

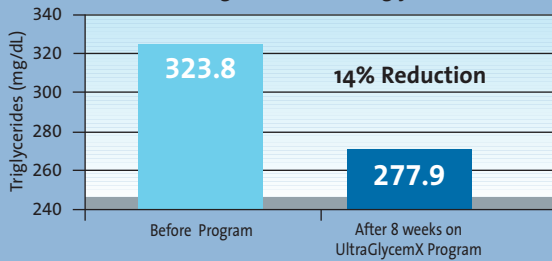
Statistically significant improvements in fasting and 2-h postprandial insulin and triglycerides with the UltraGlycemX Program.

# UltraGlycemX<sup>®</sup> Medical Food

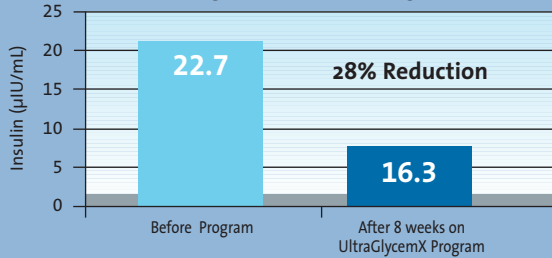
Clinically Tested Nutritional Support for Dysglycemia

In a preliminary, randomized, 2-arm clinical trial with 37 insulin resistant patients:

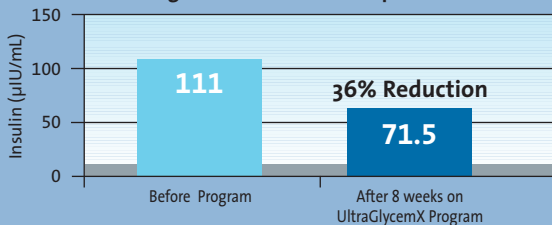
Average Decrease in Triglycerides



Average Decrease in Fasting Insulin



Average Decrease in 2-h Postprandial Insulin



## Patient Benefits:

- Specifically formulated to nutritionally support patients with the following symptoms or conditions:
  - ▶ Type 2 diabetes
  - ▶ Hypertension
  - ▶ Metabolic syndrome (syndrome X/insulin resistance syndrome)
  - ▶ Hypoglycemia
  - ▶ Hypertriglyceridemia
- Provides a scientifically designed blend of nutrients to:
  - ▶ Support healthy insulin and glucose metabolism
  - ▶ Maintain healthy cholesterol levels
  - ▶ Protect against oxidative stress
  - ▶ Provide optimal foundation nutrition
  - ▶ Promote healthy body composition
- Comes with step-by-step program instructions and dietary recommendations

Trusted by leading healthcare professionals for nutritional support of glucose/insulin regulation.

Clinically tested UltraGlycemX is made from premium-grade ingredients and carefully manufactured to assure purity, potency, and effectiveness.

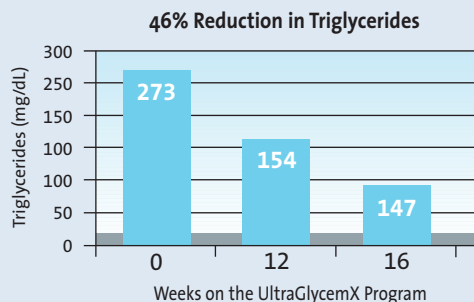
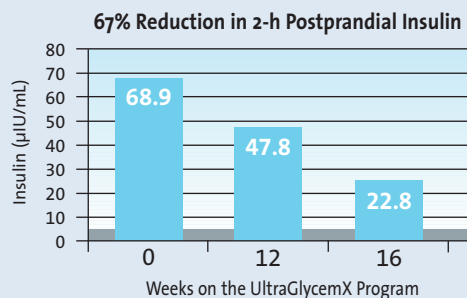
## RESULTS OF CLINICAL AND CASE STUDIES

Studies conducted at the Functional Medicine Research Center (FMRC)—the clinical research arm of Metagenics—show positive effects of the UltraGlycemX Program on:<sup>1,5</sup>

- Fasting glucose
- Fasting insulin
- Postprandial glucose
- Postprandial insulin
- Triglycerides
- Triglyceride/HDL ratio
- Body mass index (BMI)
- Blood pressure

### Case Study\*: Metabolic Syndrome

A 53-year-old white female presenting with fatigue and gradual weight gain, as well as a family history of hypertension and hyperthyroidism. Laboratory assessment showed elevated triglycerides and elevated 2-h postprandial insulin. She was instructed to take 600 mg EPA and 400 mg DHA twice daily and placed on the UltraGlycemX Program for 16 weeks. After 16 weeks, the patient showed an improvement in her BMI\*\* (from 30 to 27) and MSQ<sup>†</sup> score (from 47 to 0). The patient's 2-h postprandial insulin level and triglycerides were reduced (Figures 1 & 2), and blood pressure dropped from 120/86 to 92/62.<sup>2</sup>



\*The information provided in this Case Study describes the results of one patient under the care of a licensed healthcare practitioner and may not be a typical response.

