NEURO MASSAGE THERAPY$_{sm}$ INSTITUTE

A.D. EXERSIZE INC. EST.#E1318.

LEGAL NOTICE

1. The I.M.T. (Integrated Manual Techniques) course curriculums are taught in other states. Therefore it is the responsibility of the bodywork practitioner to be aware of all laws governing their scope of practice in application and wording with respect to the I.M.T. curriculum presented.

2. The I.M.T. curriculums incorporate M.A.T (Myoskeletal Alignment Techniques) as taught by Eric Dalton Ph.D. Therefore the term alignment is always taken from a structural integration perspective in that it represents **the repositioning of the body symmetry through reorganization of the soft tissue fascia system of the body**. In some states the term **"alignment"** is a designated chiropractic term in which case **"fascial balance"** is an appropriate synonym. In some states **"stretching"** is a physical therapy term and therefore we **"extend the fascial plane"** or whatever synonym and technique that fits within your scope of practice.

3. The I.M.T. curriculums are part of the Neuro Massage Therapy $_{sm}$ certification program. (See attached)

4. The I.M.T. curriculums are the express intellectual property of A.D. Exersize Inc. Reproduction authorization may be obtained from A.D. Exersize Inc.

5. The Pneuma$_{sm}$ Vacuum Therapy System is a patented concept for massage therapy. The original prototype and the current quieted systems demonstrated in courses are the intellectual property of A.D. Exersize Inc.

33336 Duff Rd Walker, LA 70785 225-665-7982 888-464-9111

Acknowledgements

Erik Dalton, Ph.D.: MAT (Myoskeletal Alignment Techniques)
Freedom From Pain Institute

Whitney W. Lowe: Orthopedic Massage Techniques
OMEIR (Orthopedic Massage Education & Research Institute)

Tom W. Myers: Anatomy Trains Techniques
KMI (Kinesis Institute)

George P Kousaleos: CORE Myofascial Therapy Techniques
CORE Institute

Judith Walker Delany: Neuro Muscular Techniques
NMT Center

Illkay Zihni Chirali: author "Traditional Chinese Medicine Cupping Therapy"

Structural Balance Tips

Tension in the Psoas is reflected in the Longus Coli muscle.

The Diaphragm is considered by some to be the start of all postural distortion in the body.

The Sub occipitals have **32 muscle spindles per gram** and control the tone of the upper neck and shoulders.

The motor cylinder is composed of the entire fascia and **13 individual bilateral** muscles that attach to the transverse and spinous processes of the cervical vertebrae.

The Subcutaneous Fascia will reflex the Deep Fascia using the pattern of '**Langer's Lines**' when moving across the tissue.

A ninety-degree motion moving the tissue with (AE) active engagement of the target muscle will loosen the fascia over that muscle with less discomfort.

Ischemic tissue and tight muscles respond well to hot and cold contrast hydrotherapy.

A trigger point in the serratus posterior superior muscle lies beneath the rhomboids, attaches on the ribs, and refers pain down the arm.

The Omohyoid attaches on the anterior surface of the scapulae from the hyoid and is thought to help monitor blood pressure.

Proprioceptor (positional) signals travel 120 times faster than nociceptor (pain) signals.

Many T.M.J. symptoms are thought to generate from postural distortion and pelvic balance problems.

The clavicles are the keystones to scapular position.

Ida Rolf PhD: "go for a Smooth Grove",
"Put it back where it belongs and make it move". "Get em straight and if they quit hurting, that's their tough luck."

Andrew T. Still D.O.: "roll the joints and they will come back home"
"The diaphragm must be taken into account for the why of an illness".

Dr. Philip Greenman: " Don't chase the pain."

Dr. Philip Greenman: "In the presence of vertebral dysfunction, 4th layer muscle fibrosis is always found".

Thomas W. Myers "No muscle attaches to no bone at any time."
"Speed is the enemy of depth."

