Osteopathic Manipulation Techniques (OMT).

Becoming familiar with basic principles.


UPMC McKeensport
Objectives

1. Review history and define osteopathic medicine
2. Review osteopathic philosophy
3. Review basic osteopathic manipulation techniques/videos
4. Review contraindications to treatment
“To find Health should be the object of the physician. Anyone can find disease.”

-A.T. Still
History

• Osteopathy – “osteo:bone” and “pathos: suffering”. Can disease be cured without drugs – MK system?

• Body contained all elements to maintain health, if properly stimulated.

• 1872 - first osteopathic school Kirksville
Define Osteopathic Medicine

• Provides all of the benefits of modern medicine including prescription drugs, surgery, and the use of technology to diagnose disease and evaluate injury.

• Offers the added benefit of hands-on diagnosis and treatment through a system of therapy known as osteopathic manipulative medicine.

• Emphasizes helping each person achieve a high level of wellness by focusing on health promotion and disease prevention.
Osteopathic Philosophy

• Trained to look at the whole person from their first days of medical school, which means they see each person as more than just a collection of organ systems and body parts that may become injured or diseased.

• Medical students learn how to integrate the patient into the health care process as a partner.

• Trained to communicate with people from diverse backgrounds, and they get the opportunity to practice these skills in their classrooms and learning laboratories, frequently with standardized and simulated patients.
Three tenets of osteopathy

Our profession is founded on:

- The dynamic interaction of mind, body and spirit;
- The body’s ability to heal itself;
- The primary role of the musculoskeletal system; and
preventative medicine as the key to maintain health.
Osteopathic Pledge of Commitment

I pledge to:

• Provide compassionate, quality care to my patients
• Partner with them to promote health;
• Display integrity and professionalism throughout my career;
• Advance the philosophy, practice and science of Osteopathic Medicine;
• Continue life-long learning;
• Support my profession with loyalty and action, word and deed; and
• Live each day as an example of what osteopathic physicians should be.
Strong foundation in primary care

• Proud heritage of producing primary care practitioners.

• The mission statements of the schools state plainly that their purpose is the production of primary care physicians.

• Strong foundation in primary care makes one a better physician, regardless of what specialty they may eventually practice.

• Special focus on providing care in rural and urban underserved areas

• Rapidly growing! Nearly one in five medical students in the United States is attending an osteopathic medical school.
What patients say....my story
Any differences?

• Medical students attending osteopathic schools (DOs) must take an additional 200 hours of training learning manipulation techniques of the musculoskeletal system.

• DO physicians tend to be primary care physicians, whereas U.S.M.D.’s tend to specialize in more specific types of medicine (Dermatology, Cardiology, Orthopedics, etc.)..?

• In the United States, 67.4% of active physicians are M.D.s vs. 7.3% which are D.O.s (The remaining 24.2% received their degree from a medical school outside of the United States.)

• DO students take the Comprehensive Osteopathic Medical Licensing Examination (COMLEX). MD medical students take the United States Medical Licensing Exam (USMLE).

• D.O.’s are more prevalent in rural areas.
DO approach – how do we treat?

• The osteopathic approach to wellness focuses on your body’s natural tendency toward health and self-healing.

• What’s being done during OMM visit?
Osteopathic Techniques

• Focus on the principle that the body structure and function are dependent on one another.
• When structure is altered via the musculoskeletal system - abnormalities occur in other body systems.
• Leads to restrictions of motion, tenderness, tissue changes and asymmetry – **SOMATIC DYSFUNCTION.**
Osteopathic Techniques

• In osteopathic medicine, somatic dysfunction is defined as the impaired or altered function of related components of the somatic (bodywork) system including: the skeletal, arthrodial, and myofascial structures, and their related vascular, lymphatic, and neural elements.
Osteopathic Techniques

- Following are some of the manipulation procedures most commonly used by osteopathic physicians to diagnose and treat somatic dysfunctions:
Osteopathic Techniques

- Soft Tissue
- Myofascial Release
- Counterstrain
- Muscle Energy
- HVLA
Osteopathic Techniques

• **Hands-on Contact** – essential component of the DO doctor-patient relationship

• Great deal to do with the patient’s well being, whether he or she suffers from a cold or a terminal disease.

