#### Hands on Care:

An Introduction to Osteopathic Manipulative Medicine Consults

Hot Topics in Medicine August 7, 2024

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#### My Specialized Training

- University of California, Los Angeles
  - BS, Physiological Sciences
- A.T. Still University School of Osteopathic Medicine in Arizona
  - DO, Doctor of Osteopathic Medicine
  - Teaching fellowship in anatomy and osteopathic manual medicine (OMM)
- St. Barnabas Hospital, Bronx, New York
  - Osteopathic Manipulative Medicine Residency (~5,000 procedures)
- Board Certification: Osteopathic Neuromusculoskeletal Medicine
- UC San Diego Health
  - Started inpatient OMM consult service
  - Clinical practice of inpatient and outpatient OMM (~10k)
  - Medical Director of OMM
  - Teach and research in OMM



#### An overview of osteopathic training

- Osteopathic medicine
  - US: Fully licensed physicians practicing full scope of medicine
  - Internationally: "Osteopaths" vary from physicians to therapists
- Osteopathic manipulative medicine (OMM)
  - Osteopathic manipulative treatment (OMT)
  - All DOs learn OMT in school
    - Biomechanical, structure-function orientation
  - Additional training
    - Residency training: studying and connecting anatomy and physiology in more depth across all body systems, mind-body-spirit
    - Additional CME in developing advanced understanding and skills in treating a variety of concerns



#### Learning Objectives

- 1. Distinguish the different types of body-based therapies and treatments available to patients today.
- 2. Review the updated evidence for OMM for different conditions and patients.
- 3. Develop a basic understanding of what is involved with an OMM consultation.
- 4. Discuss what patients might be appropriate for referral.
- 5. Share how to refer to UCSD's OMM service.



#### **Definitions**



- Standard medical care: Accepted by medical experts as proper treatment for certain type of disease
- Conventional medicine: System by which current providers treat symptoms and diseases using drugs, radiation, or surgery
- Complementary medicine: used **alongside** conventional medicine, but itself not considered to be standard treatment.
- Alternative medicine: used instead of standard medical treatment
- Integrative medicine: combines conventional medicine with CAM practices that have been shown through science to be safe and effective.
  - Stresses patient preference
  - Emphasizes multimodal interventions
  - Emphasizes treating the whole person rather than one organ system
  - Attempts to address mental, physical and spiritual aspects of health



## 2023 WHO Guidelines for chronic primary low back pain

WHO guidelines for non-surgical management of chronic primary low back pain in adults in primary and community care settings, December 7, 2023. https://www.who.int/publications/i/item/9789240081789

Table 1: WHO recommendations for non-surgical management of CPLBP in adults in primary and community care settings.

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D: MEDICINES

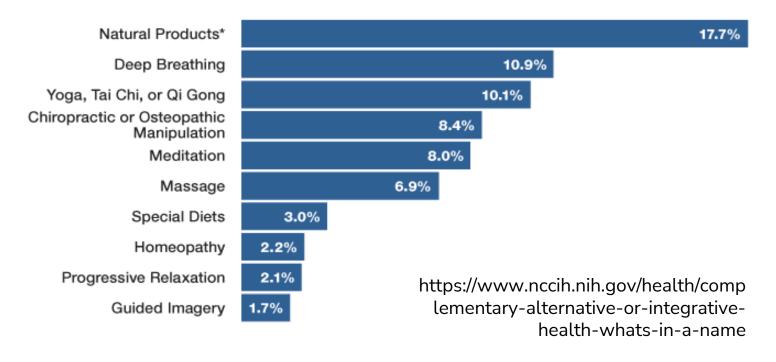
dicine

### Patients are using complementary medicine 10 most complementary be

More than 30 percent of adults and about 12 percent of children use complementary health approaches.