TYPICAL MUSCLE IMBALANCES

UPPER CROSSED SYNDROME

NOTE: DO NOT FAST SPINDLE THE FACILIATED MUSCLES

POSTURAL TIGHT FACILITATED	***PHASIC WEAK INHIBITED***
TYPE 1 FIBERS	**TYPE 2 FIBERS**
SUBOCCIPITALS	DEEP NECK FLEXORS
UPPER TRAPEZIUS	LONGUS CAPITIS & COLLI
STERNOCLEIDOMASTOID	HYOIDS
PECTORALS	RHOMBOIDS
ANTERIOR SCALENES	SERRATUS ANTERIOR
LEVATOR SCAPULAE	POSTERIOR ROTATOR CUFF
	LOWER & MIDDLE TRAPEZIUS

TYPICAL MUSCLE IMBALANCES

LOWER CROSSED SYNDROME

POSTURAL TIGHT FACILITATED	***PHASIC WEAK INHIBITED***
TYPE 1 FIBERS	**TYPE 2 FIBERS**
ILIOPSOAS	RECTUS ABDOMINIS
QUADTRARUS LUMBORUM	TRANSVERSE ABDOMINIS
LUMBAR ERECTORS	
PIRIFORMIS	GLUTEALS
HAMSTRINGS	
RECTUS FEMORIS	VASTUS MEDIALIS
TENSOR FASCIA LATAE	VASTUS LATERALIS
THIGH ADDUCTORS	
GASTROCNEMIUS	TIBIALIS ANTERIOR
SOLEUS	PERONEALS

SCIENTIFIC LAWS AND THEIR IMPLICATIONS FOR MASSAGE

PROPRIOCEPTORS (MUSCLE SPINDLE/GOLGI TENDON ORGAN)

A Muscle spindle is a tiny neural proprioceptor mechanism within the muscle fiber that monitors and influences muscular activity. When a muscle is being stretched too far too fast, the muscle spindle is stimulated and responds immediately by causing the muscle to contract. This reaction is one of protection so that the muscle will not tear.

The **Golgi tendon organ (GTO)** is the inhibitory neural unit located in the tendons and the musculo-tendonis junction. When the muscular tension on a tendon slowly exceeds a normal limit, the Golgi tendon organ causes inhibition of the motor nerve to that particular muscle telling it to relax. When this organ fires in a specific muscle, it also relaxes its synergists and strengthens its antagonist.

By communicating with the muscle spindle and golgi tendon organ, we can produce a desired response such as contraction (strengthening of a muscle), or relaxation (a decrease in muscle spasm and pain).

Understanding these neural functions is a vital step in conceptualizing Neuro Massage therapy techniques.

Sherrington's Laws of muscle physiology:

Law of Reciprocal Inhibition

When you contract one muscle, the opposite muscle must relax. For example, the contraction of the biceps stimulates the Golgi tendon organ of the triceps and inhibits (relaxes) the triceps. This is referred to as Reciprocal Inhibition and also referred to as Agonist/Antagonist. In other words, the contraction of the agonist stimulates the inhibition of the antagonist. In our example above, the biceps would be the agonist, and the triceps the antagonist.

Law of Temporal Summation

A succession of weak stimuli occurring within a short period of time will combine to cause increased excitation (i.e., strength). If you find weakness in a muscle group, you can increase the strength by several times repeating the movement where weakness has shown up.

Successive-Induction

The increased excitation of the agonist muscles follows the contraction of their antagonist. This is the law that applies to the Slow-Reversal technique, which involves the contraction of the agonist followed by maximal resistance contraction of the antagonist followed by increased strength of agonist.

Irradiation

When either the number of stimuli or the strength of the stimuli is increased, there is a spreading of excitation of the muscle fibers when this occurs which increases the strength of the muscle.

SCIENTIFIC LAWS AND THEIR IMPLICATIONS FOR MASSAGE

THINK FASCIA !

