

Nutritional Supplementation for Chronic Fatigue Syndrome

Nutrient	Tentative Protocol	Possible Benefits
Folic Acid	1-10 mg/day (3-month trial)	↓ Fatigue and depression; improved immune function
Vitamin B12	Total of 6,000-70,000 µg IM/week (3-week trial)	↓ Fatigue, depression, and pain; improved microcirculation
Vitamin C	10-15 g daily	Improved immune function, ↓ Pain; improved microcirculation
Magnesium	If ↓ RBC Mg: 100 mg IM/week x 6 Weeks - And malic acid Mg: 600 mg/day; malic acid 2,400 mg/day (8 week trial)	Subjective improvement ↓ Muscle pain
Sodium	If diagnosis of neurally mediated hypotension: ↑ Sodium intake moderately	Subjective improvement
Zinc	135 mg/day x 15 days	↑ Muscle strength and endurance ↓ Pain and fatigue; improved immune function
L-Tryptophan	In fibromyalgia: 5-hydroxytryptophan 100 mg 3 times daily (3 month trial)	↓ Pain and fatigue
L-Carnitine	1-2 g 3 times daily (3 month trial)	Improvement that can be dramatic
Coenzyme Q-10	100 mg daily (3 month trial)	Marked improvement with ↑ muscle endurance
Essential fatty acids	280 mg GLA and 135 mg EPA daily (3 month trial)	General improvement

*NOTE: Werbach recommended that a "general high-potency vitamin/mineral supplement" be used together with the supplements listed in this table. Reprinted with the permission from "Nutritional Strategies for Treating Chronic Fatigue Syndrome", by M.R. Werbach, 2000, *Alternative Medicine Review*, 5, pp. 93-108.

Physical Therapy Protocol for Spinal Cord Stimulation

NOTE:

At 6 to 8 weeks post procedure, patient can begin to increase activity.

Caution: leads can still be pulled out. Note where the leads are, as well as the battery.

Always avoid contact around the battery and avoid transverse stresses across the lead.

For the Physical Therapist

First Examination

Chronic and post surgical myofascial dysfunctions:

Trigger points, scar, general spasm

Lengthwise soft tissue stroking along the lead, as well as gentle scar mobilization.

Related to the positioning during the procedure, patients come out with upper back and shoulder pain that needs to be addressed

Myofascial Exam:

Assess for latent and active trigger points:

Joint Exam: assess kinetic chain for dysfunctions, for instance

Thoracic spinal cord stimulator for lumbar neuropathic pain: assess hips, knees, feet/ankles

Goals

Goals of first 1 to 6 visits: reduction/resolution of post surgical acute myofascial pain AND reduction of myofascial dysfunction as a result of their chronic symptoms.

Goals of the 6 week program:

Restoration of joint function in the kinematic chain, via manual therapy

Skills and knowledge of pacing for continued return to ADL's and recreational activities.

Expectations:

- The patient has had years of pain; there will be an overlying myofascial pain syndrome that needs to be addressed.
- It is possible that there are causal factors or secondary pain generators that need to be addressed
- There will be fatigue of structures that are being loaded during the rehab program
- It is important to restore structural integrity prior to putting on or adding loads
- Do not expect the response to training that an athlete would have.

When post surgical pain is abolished, continue soft tissue work on chronic MF syndrome, and perform

Functional assessment:

Balance and coordination retraining with the new perception

Stabilization skills

ADL capabilities and goal

Realistic recreational activities

Testing can include:

- Active SLR
- Single leg stance
- Timed get up and go
- Gait speed
- Steps per minute

NOTE:

Do not perform an IAOM basic functional examination or any other clinical testing focused on selective tissue testing for a pain generator for the region that has the stimulator. (No full range spinal movements, no neural tension testing!)

Do asses for joint and other musculoskeletal disorders that can be contributing to residual symptoms and or preventing progression.

Remember, often these patients could not tolerate physical therapy prior to their implant, but now they can.

1. Many rehab exercise programs are based on athlete models. This patient needs to have restored integrity of their musculoskeletal structures prior to strengthening and conditioning.
2. Restore Integrity:
During the initial phases of treatment, where intensive manual therapy may be required, focus on skills training (to create internal stiffness) and activation.
3. Respect Load-ability:
Structures undergoing new loads will experience pain based on fatigue as well as injury if the load is too great too quickly.
 - a. Fatigue pain: recovery within 48 hours
 - b. Overloaded pain: recovery takes greater than 4 days

Consider a rehab period of time for 6 weeks, at 3 times per week.

1. Attend to the precautions and contraindications of the Resource Binder.
2. Goals at 6 weeks
 - a. Skills application to novel activities
 - b. Ability to pace activities and return to activities
 - c. Understanding of the timeline to complete recovery
 - i. 1 year, surgical healing
 - ii. 2 years,
 - iii. 3 years, bone density recovered
 - iv. 4 years, neural recovery

Outcome Measurement should be filled out at the beginning and at the end of the treatment.