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**NUTRITIONAL SUPPORT USING THE ULTRAMEAL PROGRAM AND A TARGETED DIETARY SUPPLEMENT FOR HEALTHY GLUCOSE METABOLISM IN A PATIENT WITH METABOLIC SYNDROME**


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**Purpose**

To show how targeted nutritional support with the UltraMeal Medical Food program in conjunction with a dietary supplement for healthy glucose and insulin metabolism may be beneficial in a patient with metabolic syndrome and associated health concerns.

**Patient's Presentation and History**

A 53-year-old overweight white female presented with a history of weight gain over the previous 30 years. She had tried a variety of weight loss programs in the past with only moderate success. She had recently started aerobic exercise, 30-45 minutes twice weekly. She ate a standard American diet with significant amounts of grains and carbohydrates.

The patient's medical history and other symptoms included hypertension, for which she was taking no medication; seasonal allergies and sinus problems; arthritis of the right knee; and menopause-related flushing for the previous 2 years. Her family history included diabetes, heart disease, thyroid disease, and hypertension.

**Patient's Objective Information**

- HT: 68.5"; WT: 288.5 lb; BP: 169/88. BMI: 43.9 kg/m<sup>2</sup>; waist circumference: 47"; hip circumference: 56"; W/H: 0.83. Physical exam essentially unremarkable
- Prescriptive medications and dietary supplements: fexofenadine HCl, prn; guaifene/pseudoephedrine, 120 mg bid prn; glucosamine; multivitamin/mineral; antioxidants; calcium/phosphorus/magnesium; *Ginkgo biloba*
- Significant laboratory findings: elevated total cholesterol (tChol) and LDL cholesterol (LDL-C); depressed HDL cholesterol (HDL-C); elevated 2 h postprandial (PP) insulin and 2 h PP glucose
- Assessment: metabolic syndrome, obesity, hypertension, hyperlipidemia, and impaired glucose tolerance (hyperinsulinemia with compensation, but apparent decreased reserve capacity)

**Plan**

The patient was advised to:

- Start UltraMeal Medical Food for nutritional support of conditions associated with altered body composition, 1-2 servings/day
- Begin combination formula for support of healthy glucose and insulin metabolism, containing chromium, green tea, cinnamon, and alpha-lipoic acid, 2 tablets bid
- Start low-glycemic-load dietary program with no caloric restrictions
- Increase aerobic activity, working up to 100 minutes/week in the following 4 weeks
- Continue other supplements and medications

**4 and 8 Week Results**

At 4 weeks, the patient's weight had decreased to 278.5 lb and her BP had improved to 130/80. She was compliant with the dietary program and supplements, but had exercised only sporadically. She was advised to continue on the prescribed plan and to add UltraMeal Bar Medical Food as a snack.

After 8 weeks, the patient had continued to do well with the dietary program. She weighed 272.5 lb and her BP was 138/76. She was partially compliant with the exercise program (45 minutes of water aerobics, 20 minutes of walking per week). She noted that it was easier to climb stairs, and she felt more physically fit. Laboratory tests indicated improved blood lipids and fasting insulin. The patient was told to continue the program as prescribed.

**12 Week Results**

After 12 weeks, the patient weighed 269 lb, with a loss of 19.5 lb over 12 weeks. Her BP remained improved at 138/82. The patient noted feeling more energetic and was managing about 100 minutes of aerobic exercise weekly in spite of her knee acting up. She was advised to continue on the plan, and to increase exercise time as tolerated.

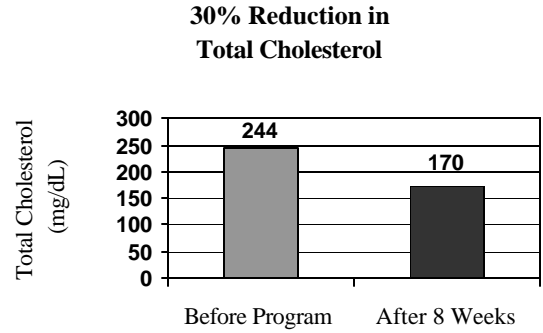
**Conclusion**

This case study suggests that a combination of UltraMeal Medical Foods, a dietary supplement for glucose metabolism support, and healthy lifestyle changes can positively impact multiple aspects of health in patients with metabolic syndrome.

**Figure 1**

After 8 weeks, the patient's total cholesterol level had markedly decreased from 244 to within reference range at 170 (reference range: 110-200mg/dL).

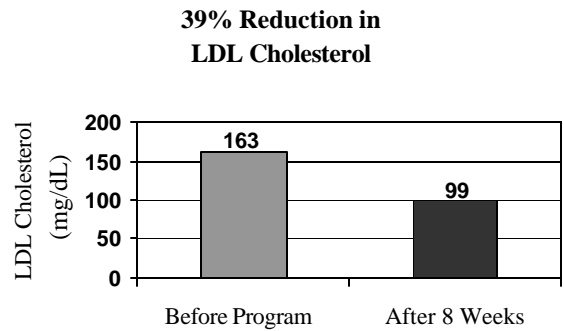
This result suggests a substantial improvement in the patient's total cholesterol level with the inclusion of UltraMeal Medical Food, a dietary supplement to support healthy glucose metabolism, and lifestyle changes.



**Figure 2**

The patient's LDL cholesterol was reduced from 163 mg/dL to within reference range at 99 mg/dL (reference range: 95-130 mg/dL).

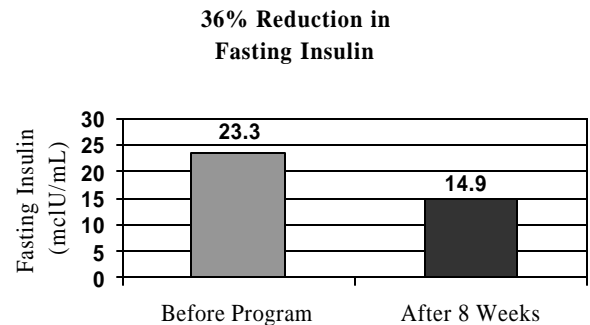
The result suggests a notable decrease in LDL cholesterol after 8 weeks on the medical food, dietary supplement, and healthy lifestyle plan.



**Figure 3**

The patient's fasting insulin was reduced from 23.3 mIU/mL to 14.9 mIU/mL (reference range: 3-30 mIU/mL).

The result suggests a considerable improvement in fasting insulin levels when UltraMeal Medical Food, a dietary supplement for glucose metabolism support, and lifestyle changes were incorporated in the patient's plan.



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<sup>†</sup>BMI is the Body Mass Index and is computed by the weight (kg) divided by the square of the height (m).

Note: 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. UltraMeal medical food is to be used under the supervision of a physician or other licensed healthcare practitioner.

Case Study: *Nutritional support using the UltraMeal Program and a Targeted Dietary Supplement for Glucose Metabolism Support in a Patient with Metabolic Syndrome.* Metagenics, Inc; 055MS604.