\*\*BMI is the body mass index and can be computed by the weight (kg) divided by the square of the height (m).

<sup>†</sup>The Medical Symptoms Questionnaire® (MSQ) is a clinical tool for the evaluation of general physical symptoms. Total scores above 75 are generally associated with substantial symptomatology and disability; scores below 30 generally indicate few or low-intensity symptoms.

## WHAT SETS ULTRAGLYCEM X APART?



- **Human studies.** Clinical and case studies conducted at the FMRC demonstrate safety and efficacy.
- **History of use.** In addition to specific human research, thousands of clinicians and their patients worldwide have experienced reliable results for years.
- **Low glycemic index GI.** Clinically tested and shown to have a low GI when referenced against both glucose (36) and white bread (52)—an ideal choice for blood sugar concerns.<sup>6</sup>
- **Specialized nutrients.** Chromium, alpha-lipoic acid, vanadium, vitamin E, biotin, and magnesium support insulin receptor sensitivity and function, as well as insulin-stimulated glucose disposal.
- **Broad antioxidant protection.** Vitamin A, beta-carotene, zinc, selenium, copper, and manganese help reduce the oxidative stress associated with hyperinsulinemia.
- **PharmaSoy®.** Scientifically advanced blend of certified non-genetically engineered, identity-preserved soy protein; isoflavones; and dairy-free calcium. Adequate dietary protein and nitrogen balance are key in controlling dysinsulinemias, and isoflavone intake appears to be inversely associated with incidence of type 2 diabetes.<sup>7,8</sup> Diets low in saturated fat and cholesterol that include 25 grams of soyprotein a day may reduce the risk of heart disease. Soy protein has also been shown to have cholesterol-lowering effects.
- **AmyloSTAR™.** A proprietary blend of maltodextrins and high amylose starch that may improve insulin response, glucose levels, and hypertriglyceridemia. Shown to lower maximum blood glucose levels in patients with type 2 diabetes.<sup>9</sup>
- **Galactomannan from locust bean.** Hypolipidemic agent that may substantially improve both the glycemic and insulinemic responses in patients with type 2 diabetes.<sup>10</sup>
- **Soluble fiber from guar gum.** Helps lower postprandial blood glucose and insulin in type 2 diabetes.<sup>11</sup>
- **Complimentary to restricted diets.** Free of dairy products, gluten, wheat, egg, yeast, and artificial flavorings, sweeteners, and colors. And each serving is only 150 Calories.
- **Variety.** Available in delicious Original, Natural Chocolate, and Natural Mocha flavors.

## THE ULTRAGLYCEM X PROGRAM

The UltraGlycemX Program consists of UltraGlycemX and a specially designed low-glycemic-index dietary program (as outlined in the UltraGlycemX Patient Guide) for patients who have problems with blood sugar regulation.

### Suggested Step Approach:

#### Days 1-2:

Patients consume 1 scoop of UltraGlycemX with 4-6 oz. of pure water two times daily, and start on the dietary plan as instructed.

#### Days 3-7:

Patients gradually increase to 2 scoops of UltraGlycemX mixed with 8-12 oz. of pure water and consume two times daily, and continue on dietary plan.

#### Days 8-28:

Patients consume 2 scoops of UltraGlycemX mixed with 8-12 oz. of pure water two times daily, and continue on dietary plan.

#### Day 29 and Beyond:

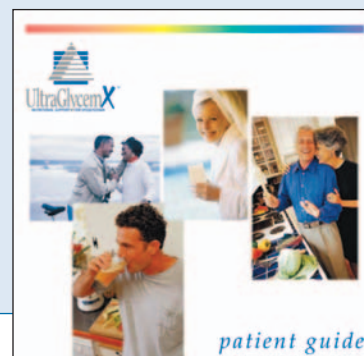
Discuss your patients' response to the program. You may want them to continue on the program, continue the product or diet alone, or use some other combination of diet and UltraGlycemX.

## PROGRAM MATERIALS

- **UltraGlycemX Patient Guide.** Comprehensive program guide with menus, recipes, and FAQs.
- **Commonly Asked Questions.** Helps practitioners answer questions patients often ask about the program.

### For Additional Information on UltraGlycemX and Dysglycemia

- **Wall Poster.** Framed illustration of the physiology of insulin resistance and where components of UltraGlycemX can offer management support.
- **Information Sheet.** Smaller version of the wall poster with explanatory text on the back.
- **Insulin Resistance Brochure.** Patient-friendly education piece.
- **ANSR Article.** Technical review of insulin resistance and natural treatments.
- **Prescribing Information.** Technical information on UltraGlycemX, indications, and ingredients and their mechanisms of action.