• When the DO examines a patient by auscultation of the chest or palpation of the abdomen or spine, the treatment has already begun.
Osteopathic Techniques

- Soft-Tissue
Osteopathic Techniques

• **Soft-Tissue Technique** – commonly applied to the musculature surrounding the spine and consists of a rhythmic stretching, deep pressure and traction.

• Purpose is to move tissue fluids (edema) and to relax hypertonic muscles and myofascial (fibrous tissue) layers associated with somatic dysfunction.
Osteopathic Techniques

- **Soft-Tissue Technique** – forces should be directed deeply to engage the tissue, but at the same time should be mildly introduced and comfortably accepted by patient.

- Direct technique – tissue moved TOWARD the restrictive barrier.
Osteopathic Techniques

- **Soft-Tissue Technique** – parallel traction, perpendicular traction, direct inhibitory pressure.
Osteopathic Techniques

• Soft-Tissue Technique Indications:

  Identify regions of restricted motion

  Reduce muscle hypertonicity, tension, fascial tension and muscle spasm

  Stretch and increase elasticity to improve ROM

  Improve circulation to the region

  Increase lymphatic drainage

  Promote patient relaxation
Osteopathic Techniques

- Soft-Tissue Technique Contraindications:

  - No ABSOLUTE contraindications
  - Precautions- acute sprain or strain
  - Fracture or dislocation
  - Neurologic or vascular compromise
Osteopathic Techniques

- **Soft-Tissue Technique:**
  - [http://www.acofp.org/acofpimis/acofporg/apps/OMT/index.html](http://www.acofp.org/acofpimis/acofporg/apps/OMT/index.html);
  - [http://www.acofp.org/acofpimis/acofporg/apps/OMT/index.html](http://www.acofp.org/acofpimis/acofporg/apps/OMT/index.html);
Osteopathic Techniques

- Myofascial Release
Osteopathic Techniques

• **Myofascial Release** – designed to treat primarily the myofascial structures.

• The tissue is loaded with a constant force until release occurs.

• In treating with indirect MRT the dysfunctional tissues are guided along a path of least resistance until free movement is achieved.

• In treating with direct MRT Restrictive barrier is engaged for the myofascial tissues.
Osteopathic Techniques

• **Myofascial Release** – soft tissue AND joint-related restrictions.
• Direct or indirect (combined).
• Penetrating pressures are deeper to engage fascia.
• Pressure is constant.
Osteopathic Techniques

• Myofascial Release Indications

  Part of screening exam to identify regions of potential motion restriction and tissue texture changes

  Reduce muscle tension and fascial tension

  Stretch and increase elasticity of shortened fibrotic tissue

  Improve ROM

  Improve circulation to specific region

  Increase lymphatic drainage and decrease swelling
Osteopathic Techniques

- Myofascial Release Contraindications

  No ABSOLUTE contraindications
  Relative – acute sprain or strain
  Fracture or dislocation
  Neurologic or vascular compromise
  Osteoporosis
  Malignancy
  Infection
Osteopathic Techniques

- Myofascial Release

http://www.acofp.org/acofpimis/acofporg/apps/OMT/index.html;
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Osteopathic Techniques

- Counterstrain
Osteopathic Techniques

- **Counterstrain** – manual procedure in which the patient is moved passively away from the restricted motion barrier, towards the position of greatest comfort.
- Passive, asymptomatic strain is induced.
- Used for relief of somatic dysfunctions that are too acute or too delicate to treat with other procedures.
Osteopathic Techniques

- **Counterstrain** – Lawrence Jones, D.O 1912.
- Indirect! - Patient placed in position of comfort to alleviate symptoms
- “Spontaneous release by positioning”
- Involve alpha IA afferent and gamma efferent relationships, also golgi tendon
- Involves multiple tender points
Osteopathic Techniques