Wolf's Law

Biological systems (including soft and hard tissues) deform in relation to the lines of force imposed on them.

Implication for massage: Postural balance is possible by decreasing the fascial stress.

Hooke's Law

Deformation (resulting from strain) imposed on an elastic body is in proportion to the stress (force/load) placed on it.

Implication for massage: Postural balance is possible by decreasing the fascial stress.

DAVIS' LAW

Ligaments or any soft tissue, when put under even a moderate degree of tension, if that tension is unremitting, will elongate by the addition of new material; on the contrary, when ligaments or other soft tissues remain uninterruptedly in a loose or lax state, they will gradually shorten. As the effete material is removed, until they come to maintain the same relationship to the bony structures with which they are united that they had before their shortening. (Taber's Cyclopedic Medical Dictionary. 6th Edition, from Nimmo, 1966)

Implication for massage: Postural balance is possible by sculpting the fascial stress.

Newtons third law

When two bodies interact, the force exerted by the first on the second is equal in magnitude and opposite in direction to the force exerted by the second on the first.

Implication for massage: Take your time, for "speed is the enemy of depth" T.W. Myers.

SCIENTIFIC LAWS AND THEIR IMPLICATIONS FOR MASSAGE

Think Reflex!

Pfluger's Laws:

Law of Unilaterality

If a mild irritation is applied to one or more sensory nerves, the movement will take place usually on one side only and on the side that has been irritated.

Implication for massage: Light stimulation remains fairly localized in response to massage.

Law of Symmetry

If the stimulation is sufficiently increased, motor reaction is manifested not only by the irritated side, but also in similar muscles on the opposite side of the body.

Implication for massage: By using increasing levels of massage intensity, a bilateral effect can be created even if massaging only one side of the body. This is especially useful for massage applications to painful areas. By massaging the unaffected side, the painful areas can be addressed without direct massage work.

Law of Intensity

Reflex movements are usually more intense on the side of irritation; at times the movements of the opposite side equal the movements in intensity, but they are usually less pronounced.

Implication for massage: (See Law of Symmetry)

Law of Radiation

If the excitation continues to increase, it is propagated upward, and reactions take place through centrifugal nerves coming from the cord segments up higher.

Implication-for massage: (See Law of Symmetry)

Law of Generalization

When the irritation becomes very intense, it is propagated in the medulla oblongata, which becomes a focus from which stimuli radiate to all parts of the cord, causing a general contraction of all muscles in the body.

Implication for massage: This response needs to be avoided if possible. It is important to keep invasive massage measures, such as frictioning, below the intensity levels that cause a general body response.

SCIENTIFIC LAWS AND THEIR IMPLICATIONS FOR MASSAGE

Think Reflex!

Weber's Law

The increase in stimulus necessary to produce the smallest perceptible increase in sensation bears a constant ratio to the strength of the stimulus already acting.

Implication for massage: For a massage method to change a sensory perception, the intensity of the method must match and then just exceed the existing sensation.

Hilton's Law

A nerve trunk that supplies a joint also supplies the muscles of the joint and the skin over the insertions of such muscles.

Implication for massage: It is difficult to figure out if a pain is from the joint itself, the muscles around a joint, or the skin over a joint. Stimulation of all areas in turn affects each part.

Clinical Application of Hilton's Law

Each nerve root serves the joint, muscles over the joint, skin over those muscles, blood vessels, organs, and glands. Therefore, excitation along a nerve pathway to any of these tissues can spill over to facilitate the other tissues also served by that nerve, creating dysfunction or pain in those secondary tissues as well. For example, excitation to a diseased gallbladder may excite the muscles overlying the area, which are innervated by the same nerve that serves that organ.

Arndt-Schultz Law

Weak stimuli activate physiologic processes; very strong stimuli inhibit them.

Implication for massage: To encourage a specific response use gentler methods and to shut off a response use deeper methods.