

Medium-term Modifications in Posture using DellaGrotte Core Integration and Principles of Feldenkrais

Conducted by: Renzo Ridi, medical professor of kinesiology and posturology at the Universities of Florence and Chieti; Josef DellaGrotte, PhD, LMT, CFP, Core Integration Training Institute, Inc.; Monica Landi, PT; Luca Bassi, biomedical-electronic engineer, University of Chieti; Lucia Ridi, electronic and biomedical engineer, researcher at the Institute of Postural Analysis [ISTAP], Florence, Italy

Background and Purpose.

- Adaptive and compensatory deviations in human posture based in displaced biomechanical equilibrium produce both stress and turbulence in the musculoskeletal-myofascial system.
- Core Integration postulates that there is a relationship between posture, functional movement patterns and pain.
- Can improvement in postural parameters through myofascial lengthening along specific core pathways of movement transmission affect posture and the reduction of pain?

Aim of the study.

Define and measure, by means of an integrated multifactor clinical instrument, variations in 25 different kinematic parameters concerning the posture of patients affected by problems of dysfunctional pain and non-alignment before and after re-educative therapy

• Research Question

- Can myofascial lengthening along specific core pathways of movement transmission utilized by DellaGrotte Core Integration improve postural deviations and reduce pain?

• Null Hypothesis:

- The use of DellaGrotte Core Integration to lengthen muscle and fascia will not improve posture or reduce pain.

Methods and Procedures:

The authors tested a method based on (DellaGrotte) Core Integration* in combination with principles of M.Feldenkrais involving movement biomechanics informed by central nervous system [cns] feedback in relation to postural equilibrium to assess its effects on restoring and improving function and structure through dynamic stabilization, functional movement efficiency, and myofascial lengthening.

- The study involved 14 persons with identifiable postural problems involving pain. (Posturopathic patients suffering from at least six months of pain-related dysfunctional symptoms of the motor apparatus including arthromyofascial, postural non-alignment were included in this study).
- Each participant was first examined and tested by Dr. Ridi, with Dr. DellaGrotte observing. Using 25 tested measurement results for each participant. The results of the Integrated Multifactor Clinical Postural Evaluation were recorded as percentage improvement in postural equilibrium.
- Each person was carefully assessed to determine which core movement pathways needed to be organized and improved. Dr. DellaGrotte then determined which applications and pathways of Core Integration lesson-exercises in combination with awareness through movement processes to assign each participant in the experimental group and in the presence of a facilitator. (see book, Instructions from Within: 6 Pathways to Lifelong Fitness and Wellness, by Josef DellaGrotte. www.dellagrotte-somatic.com)
- Each movement lesson-exercise was performed on a regular basis: at least once a day for a minimum of 3 minutes to 30 minutes over a period of 70 days.
- A control group of 14, mostly posturopathic as described. One experimental subject did not continue to participate and was added to the control group.

*A method of somatic re-education with therapeutic manual applications based on central nervous system perception of neuro-myofascial movement pathways.

Materials and Methods [synopsis].

- The Integrated Multifactor Clinical Postural Evaluation is a diagnostic computerized software protocol developed by Dr. Renzo Ridi at the Institute of Posturology in Florence, Italy in conjunction with Prof Bassi at the University of Chieti.
- In this protocol 25 postural parameters were analyzed and from all cardinal planes with attention to the following postural viewing levels:
 - Cephalic
 - Sterno-scapular
 - Pelvic girdle
 - Foot placement and plantar pressure in gait (podo-dynamic).
- [Core Integration: A Method of Somatic Reeducation with therapeutic applications based on cns based neuro-myofascial movement pathways and applied principles of Dr. M.Feldenkrais]..

Results

- Results obtained from each of the 14 postural experimental group, and the relative score not only of single posture parameters taken into consideration, but also of the totals (results of all the 25 cases together).

Fig. 1

- All experimental subjects reported a decrease in pain.
- 12 subjects out of 14 (85.7%) **showed marked improvement** in postural parameters.
- Posturo-graphic results of the control group revealed that 92.8% (13 patients) did not improve. 85.7% (12 cases) were worse, and 7.1% (1 person) unchanged. Only one person (7.1%) showed a slight improvement.

Fig. 2

Summary:

1. Application of a rigorous testing protocol using biomechanical-digital instruments on this posturally compromised group allows for a much more objective analysis than subjective individual therapeutic and rehabilitative methods.
2. Methodology of Core Integration using Feldenkrais principles of functional movement, including the component of neurosomatic re-education, applied in the frame of only 70 days between testing and retesting indicates a high percentage of positive improvements in global posture and potential for effective treatment of postural pain disorders.
3. This method produced rapid changes in the neuro-myofascial engrams determining spatial body alignment. Once directional movements and postural positions can be both 'recognized' and accepted by participant's central nervous system [cns] through one's own proprioceptive sensing mechanisms, then neuromuscular, myofascial-postural reorganization and integration takes place.

