To design and market the most efficacious Nutritional Food Supplements for the benefit of all men, women and children.



*Formulated by Mark Timon,
Founder, Vibrant Health
MS Clinical Nutrition

Mark Timon

*These statements have not been evaluated by the FDA.
This product is not intended to diagnose, treat, cure or prevent any disease.

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METABOLIC VIBRANCE™

Supplement Facts

Serving Size 3 scoops (Approx. 12g)
Servings per container 15

Amount per serving	%Daily Value	Amount per serving	%Daily Value
Calories	56	Ascorbyl palmitate	500 mg *
Calories from fat	7	certified organic	
Vitamin C (from ascorbyl palmitate)	40 mg 6.7%	Fruiteek seed 60% mannans extract	250 mg *
Vitamin D3 (from Lichen oil)	1000 I.u. 250%	Cinnamon bark powder certified organic	250 mg *
Iodine (from plants)	300 mcg 200%	Milk thistle seed 80% silymarin extract	200 mg *
Zinc (elemental, Krebs Cycle)	30 mg 200%	Green tea 98%	60 mg *
Copper (elemental, silymarin)	1 mg 50%	98% polyphenols 80% catechins, 50% EGCG decaffeinated std ext.	
Manganese (elemental, Krebs cycle)	9 mg 450%	Banaba Leaf 1% crossolic acid extract	48 mg *
Chromium (elemental, arginate)	300 mcg 250%	Lichen oil powder	10 mg *
Vanadium (elemental, Vanadyl sulfate)	20 mg *	supplies 1,000 I.u. Vitamin D3 Cholecalciferol	
Ayurvedic Components		Support Factors	
Pericarpium macropium	500 mg *	Acetyl-L-Carnitine	250 mg *
5% pterostilbene/0.5% epigallocatechin extract	300 mg *	L-carnitine fumarate	250 mg *
Mumfordicin® bitter melon fruit	300 mg *	Taurine	250 mg *
7% bitters/0.5% chararutin extract	300 mg *	L-arginine	200 mg *
Tinospora cordifolia	300 mg *	N-acetyl-cysteine	200 mg *
2.5% bitter principles extract	200 mg *	Alpha-lipoic acid (99%)	100 mg *
Holy basil 2% rosmarinic acid std extract	200 mg *	Ascorbyl palmitate	100 mg *
Gymnema sylvestre 70% Gynemic acids std ext.	200 mg *	Palatability Factors	
Botanical Components		Fructo-oligosaccharides	789 mg *
Fruiteek seed 50% fiber extract	2500 mg *	86% oligofruktose + inulin std extract	480 mg *
Apple whole fruit powder	2000 mg *	Citric acid powder	300 mg *
Blueberry leaf 20% Chlorogenic acid extract	500 mg *	Stevia leaf extract	300 mg *
		Majorsweet Stevia extract	120 mg *

Other Ingredients Natural Orange-mango flavor (900 mg)



Metabolic Vibrance is available in:

15 to 45 day supply, 180.13 gm/6.35 oz powder and in
Capsules, 90 count

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