Clinical Practice Guideline: **Rolfing**

Date of Implementation: **July 13, 2006**

Product: **Specialty**

GUIDELINES

American Specialty Health – Specialty (ASH) considers Rolfing medically necessary as a form of soft tissue mobilization for treatment of soft tissues including muscle and fascia.

DESCRIPTION/BACKGROUND

Rolfing is the popular name used for structural integration, a manual therapy of bodywork that is based on the idea that human function is improved when the segments of the body are properly aligned. This concept assumes that over time the use of incorrect postures and body alignments when walking, sitting, or doing other activities results in changes in the fascia; it is these changes that result in pain and tension in the body. Fascia is connective tissue mostly made of collagen that covers every muscle, bone, vessel, nerve, and organ in the body. Additionally, in structural integration, fascia plays a key role in maintaining posture and proper movement. The proposed goal of Rolfing is to release the body from these learned patterns of movement that are causing the dysfunction and pain. Proponents of Rolfing purport that through soft tissue manipulation via deep tissue massage and myofascial release, a therapist can reorganize the fascia to allow the muscles to relax. The aim of Rolfing is to integrate parts of the body such that the alignment of the joints results in the most efficient movement within the earth's gravitational force. It is claimed that a general Rolfing intervention realigns the patient's body and the practitioner prescribes new modes of movement. Rolfing practitioners use pressure applied by the fingers, knuckles, and elbows to break the bonds of the fascia so that they can be reorganized.

The basic certification process for Rolfing in the U.S. takes place at the Rolf Institute of Structural Integration in Boulder, Colorado. The process takes one to two years (approximately 700 hours), at the end of which one achieves basic certification as a Rolfer. For advanced certification, more training is required.

Rolfing (structural integration) was developed by Dr. Ida Rolf in the 1950s. Dr. Rolf received her PhD in biological chemistry from Columbia University in 1920 and then worked as a researcher at the Rockefeller Institute throughout the 1920s. She became interested in the human body after observing those around her suffer from pain syndromes that modern medicine could not cure. She gained her first exposure to manipulation when she was treated by an osteopathic physician for a respiratory condition, whereupon the doctor performed manipulations to reposition a rib that had been displaced from an earlier injury. However, she disagreed with what she saw as an osteopathic emphasis on solely

freeing joint restrictions, as she felt this left out the crucial role of soft tissue in body functioning. Dr. Rolf also familiarized herself with chiropractic, the Alexander technique, and the Feldenkrais method.

In the 1950s, Dr. Rolf used these concepts to create a ten-session sequence of manipulations she called structural integration. In 1971, she founded the Rolf Institute of Structural Integration, electing some of her students to teach and carry out her work through this institute.

EVIDENCE REVIEW

Two small randomized controlled trials (RCTs) were undertaken in 1988 by Cottingham et al. to evaluate patients with pelvic tilt. The first study (Cottingham, Porges, & Lyon, 1988) examined the use of Rolfing pelvic lift on parasympathetic tone. The outcome measure for this study was the amplitude of the respiratory sinus arrhythmia (RSA). The pelvic lift is a soft tissue manipulation involving a combination of posterior tilting and pelvic traction with moderate pressure to the epigastrum. Their results showed that the pelvic lift technique produced significant autonomic nervous system response in younger patients. The second study (Cottingham, Porges, & Richmond, 1988) examined the impact of Rolfing soft tissue manipulation on healthy men with a pelvic tilt, and once again their outcome measure was the amplitude of the RSA.

One systematic review of the literature on Rolfing and Rolfing techniques was undertaken by Jones (2004). She examined both Cottingham's RCTs as well as the case series by Perry et al. Jones points out that the clinical significance of RSA amplitude and vagal tone (outcome measures for the Cottingham & Porges studies) has not been established in the medical literature. As such the results of these two RCTs are limited. In addition, she points out the lack of (and need for) clinical studies on Rolfing in a symptomatic population examining clinically relevant outcomes such as pain.

James et al. (2009) investigated the effect of rolfing structural integration (RSI) in neck motion and pain levels of 31 subjects who received RSI. This investigation demonstrated that the basic 10 sessions of RSI, when applied by a physical therapist with advanced RSI certification, is capable of significantly decreasing pain and increasing AROM in adult subjects, male and female, with complaints of cervical spine dysfunction regardless of age. Jacobson (2011) reviewed the clinical practice of Structural Integration (SI), an alternative method of soft-tissue manipulation and sensorimotor education, and to summarize the evidence to date for mechanism and clinical efficacy. According to the author, limited preliminary evidence exists for improvements in neuromotor coordination, sensory processing, self-concept and vagal tone, and for reductions in state anxiety. Preliminary, small sample clinical studies with cerebral palsy, chronic musculoskeletal pain, impaired balance, and chronic fatigue syndrome have reported improvements in gait, pain and range-of-motion, impaired balance, functional status, and well-being. Adverse events are thought

to be mild and transient, although survey data are not available. Contraindications are thought to be the same as for massage. The author concludes that evidence for clinical effectiveness and hypothesized mechanisms is severely limited by small sample sizes and absence of control arms, thus more adequate research in warranted.