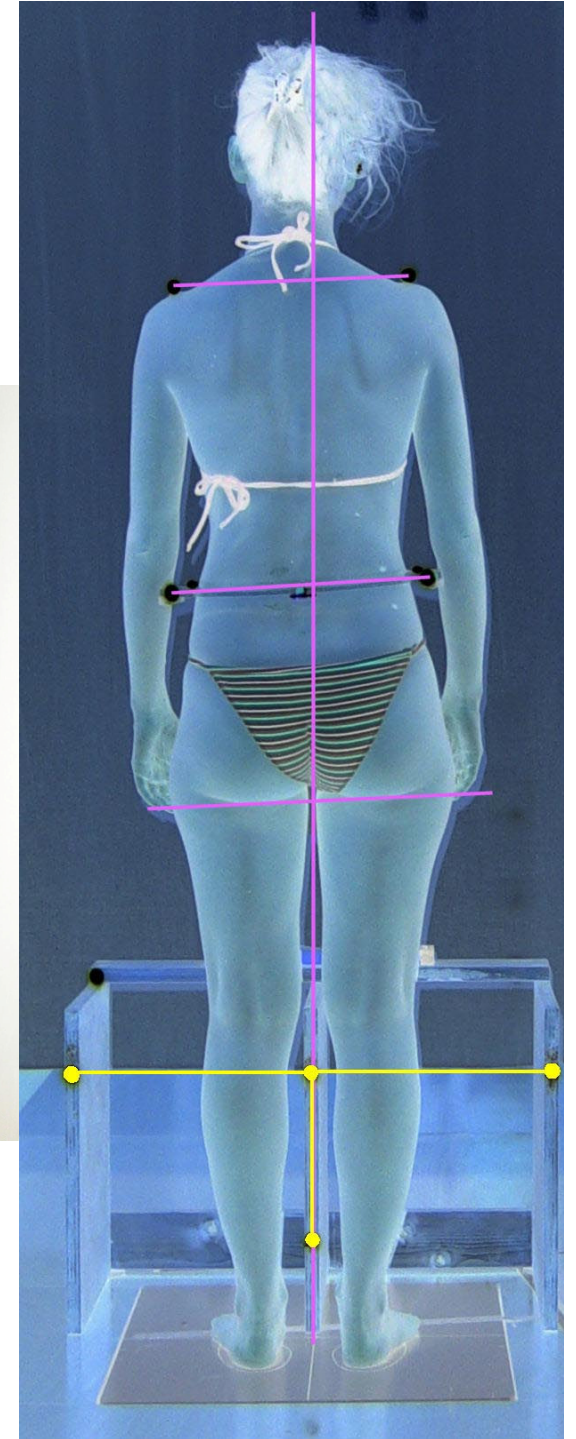
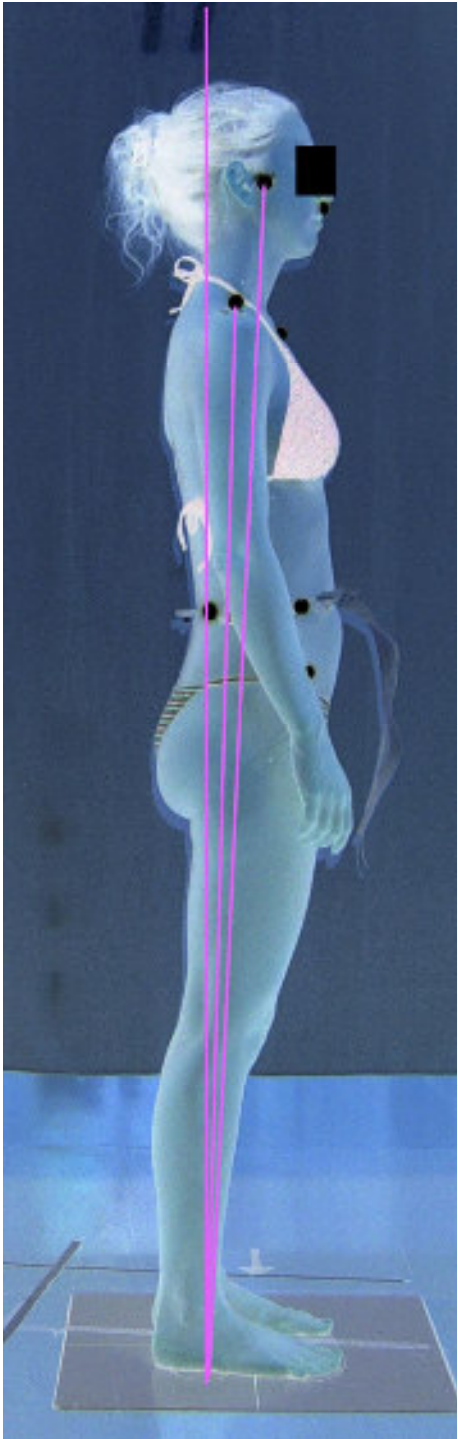


Figure 1. Core Integration Group

Percentage of absolute responses indicating degree of improvement.

