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**Acupuncture and Integrative Medicine for Neck and Back Pain**  
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The Penny George Institute for Health and Healing  
11/9/18

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**Disclosures**

- I have no relevant financial interests to disclose.

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**Objectives**

- To understand how acupuncture and integrative medicine provide a safe and viable option for the treatment of neck and back pain
- To understand acupuncture from both a modern bio-medical and traditional Chinese medicine context
- To comprehend some of the current research and mechanisms of action surrounding acupuncture and needling therapy
- To understand the training and licensure of a “licensed acupuncturist” in the state of Minnesota

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**What is integrative medicine?**

- **Integrative Medicine (IM)** is healing-oriented **medicine** that takes account of the whole person, including all aspects of lifestyle. It emphasizes the therapeutic relationship between practitioner and patient, is informed by evidence, and makes use of all appropriate therapies.

--from Arizona Center for Integrative Medicine

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**Penny George Institute for Health and Healing Services**

- Integrative medicine consultation with MD/NP
- Acupuncture with a Traditional Chinese Medicine provider
- Massage
- Nutrition consultation
- Biofeedback
- Psychology
- Classes and programs such as mindfulness and tai chi

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**What is Acupuncture?**

- Acupuncture is medical therapy that uses fine, single use, sterile needles to stimulate our natural capacity to heal. It is one modality of traditional Chinese medicine (TCM).
- Acupuncture has been practiced for more than 2,000 years in China.
- Acupuncture can be used as a stand alone therapy or in conjunction with accessory techniques such as electrical stimulation, cupping, dermal friction (guasha), Tui na (massage), Chinese herbal medicine and mind-body-breath exercise known as tai chi and qi gong.

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**Acupuncturists at the Penny George Institute for Health and Healing**

- Licensed by the Minnesota Board of Medical Practice “L.Ac.”
- Board Certified by the National Certification Commission of Acupuncture and Oriental Medicine (NCCAOM).
- Have a master’s degree or greater in Acupuncture/Traditional East Asian Medicine.
- There are many subspecialties of acupuncture including: orthopedic/sports medicine acupuncture, fertility, oncology and auricular acupuncture.

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**Current Recommendations by the American College of Physicians for low back pain.**

- **Acute or subacute low back pain** --non-drug therapies such as superficial heat, massage, **acupuncture**, or spinal manipulation. If drug therapy is desired, physicians and patients should select nonsteroidal anti-inflammatory drugs (NSAIDs) or skeletal muscle relaxants
- **Chronic low back pain**--initially select non-drug therapy with exercise, multidisciplinary rehabilitation, **acupuncture**, mindfulness-based stress reduction, tai chi, yoga, motor control exercise (MCE), progressive relaxation, electromyography biofeedback, low level laser therapy, operant therapy, cognitive behavioral therapy, or spinal manipulation

8 

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**New Joint Commission advisory on non-pharmacologic and non-opioid solutions for pain management**

Evidence-based, non-opioid treatment options for pain:

- Behavioral/cognitive/psychological interventions, such as **meditation techniques and progressive muscle relaxation**
- Environmental-based interventions, such as lighting alterations and **music therapy**
- Physical interventions, including **acupuncture, massage therapy and spinal manipulation**
- Non-opioid pharmacologic interventions, including non-steroidal anti-inflammatory agents, acetaminophen, corticosteroids and topical products

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### Acupuncture compared to IV Morphine in ED <sup>1</sup>

- This was a prospective, randomized trial of acupuncture vs morphine to treat ED patients with acute onset moderate to severe pain. Primary outcome consists of the degree of pain relief with significant pain reduction defined as a pain score reduction  $\geq 50\%$  of its initial value. We also analyzed the pain reduction time and the occurrence of short-term adverse effects. We included in the protocol 300 patients with acute pain: 150 in each group.
- RESULTS: Success rate was significantly different between the 2 groups (92% in the acupuncture group vs 78% in the morphine group  $P < .001$ ). Resolution time was  $16 \pm 8$  minutes in the acupuncture group vs  $28 \pm 14$  minutes in the morphine group ( $P < .005$ ). Overall, 89 patients (29.6%) experienced minor adverse effects: 85 (56.6%) in morphine group and 4 (2.6%) in acupuncture group ( $P < .001$ ). No major adverse effects were recorded during the study protocol. In patients with acute pain presenting to the ED, acupuncture was associated with more effective and faster analgesia with better tolerance.

