

## **PROPRIOCEPTIVE NEUROMUSCULAR DEVICES MAY BE CONSIDERED FOR POST-OPERATIVE LUMBAR SPINE MICRODECOMPRESSION**

**RECOVERY AND RETURN TO PLAY: A CASE STUDY.** Jeremy S. Summers, DC, ATC, CCSP<sup>ab</sup>; Joseph M. Horrigan, DC, DACBSP, CSCS<sup>ab</sup>; <sup>a</sup>*Soft Tissue Center at D.I.S.C, Marina del Rey and Newport Beach, CA*, <sup>b</sup>*Southern California University of Health Sciences, Whittier, CA*

**HISTORY:** A 23-year-old-male was referred to the office for soft tissue mobilization and physiotherapy three weeks post-operative L4-5, L5-S1 bilateral microdecompression, lateral recess decompression, facetectomy, foraminotomy, and the removal of free-floating bone fragments. The patient's history involved a congenital musculoskeletal condition affecting the bony anatomy throughout his joints, particularly elbows, hips and spinal canal. The patient complained of bilateral hip tightness, right hip flexor spasm, and low back pain after prolonged sitting. Prolonged standing or working on his feet created bilateral "achy" legs especially in the upper gastrocnemius and medial joint lines of the knee as well as a decrease in balance and cognitive function due to "fatigue pain". The patient is a recreational athlete that enjoys skiing and road biking.

**PHYSICAL EXAMINATION:** Upon observation the patient demonstrated valgus collapse, overpronation, and other congenital musculoskeletal abnormalities affecting his gait and biomechanics.

**DIFFERENTIAL DIAGNOSIS:** Post-operative microdecompression, Myofascial pain syndrome, Overall deconditioned patient

**TESTS AND RESULTS:** No tests were ordered for this patient.

**WORKING DIAGNOSIS AND TREATMENT:** At three weeks post-op, the patient received soft tissue mobilization to the lumbar spine and hips bilaterally and began physiotherapy. At three months post-op, the patient was able to return to recreational sports and skiing.

**FOLLOW UP HISTORY AND TREATMENT:** The patient reported that soft tissue mobilization and physiotherapy provided 2-3 weeks of relief after which all symptoms returned. The patient returned to skiing and reported he could only ski three one-half days due to "fatigue pain" of an average VAS of 6/10. Cessation of current treatment with patient referred for fitting, education, and proper application of the Intelliskin® Foundation 2.0 posture shirt and Intelliskin® ReActivator shorts, both with Core-Cue Technology®.

**RESULTS:** The patient returned to skiing two weeks after the fitting and reported his best outing in five years. He reported an average VAS of 1/10 pain/soreness without fatigue. He was able to go "faster and harder" for three full days and even felt comfortable with several rough falls. The patient also reported "less valgus collapse in his knees, the correction of forces in strides during gait ambulation, and a decrease in fatigue, which resulted in improved balance and cognitive performance at work". The patient reported the same results one month later during another weekend of skiing with no ancillary care of soft tissue mobilization and physiotherapy.

**CONCLUSION:** Soft tissue mobilization and physiotherapy provided 2-3 weeks of short-term relief. It was postulated that possible neuromuscular response and associated altered biomechanics provided by the proprioceptive devices gave the patient further pain relief and improved psychological perception, which in turn may have increased the

patient's gains in stability, neuromuscular control, stamina, and reported decrease in overall pain.

Poster Presentation

2013 ACBSP Chiropractic Sports Sciences Symposium

Colorado Springs, CO