

# Case Study

52 year old female patient with chief complaint of  
**MUSCLE ACHES AND CRAMPS, LOW ENERGY AND MENOPAUSAL SYMPTOMS**



This breast cancer survivor was primarily diagnosed with Osteopenia, with secondary diagnoses of athermalgia and Malaise. Medications she had been taking include Actonel, Arimidex, Calcium, Vitamin D and Vitamin C. SpectraCell's MicroNutrient Testing revealed functional deficiencies of Vitamin B12, Insulin, Selenium, Oleic Acid, Chromium, Vitamin E, Vitamin D and Calcium. **Based upon these deficiencies, she was administered the following daily nutritional supplement protocol:**

- 1) 1,000 mg IM of Vitamin B12 and 100 mcg of F/B methyl B12
- 2) 2 tablespoons olive oil
- 3) 1,000 IU of Vitamin D3
- 4) 1,200 mg of Calcium citrate
- 5) 200 mcg of Selenium
- 6) 400 IU of Vitamin E
- 7) 100 mcg of Chromium picolate

**In addition to the above supplements, diet and exercise programs were implemented.** The patient had to perform weight bearing exercises 5 days per week. She also had to have a diet with a low glycemic index, no sugar and no ETOH. Weight loss was recommended through caloric restriction.

**Follow up SpectraCell's MicroNutrient Testing was performed 12 months later.**

## **Clinical Outcome:**

**Vitamin D and Insulin levels improved. The patient's fasting blood sugar was at 80.** She also experienced relief to her muscle aches and cramps and had increased energy and vigor. The patient was able to resolve her symptoms without prescription medication, have a prevention strategy for potential insulin resistance and utilize a comprehensive regimen for Osteopenia management.



MicroNutrient  
Testing

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