There was one case series on Rolfing (Perry et al., 1981) that demonstrated Rolfing's efficacious effects on the walking and gait abilities of children with cerebral palsy. They showed that Rolfing led to improved performance in range of motion for the hip, knee, and ankle for those with mild cerebral palsy. Hansen et al. (2014) aimed to document gait characteristics of two children with cerebral palsy and the effects of myofascial structural integration (Rolfing) on gain patterns. Children received 3 months of weekly therapy sessions by an experienced practitioner. Gait parameters were recorded at baseline and after treatment using an electronic walkway. Children with cerebral palsy demonstrated abnormal velocity and cadence, decreased step length and single support times, and increased double support time. After treatment, both children demonstrated improvement for 3 months in cadence and double support time. The objective gait analyses demonstrated temporary improvements after myofascial structural integration in children with spastic cerebral palsy. These outcomes resulted in another study. Loi et al. (2015) examined myofascial structural integration therapy on gross motor function and gait of young children with spastic cerebral palsy in a RCT. Participants ($N = 29$) were enrolled in a randomized controlled trial. The main outcome was the Gross Motor Function Measure-66 assessed at 3-month intervals. Gait ($n = 8$) was assessed using the GAITRite(®) electronic walkway. Parents completed a survey at study conclusion. Comparing Treatment ($n = 15$) and Waitlist-Control groups ($n = 9$), authors found a significant main effect of time but no effect of group or time × group interaction. The pooled sample ($n = 27$) showed a main effect of time, but no significantly greater change after treatment than between other assessments. Foot length on the affected side increased significantly after treatment, likely indicating improvement in the children's ability to approach a heel strike. Parent surveys indicated satisfaction and improvements in the children's quality of movement. MSI did not increase the rate of motor skill development but was associated with improvement in gait quality.

PRACTITIONER SCOPE AND TRAINING

Practitioners should practice only in the areas in which they are competent based on their education training and experience. Levels of education, experience, and proficiency may vary among individual practitioners. It is ethically and legally incumbent on a practitioner to determine where they have the knowledge and skills necessary to perform such services.

It is best practice for the practitioner to appropriately render services to a patient only if they are trained, equally skilled, and adequately competent to deliver a service compared to others trained to perform the same procedure. If the service would be most competently

delivered by another health care practitioner who has more skill and expert training, it would be best practice to refer the patient to the more expert practitioner.

Best practice can be defined as a clinical, scientific, or professional technique, method, or process that is typically evidence-based and consensus driven and is recognized by a majority of professionals in a particular field as more effective at delivering a particular outcome than any other practice (Joint Commission International Accreditation Standards for Hospitals, 2020).

Depending on the practitioner's scope of practice, training, and experience, a member's condition and/or symptoms during examination or the course of treatment may indicate the need for referral to another practitioner or even emergency care. In such cases it is prudent for the practitioner to refer the member for appropriate co-management (e.g., to their primary care physician) or if immediate emergency care is warranted, to contact 911 as appropriate. See the *Managing Medical Emergencies (CPG 159 – S)* clinical practice guideline for information.

References

Bernau-Eigen, M. (1998). Rolfing: a somatic approach to the integration of human structures. *Nurse Practitioner Forum, 9*(4), 235-242.

Cottingham, J. T., Porges, S. W., & Lyon, T. (1988). Effects of soft tissue mobilization (Rolfing pelvic lift) on parasympathetic tone in two age groups. *Physical Therapy, 68*(3), 352-356.

Cottingham, J. T., Porges, S. W., & Richmond, K. (1988). Shifts in pelvic inclination angle and parasympathetic tone produced by Rolfing soft tissue manipulation. *Physical Therapy, 68*(9), 1364-1370.

Hansen AB, Price KS, Loi EC, Buysse CA, Jaramillo TM, Pico EL, Feldman HM. Gait changes following myofascial structural integration (Rolfing) observed in 2 children with cerebral palsy. J Evid Based Complementary Altern Med. 2014 Oct;19(4):297-300.

Jacobson E. Structural integration, an alternative method of manual therapy and sensorimotor education. J Altern Complement Med. 2011 Oct;17(10):891-9.

James H, Castaneda L, Miller ME, Findley T. Rolfing structural integration treatment of cervical spine dysfunction. J Bodyw Mov Ther. 2009 Jul;13(3):229-38.

Jones, T. A. (2004). Rolfing. *Physical Medicine Rehabilitation Clinics of North America, 15*(4), 799-809, vi.

Loi EC, Buysse CA, Price KS, Jaramillo TM, Pico EL, Hansen AB, Feldman HM. Myofascial Structural Integration Therapy on Gross Motor Function and Gait of Young Children with Spastic Cerebral Palsy: A Randomized Controlled Trial. Front Pediatr. 2015 Sep 10;3:74.

Medical News Today. Rolfing therapy: Technique, benefits, and more. July 29, 2022. Retrieved on October 25, 2023 from https://www.medicalnewstoday.com/articles/rolfing

Nansel, D., & Szlazak, M. (1995). Somatic dysfunction and the phenomenon of visceral disease simulation: a probable explanation for the apparent effectiveness of somatic therapy in patients presumed to be suffering from true visceral disease. *Journal of Manipulative and Physiological Therapeutics, 18*(6), 379-397.

Perry, J., Jones, M. H., & Thomas, L. (1981). Functional evaluation of Rolfing in cerebral palsy. *Developmental Medicine and Child Neurology, 23*(6), 717-729.

The Goldberg Burton Group. (1994). *Alternative Medicine: The Definitive Guide*. Puyallup: Future Medicine Publishing.

Weinberg, R. S., & Hunt, V. V. (1979). Effects of structural integration on state-trait anxiety. *Journal of Clinical Psychology, 35*(2), 319-322.

Other Resources

The Rolf Institute of Structural Integration Website: https://www.rolf.org/rolfing.php