

# **Clinical assessment of whole body cryotherapy treatment outcomes in fibromyalgia.**

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## **Abstract**

**PATIENT SCENARIO:** A 27-year-old female with long standing history of fibromyalgia presented for a total of 25 whole body cryotherapy (wbc) treatments at -170 degrees Celsius. The patient had no other medical problems, was not pregnant and did not take any medications or supplements.

**BACKGROUND:** Fibromyalgia is described as a syndrome of chronic, widespread pain, fatigue, and heightened pain in response to tactile pressure. Other symptoms may include tingling of the skin, prolonged muscle spasms in the limbs, neuropathy, muscle twitching, bowel disturbances, and chronic sleep disturbances. Fibromyalgia is often associated with anxiety, short term memory disturbance, and depressive disorder.

**PATIENT EVALUATION:** The patient reported poor sleep onset and maintenance for the past 2 years, morning stiffness and pain in the neck and shoulder region, as well as persistent low-back pain. On physical exam the patient tested positive on 15 of 18 trigger points and stated discomfort on passive range of motion movement of the shoulder joints bilaterally.

Both rotator cuffs appeared intact. The examination of the spine revealed mild scoliosis.

**TREATMENT:** The patient was treated with wbc in a 'space cabin' machine from Millennium Ice, Dallas, TX. The machine cools the inner cabin to -170 degrees Celsius for a total time of 3 minutes per treatment. The patient was wearing only gloves and socks during the treatment for maximal skin exposure to the cold temperatures. The cabin was pre-cooled to -50 degrees Celsius before the patient entered. The patient received 1 treatment per day for the first 7 days, then 2 treatments per day for the remaining 18 treatments.

**CLINICAL OUTCOME ASSESSMENT:** The patient reported improved sleep and energy level within the first 3 treatments. Her mood also began to improve. After 5 treatments, the patient reported a significant decrease in her pain perception, as well as improved concentration.

Assessment after 12 treatments showed decreased pain sensation to trigger point pressure. At the completion of 25 treatments the patients symptoms had improved significantly.

**CONCLUSION:** This case study demonstrated improvement of symptoms in a young woman with fibromyalgia after she received whole body cryotherapy treatments. This case suggests the need for more rigorous research to examine how whole body cryotherapy may provide therapeutic benefit to patients with fibromyalgia.