osteopathic ≠ chiropractic

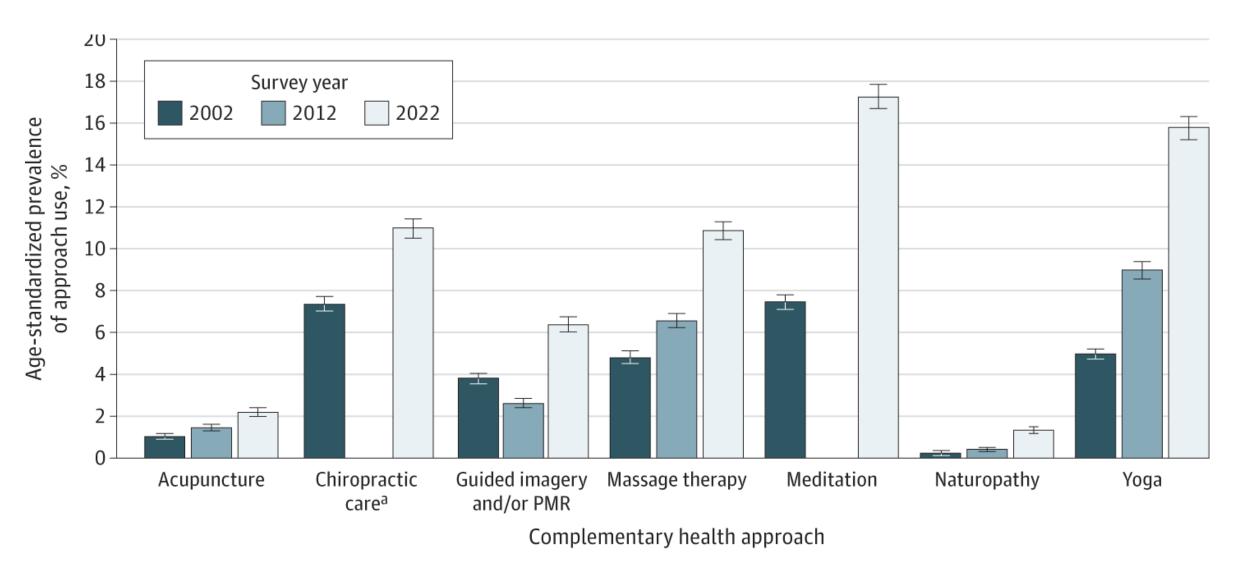
10 most common complementary health approaches among adults—2012



<sup>\*</sup>Dietary supplements other than vitamins and minerals.

Source: Clarke TC, Black LI, Stussman BJ, Barnes PM, Nahin RL. Trends in the use of complementary health approaches among adults: United States, 2002-2012. National health statistics reports; no 79. Hyattsville, MD: National Center for Health Statistics, 2015.





Nahin RL, Rhee A, Stussman B. <u>Use of complementary health approaches overall and for pain management by US adults</u>. *JAMA*. 2024;331(7):613-615.



#### Patient perspectives

 Patients suffering from chronic illness have higher prevalence of complementary/alternative medicine use

- Patient barriers to using CAM
  - Limited access
  - Financial, insurance coverage varies
  - Variation in attitudes toward CAM treatments and their use for different issues
  - Difficult to evaluate efficacy

Anwesa Chatterjee, Evaluating the barriers to the utilization of complementary and alternative medicine (CAM) in the United States: An exploratory study, Advances in Integrative Medicine, Volume 10, Issue 4, 2023, Pages 167-171, ISSN 2212-9588, https://doi.org/10.1016/j.aimed.2023.10.002.

#### Primary care practice patterns

- 53.1% of office-based US physicians recommend at least one complementary health approach to patients.
  - 30.4%: massage
  - 27.1%: chiropractic/osteopathic manipulation
  - 26.5%: herbs/supplements
  - 25.6%: yoga
  - 22.4%: acupuncture
- Most recommended by general/family practice:
  - 54.0%: chiropractic/osteopathic manipulation\*

\*osteopathic ≠ chiropractic

• 52.6%: massage therapy

Stussman BJ, Nahin RL, Barnes PM, Ward BW. U.S. physician recommendations to their patients about the use of complementary health approaches. *Journal of Alternative and Complementary Medicine*. 2020;26(1):25-33.

#### Discerning between other manual modalities

- Licensed Physicians in the US (medical school + residency training)
  - Osteopathic Manipulative Medicine
- Bachelors' or credit requirements + More schooling
  - Physical therapists (Doctorate of PT, ~3 years, 1 year internship)
  - Chiropractic (Doctorate of Chiropractic, ~3.5-5 years, clinical experience wrapped into school)
  - Chinese medicine practitioners (Masters vs Doctorate (~4 years), clinical experience wrapped into school)
    - Acupressure/Acupuncture, Tui-Na
- No bachelors degree required
  - Massage therapist
- Other training available through coursework
  - Lymphatic massage
  - Craniosacral therapy
  - Reike
  - Other manual techniques



## What is osteopathic manipulative medicine?

and how does it work?



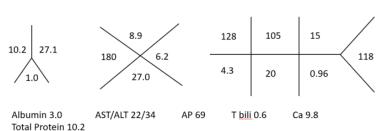
## There is a somatic experience of stress, illness, and injury.

Think about the last time you had to do something stressful.

How did your body feel?

