
**NUTRITIONAL SUPPORT USING ULTRACLEAR PLUS® AND ULTRACLEAR SUSTAIN®
IN A PATIENT WITH CHRONIC FATIGUE SYNDROME**

Purpose

To show how a targeted nutritional support program featuring UltraClear PLUS medical food for detoxification and UltraClear SUSTAIN medical food for gastrointestinal (GI) support may be useful in some patients with long-standing chronic fatigue syndrome (CFS).

Patient's Presentation and History

A 42-year-old Caucasian female presented with CFS, reporting unremitting fatigue, insomnia, chronic arthralgias and myalgias, post-exertion exhaustion, cognitive dysfunction, cyclical acne, recurrent sinus and strep infections, and increasing sensitivity to environmental stimuli (e.g., tobacco smoke, perfumes, newsprint). At the time of presentation, she was on disability and unable to work. The patient primarily ate organic foods, and noted some bloating with wheat and dairy. She had a history of hypothyroidism, mononucleosis, allergies, migraines, 6 weeks of "colitis-like" symptoms after pesticide exposure, and multiple antibiotic courses.

Patient's Objective Information

- BMI[†]: 22.8; BP: 120/80
- MSQ* score 129
- Results of HEENT exam: notable allergic shiners, lungs clear to auscultation
- Thyroid palpable, liver non-tender, abdomen soft with diffuse tenderness in right and left upper quadrants
- Along with dry skin, reddened vesicles in various stages of eruption, healing, and scarring noted on anterior arms, forearms, calves, and thighs
- Prescriptive medications and supplements included spironolactone (75 mg/day), desiccated thyroid (120 mg/day), and a variety of nutritional supplements
- Assessment: CFS, multiple chemical sensitivities, possible food allergies, and adrenal fatigue

Plan

In addition to continuing prescriptive medications and discontinuing supplements, the patient was instructed to begin taking:

- UltraClear PLUS medical food, 3 servings daily
- Licorice root extract, ¼ tsp qd
- Extract of 7 mushrooms, 30 drops bid
- Multivitamin/mineral supplement without iron, 2 tablets bid

1 and 3 Week Results

The patient's laboratory results from week 1 showed altered intestinal permeability and detoxification.

After 3 weeks on the program, the patient reported improvements in sleep, cognition, and energy and was instructed to:

- Continue UltraClear PLUS, licorice root, multivitamin/mineral supplement without iron
- Discontinue mushroom extract
- Add elimination diet, fiber supplement (1 scoop tid), glutamine (5 grams tid)

8 and 12 Week Results

The patient's fatigue, energy, and sleep continued to improve. Prior to the program, she was sleeping 14-16 hr/day, decreasing to 8-10 hr/day after 8 weeks on the program. She was instructed to continue the protocol and add sodium sulfate (20 mg bid) to help manage chemical sensitivities.

The patient indicated a 30% to 40% improvement overall after 12 weeks, and said she was better able to withstand chemical exposures. Intestinal permeability and detoxification laboratory values also improved. The patient was instructed to add a supplement to support mitochondrial energy production (2 capsules tid).

20 and 32 Week Results

The patient continued to do well and rated her overall improvement at 50% by the 20th week. She was instructed to:

- Continue the elimination diet, licorice root extract, multivitamin/mineral supplement, and fiber supplement
- Discontinue UltraClear PLUS, mitochondrial support supplement, and glutamine
- Begin taking UltraClear SUSTAIN medical food, 2 scoops bid
- Increase sodium sulfate, 400 mg bid
- Add N-acetylcysteine, 500 mg tid

After 32 weeks, the patient was no longer bedridden and continued to show improvement. She decided to remove mercury amalgams and had two chelation IV therapies. The patient noted that support for detoxification, particularly the sodium sulfate, helped her manage chemical sensitivities.

Conclusion

This case study suggests that a focused nutritional program featuring UltraClear PLUS for detoxification and UltraClear SUSTAIN to support healthy GI function may help address CFS symptoms—including multiple chemical sensitivities associated with long-term CFS.

Figure 1

After 32 weeks, the patient’s Medical Symptoms Questionnaire* score decreased from 129 to 18 (reference range: <30 = few or low intensity symptoms).

The result suggests a distinctive clinical improvement and noticeably fewer symptoms.

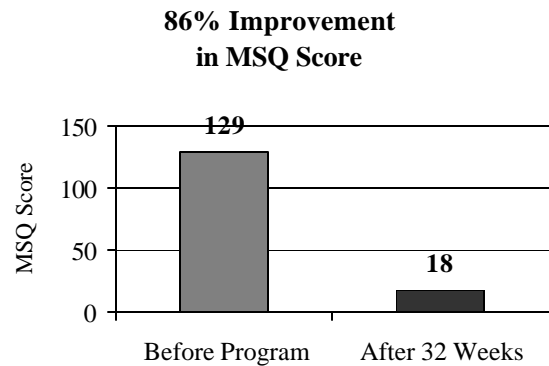


Figure 2

Lactulose-to-mannitol ratio decreased to within reference range, from 0.338 to 0.031 after 32 weeks (reference range: 0.01 to 0.06 IP).

This result suggests that the recommended nutritional protocol featuring UltraClear PLUS and UltraClear SUSTAIN helped improve the patient’s “leaky gut.”

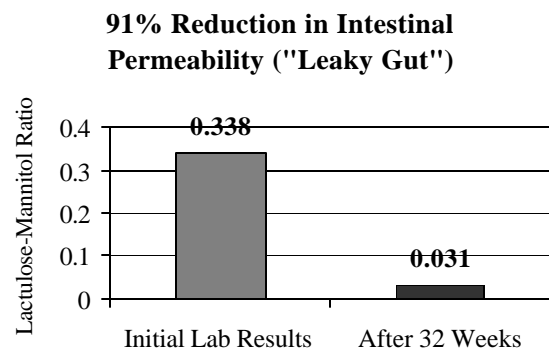
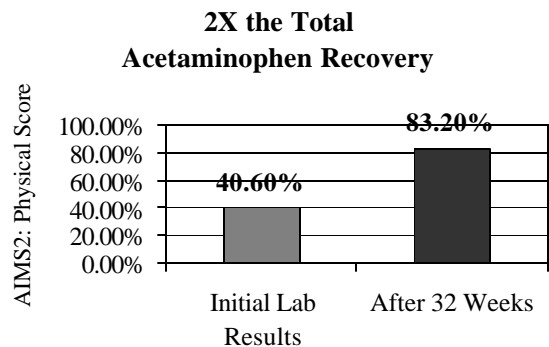


Figure 3

Acetaminophen recovery was highly compromised prior to the program, at 40.6% of a challenge dose recovered. After the program, acetaminophen recovery increased 2-fold to 83.2%. Specifically, glucuronidation, sulfation, and glutathione conjugation were all low prior to the program (25%, 12%, and 3.6% respectively). After 32 weeks on the program, all of these detoxification parameters improved to well within their reference ranges (44%, 32%, and 7.2% respectively).

The results indicate a substantial improvement in Phase II detoxification through glucuronidation, sulfation, and glutathione conjugation with the targeted nutritional support program.



[†]BMI is the Body Mass Index and can be computed by the weight (kg) divided by the square of the height (m).

*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.

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. UltraClear PLUS medical food and UltraClear SUSTAIN medical food are to be used under the supervision of a physician or other licensed healthcare practitioner.

Case Study: Nutritional Support Using UltraClear PLUS and UltraClear SUSTAIN in a Patient with Chronic Fatigue Syndrome. Metagenics, Inc.; 016CFS1203.