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### Acupuncture for Chronic Pain Individual Patient Data Meta-analysis <sup>2</sup>

“Background Although acupuncture is widely used for chronic pain, there remains considerable controversy as to its value. We aimed to determine the effect size of acupuncture for 4 chronic pain conditions: back and neck pain, osteoarthritis, chronic headache, and shoulder pain.

Methods We conducted a systematic review to identify randomized controlled trials (RCTs) of acupuncture for chronic pain in which allocation concealment was determined unambiguously to be adequate. Individual patient data meta-analyses were conducted using data from 29 of 31 eligible RCTs, with a total of 17 922 patients analyzed.

Results In the primary analysis, including all eligible RCTs, acupuncture was superior to both sham and no-acupuncture control for each pain condition ( $P < .001$  for all comparisons). After exclusion of an outlying set of RCTs that strongly favored acupuncture, the effect sizes were similar across pain conditions. Patients receiving acupuncture had less pain, with scores that were 0.23 (95% CI, 0.13-0.33), 0.16 (95% CI, 0.07-0.25), and 0.15 (95% CI, 0.07-0.24) SDs lower than sham controls for back and neck pain, osteoarthritis, and chronic headache, respectively; the effect sizes in comparison to no-acupuncture controls were 0.55 (95% CI, 0.51-0.58), 0.57 (95% CI, 0.50-0.64), and 0.42 (95% CI, 0.37-0.46).

Conclusions Acupuncture is effective for the treatment of chronic pain and is therefore a reasonable referral option. Significant differences between true and sham acupuncture indicate that acupuncture is more than a placebo. However, these differences are relatively modest, suggesting that factors in addition to the specific effects of needling are important contributors to the therapeutic effects of acupuncture.” <sup>2</sup>

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### Alexander Technique Lessons or Acupuncture Sessions for Persons With Chronic Neck Pain: A Randomized Trial <sup>3</sup>

“Background: Management of chronic neck pain may benefit from additional active self-care-oriented approaches.


Objective: To evaluate clinical effectiveness of Alexander Technique lessons or acupuncture versus usual care for persons with chronic, nonspecific neck pain.

Intervention: 12 acupuncture sessions or 20 one-to-one Alexander lessons (both 60 minutes total) plus usual care versus usual care alone.

Measurements: NPQ score (primary outcome) at 0, 3, 6, and 12 months (primary end point) and Chronic Pain Self-Efficacy Scale score, quality of life, and adverse events (secondary outcomes).

Results: 517 patients were recruited, and the median duration of neck pain was 6 years. Mean attendance was 10 acupuncture sessions and 14 Alexander lessons. Between-group reductions in NPQ score at 12 months versus usual care were 3.92 percentage points for acupuncture (95% CI, 0.97 to 6.87 percentage points) ( $P = 0.009$ ) and 3.79 percentage points for Alexander lessons (CI, 0.91 to 6.66 percentage points) ( $P = 0.010$ ). The 12-month reductions in NPQ score from baseline were 33% for acupuncture and 31% for Alexander lessons. Participant self-efficacy improved for both interventions versus usual care at 6 months ( $P < 0.001$ ) and was significantly associated ( $P < 0.001$ ) with 12-month NPQ score reductions (acupuncture, 3.34 percentage points [CI, 2.33 to 4.38 percentage points]; Alexander lessons, 3.33 percentage points [CI, 2.22 to 4.44 percentage points]). No reported serious adverse events were considered probably or definitely related to either intervention.

