

FASCIA AS A SENSORY AND EMOTIONAL ORGAN

IMPLEMENTING NEW INSIGHTS FROM CONNECTIVE TISSUE RESEARCH INTO MYOFASCIAL TREATMENT PRACTICE

Robert Schleip PhD MA

Recent research indicates that the muscular connective tissues (fasciae) serve a more active role than previously assumed. This includes the capacity to regulate their stiffness independently from neuromuscular coordination, the role of fascia as a potential pain generator, and its role as our richest sensory organ for proprioception. In addition, new insights about an intricate connection between fascia and the autonomic nervous system as well as emotional aspects have become available. These new perspectives offer valuable suggestions for practical clinical applications in working with post-traumatic stress disorders as well as other common aspects in musculoskeletal medicine. Dr. Robert Schleip, director of the Fascia Research Project, Ulm University, Germany, will review the most important insights from the field of fascia research related to this intriguing topic and will demonstrate practical translations into hands-on myofascial applications.

Theoretical part:

- Fascia as sensory organ: the basis for proprioception, the so called sixth sense.
- The four mechanoreceptor types in fasciae: Golgi-, Pacini-, Ruffini- and free nerve endings. Their preferred locations, mechanical sensitivity and expected physiological responses.
- Connection between fascial tonicity and the autonomic nervous system
- Fascia and interoception. Role of visceral and cutaneous receptors for body image formation and emotional conditioning.
- Embodiment and mindfulness with a fascial perspective
- Understanding autonomic nervous system balance from an evolutionary perspective (based on Ernst Gellhorn)
- Understanding Post-Traumatic Stress Disorders based on recent insights from Peter Levine, Stephen Porges and others.
- The tensegrity concept revisited: myofascial force transmission lines, with latest modifications. Relevance for postural regulation.
- Lumbar fasciae: architecture and innervation. New aspects in back pain research. Practical applications:
 - Golgi receptor stimulation: application for correction of shoulder protraction
 - Pacini stimulation: application to spinal facet joints and costovertebral junctions
 - Ruffini stimulation: application on upper trapezius, with downstream effects on vagal tonicity and heart rate variability
- Mirror neurons and empathy: practical application with the CAKE technique (constructive anticipatory kinesthetic empathy)
- Stimulation of free nerve endings: example of periosteum manipulation.
- Fascial techniques for the treatment of acute low back pain
- Fascial techniques for the treatment of myofascial neck tension syndromes
- Working with Post-Traumatic Stress Disorders in the setting of a physiotherapeutic or movement educator environment
- Inclusion of mindful micro movements of the patient during the hands-on work.

Robert Schleip PhD MA directs the Fascia Research Project of Ulm University in Germany. Having been a Rolfing instructor and Feldenkrais practitioner for over 20 years, he felt frustrated with the speculative nature of scientific explanations backing up most areas of current bodywork. When he entered the field of connective tissue science as an active laboratory researcher in 2003, he became so thrilled that he soon became one of the driving international forces in the newly emerging field of fascia research. His own research findings on active contractile properties of human fasciae have been honored with the Vladimir Janda Award of Musculoskeletal Medicine. He is research director of the European Rolfing Association, and co—initiator of the 1st Fascia Research Congress hosted at Harvard Medical School (Boston 2007) as well as of the subsequent congresses.