## Quantitative Biometric Assessment and Diagnostic





### **Qualitative Biometric Assessment and Diagnostic**



#### Biomechanical/Biophysical Treatment

#### **Biochemical Treatment**

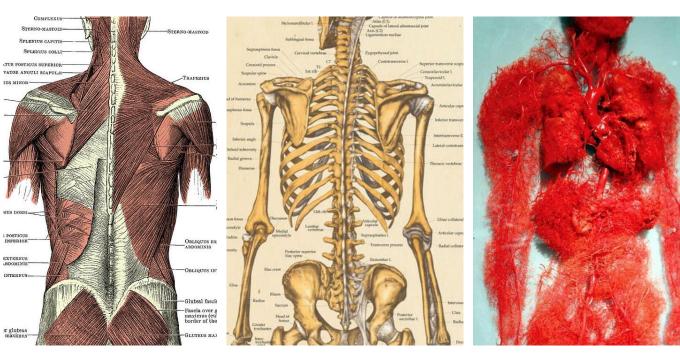




#### Clues from the body

- Osteopathic structural exams are focused evaluations of the subtle and not so subtle changes in musculoskeletal system
  - Tissue texture changes
  - Asymmetry
  - Range of motion changes
  - Tenderness

"Somatic dysfunction"





#### Osteopathic Perspective

- Structure/function model:
  - These "somatic dysfunctions" reflect a deviation from normal
  - Osteopathic diagnosis seeks to understand these altered biomechanics and biophysics
  - OMT works with the patient to resolve these "somatic dysfunctions", which in turn can help restore normal function and homeostasis
- This model might be inadequate
  - Growing discussions in osteopathic research spaces about there being more involved in the therapeutic relationship that transpires in an osteopathic encounter

Esteves JE, Zegarra-Parodi R, van Dun P, Cerritelli F, Vaucher P. Models and theoretical frameworks for osteopathic care – A critical view and call for updates and research. *Int J Osteopath Med*. 2020;35:1-4.



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#### Osteopathic Philosophy

 The body has an inherent ability to heal, recovery, and maintain homeostasis

- Structure and function are interrelated at all levels
  - Anchored in anatomy and physiology
- The person is an integrated unit of body, mind, and spirit
  - Emphasis on considering the whole person

Roberts A, Harris K, Outen B, Bukvic A, Smith B, Schultz A, Bergman S, Mondal D. Osteopathic Manipulative Medicine: A Brief Review of the Hands-On Treatment Approaches and Their Therapeutic Uses. Medicines (Basel). 2022 Apr 27;9(5):33. doi: 10.3390/medicines9050033. PMID: 35622072; PMCID: PMC9143587.



#### Take away points

- She had pain that was limiting her function and quality of life, and it was not improving on its own.
- We started our evaluation from an osteopathic, biomechanical / biophysical perspective
- Goal may not always be to be "pain free"
- Significant changes
  - Functional Improvements returning to physical exercise
  - Psychological relationship with pain changed



#### Mind-body connection

- The mind and body are connected and influence each other in a two-way relationship
- If tissue structures are not changing in a treatment, that may lead me to gather further history or do/recommend more workup
  - Sometimes, this reveals more information about the patient's psychological/emotional state and how that might be contributing to their health status or concern
- Sometimes physical exam findings resolve, and patients have persistent pain
  - This might suggest neuroplastic pain, which require other treatment approaches



#### Treatment plans differ for each person

- Some patients have resolution of their issues after a course of treatment
  - We don't make predetermination of how many visits a patient needs.
  - Treatment course is determined visit to visit based on each patient's unique individual response.
  - If patient plateaus in her response or no longer benefits, we will make a joint decision to stop treatment.
- Some patients benefit ongoing routine treatment
  - For some, OMT can help keep them off pain medication
- Some patients don't benefit
  - If we don't think OMT will help or if they are with the wrong provider, we will usually know within the first couple visits.



#### What does OMT look like?

- Many different techniques/approaches
  - Muscle vs joint vs ligamentous vs fascial vs ??
  - Gentle, precise, and sometimes subtle application of force
- Individualized treatment plan
  - Varies visit to visit
  - Treating specific structural exam findings
  - Addressing related anatomy and physiology
  - Treatment is complete when we note objective changes in tissue structures

- Procedure/technique names
  - Soft tissue techniques
  - Muscle energy
  - Counterstrain
  - Myofascial release
  - Balanced ligamentous tension
  - Articulatory techniques
  - High Velocity Low Impulse Technique
  - Osteopathic cranial manipulative medicine

