

# Intra-Professional Communication

## Part IV

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# Disclosure

This certifies that I, Jennifer M. Williams, have not, nor has my spouse/partner or any immediate family member have had in the past 12 months or expect to have in the upcoming months, any financial relationship or gift-in-kind with industry that is relevant to the subject matter of the presentation.

# Outline

- Intra-Professional Collaboration
  - Integrated Language
  - Chinese Herbs in Western Settings
- Treatment Approaches
  - Pragmatic Acupuncture for Pain
  - Western Acupuncture Challenges and Kilig
- Diagnostic Framework and Needle Techniques
  - Medical Notes, Research, and Case Studies
  - Educating Public

# Intra-Professional Collaboration

- Asclepius was the god of medicine and healing in ancient Greek philosophy.
- He represented the healing aspect of medical arts, using herbs and food.
- He shared the title Paeon; *the healer*.
- Asclepius' healing staff is the symbol still used in medicine today.



# Intra-Professional Collaboration

## Changing Paradigm of Medicine

- Shift from incentivized medicine to holistic model
- Incentivized model manages disease/dysfunction
- Holistic model treats person with disease/dysfunction
- CM and FM are changing standard of care
  - Standard of care not always evidence-based
    - Evidence-based used in incentivized model

# Integrated Language



# Evidence-Informed Practice

- Part of Doctoral Programs and Profession
- National Institutes of Health (NIH)
- Evidence-Based Acupuncture (EBDA)
  - Website set up by an MD who retrained in CM
  - Developed resource as a communicate tool
  - Taken over and incorporated as a 501c3
    - Mission is to foster 'Better health through better information about acupuncture's scientific evidence.'
    - Aim is to provide high quality, well-researched, well-written information about acupuncture's evidence using the dominant language of science and medicine
    - <https://www.evidencebasedacupuncture.org/>

# CM Pain Theories

- **Trauma Can Cause Local Stagnation**
  - Qi (energy) – slight stagnation
  - Blood – severe stagnation
    - Bruising, swelling
    - Can linger
      - Blood Stasis
      - Area of Injury Susceptible
        - » Exterior pathogen can settle (chronic joint pain)
          - Obstruction of Cold or Damp



# CM Pain Theories

- **Pain as Empty or Full Condition**
  - Empty is dull ache
    - Deficiency of qi or blood
    - Consumption of body fluids (muscle dehydration)
    - Qi stagnation > distension than pain; no fixed location
  - Full is intense or sharp
    - Stagnation of qi or blood
    - Obstruction of phlegm
    - Blood stasis > stabbing, boring pain; fixed location
      - head, chest, epigastrium, abdomen, uterus

# CM Pain Theories

- **Deficiency** - weak flow (circulation, energy)
- **Stagnation** - blocked flow (break, tear)
- **Obstruction/Bi Syndrome** - cold/damp joints
- **Stasis** - restrained flow (swelling, trigger point)

*“Where there is pain, there is no free flow.  
Where there is no free flow, there is pain.”*

**Herbs / Food can be used to address pain patterns**

# Herb/Diet Support Language

- **Traumatic Injuries**

- Require increased nutrition
- Require increased oxygen
- Current literature
  - Emphasizes need for increased nutrition post trauma
  - Outlines mechanism of nutrition and oxygen needs
  - Reviews concept of blood stasis as faulty circulation
- Poor blood quality hinders healing

# Herb/Diet Support Language

- **Poor Blood Quality Hinders Healing**
  - Decreased circulation
    - Cold hands & feet
    - Stabbing pain
    - Degeneration
  - Deficiency can manifest as heat
    - Mental preoccupation or anxiety
    - Vivid dreams
    - Night sweats

# Herb/Diet Support Language

- **Selecting Kinds of Nutrition (Food/Herbs)**
  - Nature of injury
  - Quality of pain
  - Location of pain
  - Health of organs
  - Pain terms and concepts
- **Pain Terms and Concepts**
  - Help determine dietary changes or ideal herbs

