Beyond Drugs: Integrating Osteopathic Treatments and Lifestyle Changes for Chronic Pain Management

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OBJECTIVES

* Recognize non-narcotic options for the treatment of acute & chronic pain
* Recognize indications for using non-narcotic options
* Recognize role of therapeutic exercise in treating chronic pain
* Introduce Advanced Aqua Healing concept
“To find health should be the object of the doctor. Anyone can find disease.”

—Philosophy of Osteopathy
Andrew Taylor Still, M.D., D.O.

Integrative Pain Management

“Between 1999 and 2013, the intensified focus on adequate treatment of pain led to a quadrupling of opioid prescriptions in the United States. A tragic consequence was a surge in opioid abuse and overdose deaths.”

* By 2014, drug overdoses surpassed motor vehicle crashes as the leading cause of injury deaths.


An Iatrogenic Epidemic
16,000 Americans died from an overdose of prescription pain medication, and nearly 2 million Americans either abused or were dependent on opioids.


During the 2003-2013 years, among adults aged 18 through 64 years, the percentage of nonmedical use of prescription opioids decreased. In contrast, the prevalence of prescription opioid use disorders, frequency of use, and related mortality increased.

Nonpharmacologic therapies include cognitive behavioral therapy, self-management strategies, mindfulness-based stress reduction, yoga, acupuncture, and physical therapy.


Chronic pain affects nearly 100 million Americans and costs the United States up to $635 billion per year to treat. According to the Institute of Medicine, chronic pain affects a growing number of people.

NIH-funded study suggests brain is hard-wired for chronic pain.
“Osteopathy is based on the perfection of Nature’s work. When all parts of the human body are in line we have health. When they are not the effect is disease.”

—Osteopathy Research and Practice

* Andrew Taylor Still, M.D., D.O.
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* History
* Physical
* Discuss patients goals
* Establish realistic timeline
* Involve patient in treatment choices
* Define roles of physician & patient

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* Factors influencing Pain:
  * Anatomic changes
  * Deconditioning
  * Anxiety/depression
  * Insomnia
  * Smoking
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Insomnia

- Stress
- Anxiety
- Depression
- Too much caffeine, alcohol or nicotine
- Pain from medical conditions, such as arthritis
- Changes in work shifts
- Poor sleep habits, such as an irregular sleep schedule
  - Worrying too much about not being able to sleep

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Deconditioning

- Age related
- Disuse
- Disease related
- Obesity
- Pain
- Depression
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- Anxiety/depression
- Decreased immunity
- High blood pressure
- Obesity
- Pain perception
- Insomnia

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- Accurate Physical Assessment
- Therapeutic Exercise
- Acupuncture
- Injections
- OMT
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Physical Assessment

* Gait
* Posture
* Tissue texture
* Muscle strength
* Sequence of muscle recruitment

Gait

“The human being is a dynamic unit of function”
Posture

* Sagittal curves
  * Cervical
  * Thoracic
  * Lumbar
* Shoulders
* Hips
* Knees

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Posture

*How Heavy is Your Head?*

12 lbs.  32 lbs.  42 lbs.

NORMAL POSTURE  2 INCHES FORWARD  3 INCHES FORWARD
Posture
Posture

- TART Changes
- Fascial tension
- Muscle spasm
- Trigger points
- Chapman reflexes
- Restricted joint motion
Fascial tension
Muscle shortening

Restricted Joint Motion
Anterior Hip Capsule
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“Structure and function are interrelated at all levels”

- Iliotibial Band Syndrome
- Tight piriformis muscle
- Tight hip external rotators and adductors
- Hip abductor weakness
- Lower lumbar spine dysfunction
- Sacroiliac joint hypomobility

Knee pain

- Pes anserine bursitis
- Overweight
- Female
- Diabetes
- Age 50-80 y/o
**Muscle strength**

- Sit –to –Stand Test
  - Functional mobility & strength
  - Timed test- pt rises from chair without using arms 5 times.
- Community –dwelling elderly
  - 60-69 y/o- 11.4 sec
  - 70-79 y/o- 12.6 sec
  - 80-89 y/o-14.8 sec

**Muscle strength**

- Trendelenburg test
**Sequence of muscle recruitment**

* Prone Hip Extension test
  * 1. Hamstrings
  * 2. Glute max
  * 3. Contralateral QL
  * 4. Ipsi QL
  * 5. Contra E.Spine
  * 6. Ipsi E.Spine

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**Prescriptive exercises**

* Tight muscles lower quarter lliopsoas
  * Rectus femoris
  * Adductor
  * Piriformis
  * Hamstrings
  * Tensor fascia lata
  * Quadratus lumborum

* Weak muscles lower quarter
  * Gluteus maximus
  * Gluteus medius
  * Abdominals
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Muscle Imbalance

- Weak glute max/tight hip flexors
- Weak abs
- Short e. spinae
- Weak glute med.,min/short TFL/QL
- Anterior pelvic tilt/increased lumbar lordosis
- Hypermobility lower T/L spine

Normal Firing Patterns

- Hip extension
  - 1. Hamstrings
  - 2. Glute max
  - 3. Contralateral QL
  - 4. Ipsi QL
  - 5. Contra E.Spinae
  - 6. Ipsi E.Spinae

