Instructor's Review for Final Exams

Who Are These People?
Who is Hippocrates?

(60-380 BC) - Hippocrates

Thought that disease resulted from natural causes and the body has the power to heal itself. Wrote code of ethics that became the Hippocratic Oath. Hippocrates said: hard rubbing binds…much rubbing causes parts to waste…and moderate rubbing makes them grow.
Who is Galen of Pergamon?

Originally from Greece. Physician for the school of gladiators who were rubbed before fighting. Wrote book on manual medicine and massage.
Who is Pehr Henrik Ling?

Pehr Henrik Ling – considered the “father” of Swedish massage, utilized a particular type of massage and exercise in his modality.
Who is Johann Metzger?

Johann Metzger (1817-1893)

Johann Metzger – Dutch physician, who utilized massage as a fundamental component of physical rehabilitation, also introduced French terminology into the profession.
James Cyriax – “father” of orthopedic medicine, he advocated the use of manipulation and deep-tissue (deep transverse friction) massage with active and passive motion to restore mobility.
Who is Ida Rolf?

Ida Rolf (1896 - 1979)

Ida Rolf utilized Structural Integration to get the body into homeostasis. Inventor of Rolfing modality.
Who is Dr. William Fitzgerald?

Dr. William Fitzgerald (1869-1955)

1913 - Dr. William Fitzgerald rediscovered Reflexology and called it Zone Therapy.
Who is Eunice Ingham?

Eunice Ingham (1889 - 1974)

Eunice Ingham – a physiotherapist who popularized reflexology in North America. Her work is still carried on today by the International Institute of Reflexology.
Also accredited with coining the word “Myomassology”.

Inducted into the Massage Therapy Hall of Fame in 2012.

Irene Simonen Gauthier (1920 - 2010)

Irene Simonen Gauthier—As a founding member of the International Myomassethics Federation and the Association of Michigan Myomassologists, Irene developed an organization which encompasses all forms of bodywork.
Who is *Stanley Lief*?

Neuromuscular Therapy was created by Stanley Lief. For a more detailed history of Neuromuscular Therapy see Judith Walker Delaney's website.
Who is Janet Travell?

Janet Travell (1901 - 1997)

Janet Travell – Developer/Researcher of Trigger Point Therapy. Was the physician for President John F. Kennedy.
Who is William Garner Southerland?

William Garner Southerland
(1873-1954)

Craniopathy is the study of the musculoskeletal system of the skull and cerebrospinal fluid (CSF) flow, as well as intracranial pressure (ICP) and compliance in the brain and cord. Craniopathy was founded by Dr. Sutherland, an Osteopath.
Who is John Upledger?

Dr. John E. Upledger is co-founder of The Upledger Institute, Inc. and former medical director of Upledger Clinical Services. Born on February 10, 1932 in Detroit, Michigan. Founder of Cranial Sacral Therapy.
Who is John Barnes?

The John F. Barnes' Myofascial Release Approach consists of the gentle application of sustained pressure into fascial restrictions within the body.

John Barnes PT (Still Living)
Who is Margaret Machado?

Auntie Margaret Machado (1916-2009)

Aunty Margaret was in her 50’s when she began teaching the gift of Lomi Lomi that was previously held sacred and secret for Hawaiian families only. This icon of healing, Aunty Margaret, broke the rules of keeping the kahuna “secrets” secret. She is the chief promoter of Lomi Lomi massage to the Western population.
Mikao Usui Sensei is the founder of Reiki Ryoho (healing art or method). He attained enlightenment and a healing ability in 1922 at the age of 57. This happened while he was fasting and meditating on Mt. Kurama in Kyoto, the ancient capital city of Japan.
Who is F.M. Alexander?

F.M. Alexander (1869-1955)

1900's early - The Alexander Technique was developed by an Australian actor F.M. Alexander.
Who is Wilhelm Reich?

Wilhelm Reich (1897-1957)

1934 - Wilhelm Reich - Austrian psychoanalysis. Freud’s student. Used Somato techniques to dissolve muscular armor. Attempted to cure neuroses by releasing their corresponding muscle tensions by using breath, movement and physical manipulation.
Who is Dr. George J. Goodheart?

George J. Goodheart, DC. (1918 – 2008)

1964 - Applied Kinesiology was founded by Chiropractor George Goodheart.
Who is Alexander Lowen?

Bioenergetics created by Alexander Lowen, emerged from Reich’s work. Lowen broke away from working with Reich to create Bioenergetics.
Who is Dr. John Pierrakos?

John Pierrakos (1921-2001)

1971-Core Energetics Started by Dr. John Pierrakos in 1971, core energetics adds a more spiritual aspect to bioenergetics.
Who is Dr. Moshé Feldenkrais?

Dr. Moshé Feldenkrais (1904-1984)

The Feldenkrais Method is an educational system intended to give a greater functional awareness of the self. The method uses movement and awareness as the primary vehicle for learning.
Who is Dr. Fritz Smith?

Dr. Fritz Smith (1929- still living)

1973-Zero Balancing was developed by osteopath and acupuncturist Dr. Fritz Smith.
Who is Elizabeth Dicke?

Connective Tissue Therapy (CTT), Connective Tissue Massage (CTM), Bindegewebssmassage, developed by Elizabeth Dicke in Germany in 1929 and is well known throughout the world but less known in the United States. Using zones as a guide, reflex points were found in the subcutaneous fascia that effect other parts of the body.
Who is Milton Trager, M.D?