Conclusion: Acupuncture sessions and Alexander Technique lessons both led to significant reductions in neck pain and associated disability compared with usual care at 12 months. Enhanced self-efficacy may partially explain why longer-term benefits were sustained.” <sup>3</sup>

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### How does acupuncture work?

Bio-Medicine	Traditional Chinese Medicine
As segmental analgesia, acupuncture may inhibit the nociceptive pathways.	Acupuncture is believed to stimulate our natural capacity to heal. This vital function is often referred to in Traditional Chinese Medicine as "qi".
Acupuncture releases $\beta$ -endorphin in the brain and enkephalin in the spinal cord.	The word "qi" is a lexeme with no one word that encapsulates it's meaning. "Qi" is often referred to as "vital function".
Acupuncture stimulates type II/III nerves in muscles and promotes local blood flow to aid in tissue healing	Acupuncture, tui na massage and mind-body-breath exercise are believed to promote circulation, reduce pain and aid in healing
Acupuncture can be used to stimulate myofascial trigger and/or motor points.	

13 

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### Acupuncture at Penny George Clinics and other Allina Sites

**Locations**

- Virginia Piper Cancer Institute
  - Abbott Northwestern
  - Mercy
  - Unity
- Outpatient Clinics
  - Abbott Northwestern
  - WestHealth
  - Buffalo
  - Unity
  - New Ulm
  - Owatonna
- Primary Care Clinics
  - Highland Park
  - St. Francis, Shakopee
  - Woodbury
  - Isanti
  - Minnetonka
  - Northfield
  - River Falls (*coming in September*)
  - Hastings (*coming in November*)

14 

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### TCM: Acupuncture

**Possible Contraindications**

- Uncontrolled INR
- Thrombocytopenia, neutropenia-acupuncture may increase risk of infection.
- If patient is pregnant, it is necessary to communicate this to acupuncturist as certain points are contraindicated
- Electro-acupuncture is contraindicated for patients with pacemaker
- Herbs may not be appropriate for patients with certain types of cancer or on certain types of medications.

15 

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**Chronic Pain**

Chronic pain often requires a whole person approach as there are multiple factors that contribute to chronic pain

- Stress
- Sleep
- Diet
- Depression and anxiety
- Lack of movement/fear of movement

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**Penny George Transforming Pain Shared Medical Visit**

• The Transforming Pain Shared Medical Visit (SMV) is a skills based, upstream, non-pharmaceutical approach for the treatment and prevention of chronic pain. Combining the latest evidence based neuroscience understanding of chronic pain with the wisdom of traditional Chinese medicine, this program utilizes group synergy, mindfulness, tai chi, qi gong and education to reduce patients' pain and improve their quality of life. The program consists of 8 weekly visits of 2.5 hours and are billed to patients' insurance.

17 

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**Each week consists of:**

- 1 on 1 visit with Dr. Nancy Van Sloun
- Group discussion of previous week's content and practice
- A specific topic regarding the treatment of chronic pain
- Tai chi and qi gong practice and homework for following week
- Reading assignments, written exercise, mindfulness, tai chi - qi gong home practice

18 

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**Weekly Focus**

- Week 1-Neuroscience and TCM education regarding chronic pain
- Week 2- The relationship between emotions and chronic pain
- Week 3- Mindfulness
- Week 4- The effects of chronic stress on pain
- Week 5- Movement and chronic pain, kinesiophobia
- Week 6- The role of diet and pain
- Week 7- Putting it all together, moving forward
- Week 8- Aftercare plan and next steps
- Follow up 6-8 weeks after completion

19 

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**You can change the brain**

From a neuroscience perspective, the components of the program (education, mindfulness, tai chi/qi gong) create positive changes in the brain that over time will reduce pain

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**TCM modalities of tai chi and qi gong**

- Tai Chi and qi gong promote a gentle and safe way to promote balance, coordination, gently stretch the connective tissues, improve circulation and promote relaxation.
- Tai chi has been shown to reduce pain catastrophizing. 4

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