- Hip Abduction
  - 1. TFL
  - 2. Glute med.
  - 3. QL
  - 4. E. Spinae

Abnormal Firing Patterns = muscle imbalance
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Therapeutic Exercise
- Perscriptive exercises based on assessment
  - Strength
  - Posture
  - Range of motion
Iliopsoas Stretch

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Acupuncture

- Acute
  - Battlefield auricular
  - Chinese scalp acupuncture
  - Tendinomuscular Meridian Treatment
- Chronic
  - PENS
  - Meridian points
  - Auricular points
  - Chinese scalp acupuncture
  - Psychoemotional conditions
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Acupuncture for Acute Pain

- Tendinomuscular Meridian Treatment

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Acupuncture

- **Pain**
  - Fatigue
  - Nausea & vomiting caused by chemotherapy
  - Neuropathy caused by chemotherapy
  - Weight loss
  - Anxiety
  - Depression
  - Insomnia

- **Dry mouth/dry eyes**
- **Hot flashes**
- **Nerve problems - CTS**
- **Constipation & diarrhea - IBS**
- **Interstitial Cystitis**
- **Migraine**
- **Headache**
- **Raynaud’s**
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Acupuncture

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Acupuncture
Integrative Pain Management

Acupuncture

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Injections

- Homeopathic
  - Traumeel
- Bioregenerative
  - Prolotherapy
    - Platelet Rich Plasma (PRP)
    - Dextrose
    - Hyaluronic Acid
- Steroid
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- Treatment options
- Trigger Point injections

"The rule of the artery is absolute, universal, and must be unobstructed or disease will result."

—Autobiography of A. T. Still
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* Treatment options
* Cupping

* OMT
  * Five Models
    * Biomechanical
    * Respiratory-Circulatory
    * Neurological
    * Behavioral

Foundations of Osteopathic Medicine, 3rd edition, Chap. 5, pp 53-56
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Advanced Aqua Healing

- Biomechanical – structural model
• Biomechanical–structural model
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- Biomechanical – structural model
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- Biomechanical – structural model

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- Respiratory- circulatory model
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* Respiratory-circulatory model

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Neurological model
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- Metabolic-nutritional model

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- Behavioral-psychosocial model
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Thank you for your attention

Questions are welcome
Lower back pain was most common among smokers (16.5 percent), alcohol-dependent drinkers (almost 15 percent), obese people (close to 17 percent) and those suffering from depression (slightly over 19 percent).

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- Anatomic Changes
  - Joint changes – stiffness or hypermobility
  - Bone changes – osteoporosis
  - Muscle
  - Neuropathy
Joint pain

1 out of 3 American adults suffer from some type of joint disease. Gaining one pound puts four times more stress on knee and hip joints. Although symptoms usually develop years later, osteoarthritis damage can begin as early as age 20 – especially among athletes who overtrain or sustain injuries. By age 50, you’ve probably logged 75,000 miles or more on your knees.

Four keys to defeating osteoarthritis pain

Stay lean – Sometimes just losing excess weight relieves the pain.
Stay active – Physically fit people suffer less arthritis pain than people who aren’t active.
Stay strong – Strong muscles help take the weight load off your joints, limiting cartilage damage. A strong core – abdominal and back muscles – keeps your body stable and balanced.

Muscle pain

The most common causes are:

- Injury or trauma including sprains & strains
- Overuse: using a muscle too much, too soon, too often
- Tension or stress

Muscle pain may also be due to:

- Certain drugs, including ACE inhibitors for lowering blood pressure, cocaine, and statins for lowering cholesterol
- Dermatomyositis
- Electrolyte imbalance, i.e. potassium & calcium
- Fibromyalgia
- Infections, including influenza (the flu),
- Lyme disease, malaria, muscle abscess, polio, Rocky Mountain spotted fever, trichinosis
- Lupus
- Polymyalgia rheumatica
- Rhabdomyolysis
Smoking constricts blood vessels
Low tolerance for exercise and fatigue
Osteoporosis and hip fractures
• The longer you smoke and the more cigarettes you consume, the greater risk of fracture in old age.
• longer to heal than nonsmokers and may experience more complications during the healing process.
• Significant bone loss has been found in older women and men who smoke
• Reduces Vitamin D3 (1)

Fibromyalgia
• Fibromyalgia is a common syndrome in which a person has long-term pain, spread throughout the body. The pain is most often linked to fatigue, sleep problems, headaches, depression, and anxiety.
• People with fibromyalgia may also have tenderness in the joints, muscles, tendons, and other soft tissues.
• Causes
• The cause is unknown. Possible causes or triggers of fibromyalgia include:
• Physical or emotional trauma
• Abnormal pain response (Areas in the brain that control pain may react differently in people with fibromyalgia.)
• Sleep disturbances
• Infection, such as a virus, although none has been identified
• Fibromyalgia is most common among women age 20 to 50.
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Nerve pain
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Somatic dysfunction

* Impaired or altered dysfunction of related components of the somatic (body framework) system

  **Acute somatic dysfunction**
  Diagnosed by history & palpatory assessment of tenderness, asymmetry of motion and relative position, restriction of motion, and tissue texture changes.

  **Chronic Somatic dysfunction**
  Tenderness, itching, fibrosis, paresthesias, and tissue contraction

* Osteopathic Manual Treatment (OMT)