 Patients are often surprised because its gentler than expected



## Osteopathic research landscape

### Strongest evidence is in musculoskeletal disorders

- Possible effectiveness of OMT for chronic nonspecific back pain, nonspecific neck pain, non-cancer pain in adults.
- Back pain studies include pregnant and postpartum women.
- Effects last at least 3 months, some studies have outcomes at 1 year
  - Bagagiolo D, Rosa D, Borrelli F. Efficacy and safety of osteopathic manipulative treatment: an overview of systematic reviews. BMJ Open. 2022 Apr 12;12(4):e053468. doi: 10.1136/bmjopen-2021-053468. PMID: 35414546; PMCID: PMC9021775.
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## Studies have been published showing possible effects in patients with:

- Dizziness
- Primary headaches, including migraines
- Traumatic brain injuries
- Patients with cancer pain
- Post operative populations
  - Knee arthroscopy, Abdominal surgery, s/p Sternotomies, lumbar discectomies
- Pneumonia
- Wound healing
- Latch and suckling in newborns
- Hospitalized preterm infants
- Stress response
- Immune function and antibody response after vaccinations



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#### OMT is safe

- Literature review of OMM prospective studies (n=13)
  - TBI, asthma, COPD, Parkinson's, peripheral vertigo, neck pain, back pain
- Incidence rate of 1.0 adverse event per 100 post-OMT interval days
  - Of adverse events reported
    - 98% were mild (mild symptoms, no treatment)
    - 2% were moderate (moderate pain, minimal/local or noninvasive intervention)
    - No severe adverse events and no patient deaths.

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# Osteopathic and Integrative Medicine at UC San Diego Health

#### When to refer

- Primary musculoskeletal pain
  - Acute injury that is not recovering
  - Traumatic injury precipitating event
  - Sports related injury
  - Drop in function or worsening pain after a fall/injury/illness
  - Musculoskeletal chest pain
- Secondary musculoskeletal pain
  - Illness with a musculoskeletal component causing symptoms
    - Pneumonia with persistent back pain
    - Pain developed after surgery/hospitalization
- During your exam is there
  - Tissue texture changes
  - Asymmetry
  - Changes in range of motion
  - Pain to palpation (tenderness)
- Tincture of time did not work. Other interventions have not worked.



#### Introducing the consult

 "There's some musculoskeletal findings on my exam that make me think a hands-on approach might be beneficial"

• Physicians who specialize in the musculoskeletal system and understanding how the whole body is connected.

Goal: Helping your whole system function better

#### Locations

Inpatient | La Jolla - Jacobs Medical Center

Outpatient | Hillcrest

- 4<sup>th</sup> and Lewis

#### La Jolla

- Primary Care Gen Family Medicine
- Primary Care UPC Internal Medicine
- Pain Medicine Koman Outpatient Pavilion
- Sports Medicine Chancellor Park Executive Drive
- Pelvic Medicine Chancellor Park Executive Drive
- Rheumatology Pearlman

#### **Scripps Ranch**

- Primary Care – Scripps Ranch Family Medicine

#### Sorrento Valley

- Neurology/Headache Clinic



#### "CIM" (Center for Integrative Medicine) Clinical Offerings

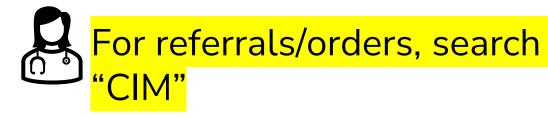
#### **Outpatient**

- Osteopathic Manual Medicine
- Acupuncture/Acupressure/Traditional Chinese Medicine
- Therapeutic Massage Therapy
- Integrative Medicine Physician Consults (functional medicine, ayurvedic, diet/exercise, etc.)
- Integrative Nutrition
- Health Coaching
- SLIM Program Obesity Medicine Group Visits
- Naturopathic Pain Medicine (Medical Cannabis)

#### Inpatient\*

- Osteopathic Manual Medicine (M-F)
- Acupuncture (1 day/wk Weds)
- Massage Therapy (2 day/wk Tues/Thurs)

\*only at JMC



#### What to do if they can't get into OMM

- Wait time
- If primary musculoskeletal pain:
  - Physical therapy
  - Massage therapy
  - Acupuncture
  - If they plateau and stop improving or are feeling like they need something more we can get them in after they work though some of the chronic layers.
  - OMM wait list have them call if they want to be seen. If especially acute, can message us to see if we can get them sooner.
- If concern for mind—body component (significant anxiety, high stress state)
  - Acupuncture
  - Recommend exercise, movement, yoga, stretching
  - Meditation
    - Center for mindfulness MBSR classes, self compassion courses



#### Questions?