- **Counterstrain** – time based method.
- Treatment position held for 90 seconds and then repositioned to the neutral.
- Await feeling of release, relaxation, pulsation.
Osteopathic Techniques

• **Counterstrain Indications**

*Acute, Subacute and chronic somatic dysfunction of articular and myofascial origin*

*Adjunctive treatment of systemic complaints with associated somatic dysfunction*
Osteopathic Techniques

• Counterstrain Contraindications

**ABSOLUTE:**

*Traumatized tissues that can be negatively affected by positioning*

*Severe illness with positional restrictions*

*Vascular and Neurologic syndromes*

*Severe spondylosis*
Osteopathic Techniques
Osteopathic Techniques

• Counterstrain

http://www.acofp.org/acofpimis/acofporg/apps/OMT/index.html;
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OSTEOPATHS CAN BE A LITTLE MANIPULATIVE.

Not another boring slide show!

I DON'T CARE
Osteopathic Techniques

• Muscle Energy
Osteopathic Techniques

• **Muscle Energy** – patient is directed to use his or her muscles from a precise position and in a specific direction against a counterforce applied by the physician.

• To restore motion, decrease muscle/tissue changes and modify asymmetry of somatic dysfunction.
Osteopathic Techniques

- **Muscle Energy** – Fred Mitchell, D.O.
- Patient’s muscles are actively used from controlled position, in specific direction against specific counterforce.
- Direct! Position toward the restrictive barrier.
Osteopathic Techniques

• **Muscle Energy**  - post isometric relaxation, respiratory assist, oculocervical reflex.
• **Golgi Tendon Organ**  – senses changes in muscle tension, reflex inhibition and increase in muscle length.
Osteopathic Techniques

• **Muscle Energy Indications**

_Somatic dysfunction of myofascial origin to reduce hypertonic muscles, lengthen shortened muscles or stretch and improve elasticity of fibrotic muscles_

_Somatic dysfunction of articular origin to mobilize restricted joints and improve ROM_

_To improve local circulation_

_To increase tone in hypotonic or weak muscles_
Osteopathic Techniques

- **Muscle Energy Contraindications**

  Fracture, dislocation or moderate to severe joint instability
  Lack of cooperation or patient unable to understand instructions
  Severe osteoporosis
Osteopathic Techniques

• **Muscle Energy**

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Osteopathic Techniques

- Thrust Technique (HVLA)
Osteopathic Techniques

• **Thrust Technique (HVLA)** – physician applies a high velocity/low-amplitude thrust to restore specific joint motion.

• The joint regains its normal range of motion and re-sets neural reflexes.

• Reduces and/or completely nullifies the physical signs of somatic dysfunction; tissue changes, asymmetry, restriction of motion and tenderness.
Osteopathic Techniques

- Thrust Technique (HVLA)

HVLA lumbar spine with side-bending, rotation, and flexion. A short rotation thrust is applied using the physician’s forearms.
Osteopathic Techniques

- **Thrust Technique (HVLA)** – rapid therapeutic force of brief duration that travels a short distance within ROM of a joint and engages restrictive barrier om >1 plane of motion to elicit release of restriction.

- Direct technique toward restriction.
Osteopathic Techniques

• Thrust Technique (HVLA) Indications

To restore motion of a previously mobile articulation that is exhibiting restriction

Improve intersegmental joint motion

Improve tissue texture changes

Improve pain and increase ROM
Osteopathic Techniques

• Thrust Technique (HVLA) Contraindications

**Absolute**

- Joint Instability
- Severe osteoporosis
- Metastasis in the area
- OA joint with ankylosis
- Osteomyelitis
- Herniated disc with radiculopathy
- RA of C1-2 region
Osteopathic Techniques

- Thrust Technique (HVLA)

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  http://www.acofp.org/acofpimis/acofporg/apps/OMT/index.html;
Thank you

• THANK YOU!
• QUESTIONS??

• References:
  http://www.acofp.org/acofpimis/acofporg/apps/OMT/index.html;
  https://archive.org/details/atlasofosteopath00nich;