Utilizing gentle, non-intrusive, natural movements, The Trager Approach helps release deep-seated physical and mental patterns and facilitates deep relaxation, increased physical mobility, and mental clarity. These patterns may have developed in response to accidents, illnesses, or any kind of physical or emotional trauma, including the stress of everyday life.
Laws of Neuromuscular Therapy
What is Sherrington’s Law?

Sherrington’s Law – when a muscle receives a nerve impulse to contract, its antagonist simultaneously receives an impulse to relax – also known as reciprocal inhibition.

Sir Charles Scott Sherrington (1857 - 1952)
What is Davis’ Law

Davis’ Law: “If muscle ends are brought closer together, then the pull of the tonus is increased, thereby shortening the muscle, which may even cause hypertrophy. If the muscle ends are separated beyond normal, then tonus is lessened or lost, thereby “weakening the muscle.”

NMT: This law allows the NMT therapist the ability to loosen a hypertonic muscle by manipulating the Golgi tendon organs.
What is Hilton’s Law?

**Hilton’s Law:** “A nerve trunk that supplies a joint also supplies the muscles of the joint and the skin over the insertion of such muscles.” (1804-1878, English Surgeon)

**Reflex Arc**

**NMT:** Whenever the integrity of a joint is threatened the muscles and skin surrounding the joint become hypertonic and “guarding”. Ischemia results. This allows the NMT therapist to do skin rolling and other techniques to help reduce ischemia and pain.
Normal Reflex Arc

NORMAL REFLEX ARC

- Normal Skin Function
- Normal Muscle Tone
- Normal Joint Movement

Skin

Muscle

Vessels

Hilton's Law

Hilton's Law

Intunical Pool

Peripheral Nerve

Afferent Impulses

Efferent Impulses

Posterior Root

Anterior Root
Pathological Reflex Arc

Physiopathological Reflex Arc

10 x's

- Pathological Reflex Arc
- Physiopathological Reflex Arc
- Normal Skin Function
- Trigger Point or Ischemic Tissue
- Normal Joint Movement
- Normal Visceral Function
- Normal Vascular Function
- Epidermal Constriction
- Increased Muscle Tonus
- Increased Intrajoint Pressure
- Decreased Visceral Function
- Vasocostriction

Insert: Image of a skeletal system with a highlighted shoulder area.

Additional Elements:
- Skin
- Muscle
- Joint
- Viscera
- Vessels

Hilton's Law
Physiopathological Reflex Arc with Referred Pain

- Somatic to Somatic
- Somatic to Viscera
- Viscera to Viscera
- Viscera to Somatic

Systemic Pain

- Original Trigger Point
- Secondary Trigger Point
- Third Trigger Point
Arndt Shultz’s Law: the pharmacologic principle of homeopathy, discovered by 19th century scientists, Hugo Schulz and Rudolf Arndt. It says that weak stimuli accelerate physiologic activity, medium stimuli inhibit physiologic activity, and strong stimuli halt physiologic activity.(1835-1900, Psychiatrist)

NMT: This law allows the NMT therapist to apply pressure to trigger points and ischemic areas thereby inhibiting the neurological reflex arc or circuits that underlie them.
What is Wolff’s Law

Wolff's Law-The Law of Bone Transformation: “Every change in the form and the foundation of a bone, or in its function alone, is followed by certain definite changes in its internal architecture and secondary alterations in its external conformation.” (Form follows function-German Physician)

NMT: Deformation (resulting from strain) imposed on an elastic body is in proportion to the stress/load placed on it. Gravity itself is such a force and can only be resisted with optimal efficiency only with a balanced posture. Gravity cannot fix what it deforms.
The Law of Facilitation

**Law of Facilitation:** “When an impulse has passed through a certain set of neurons to the exclusion of others, it will tend to take the same course on a future occasion, and each time it traverses this path the resistance will be less.”

**NMT:** Vicious pathological reflexes may refer up or down the spinal cord and then out to peripheral tissues at any nerve root level. They often follow the path of least resistance, a previously facilitated pathway such as that created by a prior injury or overuse syndrome.
Newton’s Law of Motion:

“To every action there is always an opposed equal reaction; or the mutual actions of two bodies upon each other are always equal, and directed to contrary parts.”

NMT: If one shoulder is high, the other is low. If one shoulder protrudes, the other shoulder is retracted.
Righting Reflexes: “Reflexes which, through various receptors in the labyrinth, eyes, muscles, or skin, tend to bring the body into its normal position in space and which resists any force acting to put it into a false position.”

NMT: Compensation takes place in the structure of the body due to the Righting Reflexes. Equilibrium can be a subjective event.
Pfluger’s Laws

1. Law of Unilaterally
2. Law of Symmetry
3. Law of Intensity
4. Law of Radiation (referred pain).
5. Law of Generalization

Eduard Friedrich Wilhelm Pflüger
1829-1910
Pfluger’s Laws Defined

1. **Law of Unilaterally**: if a mild irritation is applied to one or more sensory nerves, the movement will take place usually on one side only, on the side which is irritated.

2. **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.

3. **Law of Intensity**: Reflex movements are usually more intense on the side of irritation; at times the movements of the opposite side equal them in intensity, but they are usually less pronounced.
4. **Law of Radiation (referred pain).** If the excitation continues to increase, it is propagated upward, and reactions take place through centrifugal nerves coming from the cord segments higher up.

5. **Law of Generalization:** Systemic Pain…hurts all over. 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 of the body.