Blue Bar = change in absolute response.

Note: scale = -4 to +12

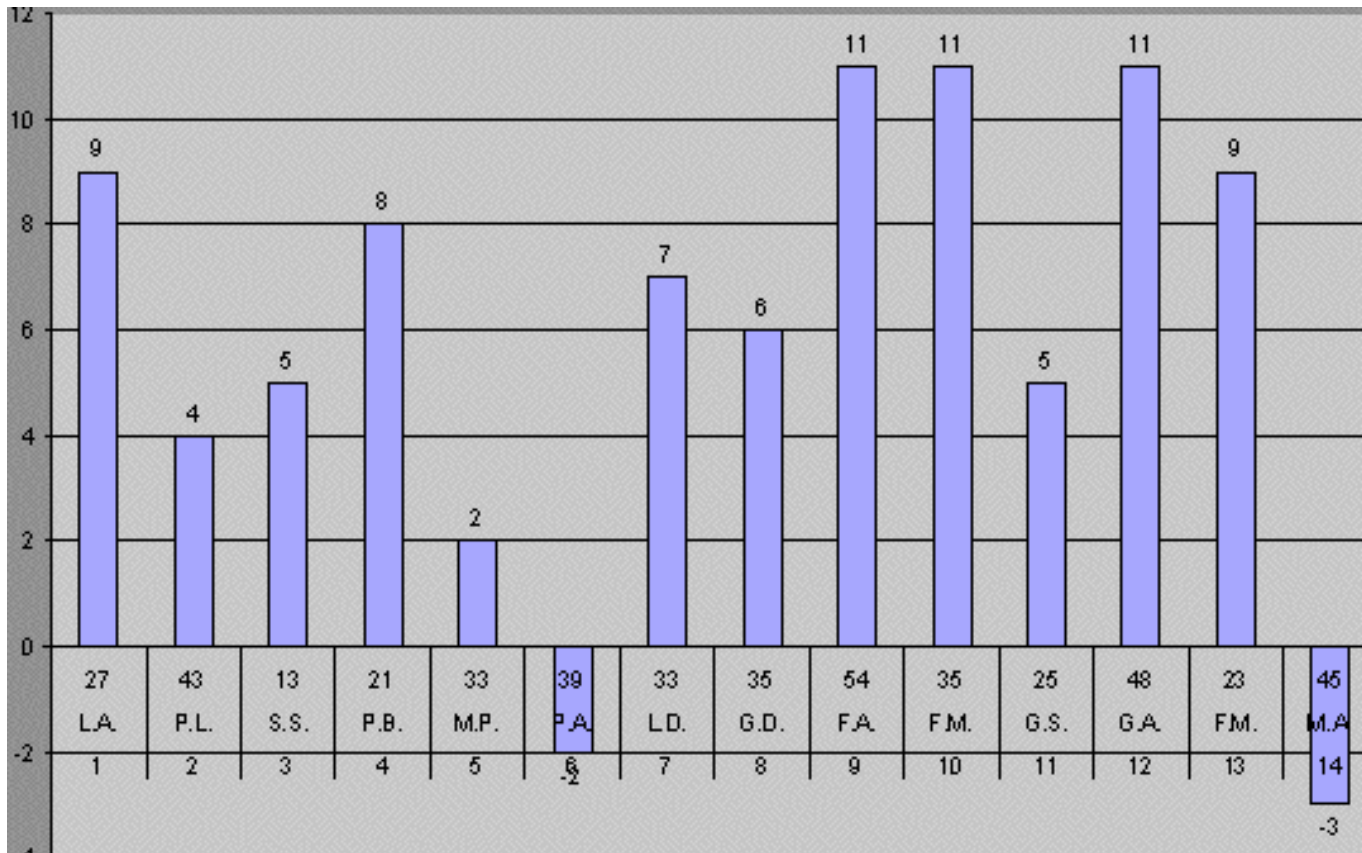


Figure 2. Control Group

Percentage of absolute responses indicating degree of improvement.

Blue Bar = change in absolute response.

Note scale = -4 to +1

Control Group: total scores after 2 months (no therapy or movement reeducation)

