

A Model of Structural Improvement using a Pathway System of Functional Myofascial Lengthening

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Background: The relationship of posture, the fascia, and idiopathic pain syndromes has been of longstanding interest. Adaptive and compensatory deviations from biomechanical body equilibrium produce both stress and turbulence in the musculoskeletal-myofascial system. Core Integration, a modality based on Feldenkrais principles of *awareness through movement*, *functional*, *structural integration*, and biomechanics is proposed as a method of somatic reeducation with therapeutic applications based on hypothesized neuro-myofascial movement pathways. Can improvement in postural parameters attended by myofascial lengthening in biomechanical based core pathways of movement transmission affect posture and the reduction of pain?

Methods: The authors tested and retested a method of myofascial lengthening, *Core Integration and awareness through movement(Principles of Feldenkrais)*, on 16 participants presenting with continuous or chronic back pain over a period of two months. 25 parameters of posture were analyzed by mechanical instruments/computer specification readouts from all cardinal planes with attention to the following postural viewing levels: cephalic, sterno-scapular, pelvic girdle. In addition, foot placement and plantar pressure during gait were recorded. Based on the test profiles, specific myofascial pathway exercises were designed, and were assigned to be used in conjunction with selective manual treatment. Each participant's facilitator agreed to be available for individual treatment and teaching, as arranged between subject and practitioner, or by request as needed. Each movement lesson-exercise was to be performed on a regular basis (at least once a day for a minimum of 1 minute to a maximum of 30 minutes).

Results: Of 20 tested, 16 participants followed the protocol with 100% improvement, 2 months later, in postural equilibrium demonstrated by the retesting results, and reported 100% reduction in symptoms as well. The changes were statistically significant, not attainable by chance alone.

Conclusion: Core Integration, a methodology based on myofascial pathway lengthening to elicit neurosomatic reeducation, applied and tested in the frame of 70 days between testing and retesting has potential for effective treatment of postural pain disorders. It is hypothesized that the central nervous system can best track and organize efficient movement when there is recognition of, clear direction to, and perceived connection with functional-structural myofascial pathways. The process leads to neuromuscular and myofascial-postural reorganization. Integration is reflected in improvement of postural equilibrium.