# UltraGlycemX

## Nutrient Profile:

Caloric Distribution	Percent of Total Energy
Protein .....	40% of calories
Carbohydrates .....	42% of calories
Fat .....	18% of calories

## Nutritional Information per Serving

Serving Size .....	2 scoops (50 g)
Servings per Container .....	14
Calories .....	150
Fat .....	3 g
Cholesterol* .....	0 mg
Sodium .....	170 mg
Potassium .....	580 mg
Total Carbohydrate .....	25 g
Simple .....	4 g
Complex .....	21 g
Dietary Fiber .....	9 g
Protein .....	15 g

## Each Serving Contains:

	% RDI
Vitamin A (retinyl palmitate) .....	2500 IU 50
Vitamin A (mixed carotenoids) .....	2500 IU 50
Vitamin C (Ultra Potent-C®) .....	250 mg 420
Calcium (as phosphate) .....	500 mg 50
Vitamin D (cholecalciferol) .....	100 IU 25
Vitamin E (as d-alpha tocopheryl succinate) .....	200 IU 670
Thiamin (as thiamin HCl) .....	1 mg 70
Riboflavin .....	1 mg 60
Niacin (as niacin and niacinamide) .....	39 mg 200
Vitamin B <sub>6</sub> (as pyridoxine HCl) .....	1 mg 50
Folate (as folic acid) .....	200 mcg 50
Vitamin B <sub>12</sub> (as cyanocobalamin) .....	3 mcg 50
Biotin .....	5 mg 1670
Pantothenic acid (as D-calcium pantothenate) .....	5 mg 50
Phosphorus .....	400 mg 40
Magnesium (as magnesium citrate) .....	200 mg 50
Zinc (as zinc glycinate) .....	15 mg 100
Selenium (as selenomethionine) .....	150 mcg 210
Copper (as copper lysinate HCl) .....	1.5 mg 75
Manganese (as Manganese Chelazome® amino acid chelate) .....	1 mg 50
Chromium (as chromium polynicotinate) .....	500 mcg 420
Molybdenum (as molybdenum amino acid chelate) .....	38 mg 50
Isoflavones .....	17 mg **
Alpha-lipoic acid .....	200 mg **
Inositol .....	100 mg **
Vanadium (as vanadyl sulfate) .....	2.5 mg **

**Other ingredients:** Soy protein isolate (PharmaSoy®), corn maltodextrin, modified high-amylose starch, rice polishings, partially hydrolyzed guar gum, fructose, natural flavors, locust bean gum, lecithin.

**Directions:** Blend, shake, or briskly stir two level scoops into 8-12 ounces of water.

**Form:** 24.7 oz. (700 g) Powder Container (14 servings)

Ultra Potent-C® is a registered trademark of Metagenics, Inc. U.S. Patent #5,626,883.

Manganese Chelazome® is a registered trademark of Albion Laboratories, Inc.

PharmaSoy® is a technologically advanced nutritional blend of superior soy protein, isoflavones, and dairy-free calcium.

\* Information on cholesterol is provided for individuals who, on the advice of a physician, are modifying their dietary intake of cholesterol.

\*\* Daily value not established.

## References

- Lukaczer D, Lerman R, Schiltz B, et al. A pilot trial comparing the effects of identical weight loss diet programs with or without additional nutrient supplementation in subjects with insulin resistance and hyperinsulinemia. Gig Harbor, WA: FMRC; Research Report 105, 5/00.
- Case Study: Nutritional support using UltraGlycemX™ medical food in a patient with metabolic syndrome. Metagenics, Inc. 2003; 001R703.
- Case Study: Nutritional support using UltraGlycemX in a patient with hyperinsulinemia and lethargy. Metagenics, Inc. 2003; 004R803.
- Case Study: 013R1103;2003
- Case Study: 010R1003;2003
- Lukaczer D, Schiltz B. Determination of the glycemic index for UltraGlycemX™ medical food. Gig Harbor, WA: FMRC; Research Report 106, 7/00.
- Bhathena SJ, Velasquez MT. Beneficial role of dietary phytoestrogens in obesity and diabetes. *Am J Clin Nutr* 2002;76(6):1191-201.
- Mezei O, Banz WJ, Steger RW, et al. Soy isoflavones exert antidiabetic and hypolipidemic effects through the PPAR pathways in obese Zucker rats and murine RAW 264.7 cells. *J Nutr* 2003;133(5):1238-43.
- Behall KM, Howe JC. Effect of long-term consumption of amylose vs. amylopectin starch on metabolic variables in human subjects. *Am J Clin Nutr* 1995;61(2):334-40.
- Zavoral JH, Hannan P, Fields DJ, et al. The hypolipidemic effect of locust bean gum in familial hypercholesterolemic adults and children. *Am J Clin Nutr* 1983;38(2):285-94.
- Gatenby SJ, Ellis PR, Morgan LM, et al. Effect of partially depolymerized guar gum on acute metabolic variables in patients with non-insulin-dependent diabetes. *Diabet Med* 1996;13(4):358-64.

**UltraGlycemX and UltraBalance® medical foods are researched, developed, and manufactured by Metagenics, Inc.**



www.metagenics.com

©2003 Metagenics, Inc.  
MET831 9/03 Rev 3/04