# Herb Pharmacodynamics



Ai Ye



Ba Ji Tian whole jen



Bai Bu



Bai Dou Kou



Bai Guo Whole jen



Bai He



Bai Ji



Bai Ji Li



Bai Ji Li whole bu: small



Bai Jiang Cao



Bai Jie Zi



Bai Mao Gen



Bai Mou Gen Whole jen



Bai Qian



Bai Shao whole jen



Bai Wei



Bai Zhi Whole jen



Bai Zhu



Bai Zi Ren



Ban Lan Gen



Ban Xia



Bei Xie 1b



Bi Ba



Bian Dou Whole jen



Bian Xu



Bie Jia



Bing Lang



Bo He-1a



Bu Gu Zhi



Bu Gu Zi Whole jen



Cang Er Zi



Cang Zhu



Cao Dou Kou Whole jen



Cao Guo e



Cao Wu whole jen



Ce Bai ye



Chai Hu



Chan Tui 1



Che Qian Zi



Che Qian Zi part



Chen Pi



Chen Xiang



Chi Shao



Chi Shi Zhi Whole jen



Chuan Bei Mu



Chuan Jiao whole jen



Chuan Lian Zi



Chuan Niu Xi



Chuan Shan Whole part jen



Chuan Xiong



Chun Pi



Ci Shi



Cong Bai whole jen



Da Fu Pi

# Herb Pharmacodynamics

- **Concurrent Use of Herbs & Pharmaceuticals**
  - Complicated by supplements and recreational drugs
- **Pharmacokinetic Interactions**
  - Absorption – generally in the intestines
  - Distribution – process of transfer and release in body
  - Metabolism – generally in the liver (induce or inhibit)
  - Elimination – generally in the kidneys
- **Pharmacodynamic Interactions**
  - Herb to herb interactions – enhance or antagonize
  - Herb to drug interactions – anticoagulant, anti-platelet, diuretic, anti-diabetic, sympathomimetic

# Herb Pharmacodynamics

- **Characteristics of Chinese Model**

- **Channel or Meridian Relationships**

- Direct effect – enters an organ channel
      - Such as Lung channel to stop cough
    - Indirect effect – enters a governing channel
      - Such as Kidney channel for healing bone fracture
    - Specific effect – enters an associated channel
      - Such as Liver channel for jaundice based headache

- **Toxicity**

- Few species are toxic
      - Must be processed correctly
      - Must be small and limited doses



# Herb Pharmacodynamics

- **Characteristics of Chinese Model**

- **Thermal Property**

- Balancing formulas
    - Therapeutic effect
      - Cold and Cool for disorders characterized by heat
      - Neutral
      - Hot and Warm for disorders characterized by cold

- **Direction**

- To guide herbs or
    - Counterbalance disorder characterized by movement

# Herbs and Nutrition for Pain

- **Using Herbs for Pain**
  - Casually used herbs
    - Many have recreational qualities
    - Cheap and widely marketed
    - Most have unwanted side effects
  - Professionally used herbs
    - Few have recreational qualities
    - More expensive and not well-known
    - Most have nutritional qualities

# Herb Terms and Concepts

- **Chemical Composition**
  - Can be complex number of components
- **Pharmacological Effects**
  - Western studies on physiological influences
- **Herb-Drug Interaction**
  - Critically important
- **Cautions and Contraindications**
  - Important in minimizing unwanted side effects

# Herb Terms and Concepts

- **Organs and Channels**
  - Direct or indirect effect on organ or area of body
- **Direction**
  - Developmental movement of an ailment
    - Such as cough, vomiting, diarrhea, sweating
- **Thermal Properties**
  - Cold, cool, hot, warm, and neutral
- **Taste and Function**
  - There is often a correlation between taste and function

# Herb Terms and Concepts

- **Qi Influence**
  - Movement or function of cells, organs, fluid, or energy
- **Yin**
  - Cold, substance, inner, lower, contracting, still
- **Yang**
  - Hot, energy, outer, upper, expanding, movement
- **Therapeutic Actions**
  - Organs have a broader function in the East

# Herb Terms and Concepts

- **Taste and Function of Herbs**

- **Acrid** - releases exterior; moves qi and blood
- **Sweet** - nourishes deficiencies; harmonizes formula
- **Sour** - stabilizes/binds; prevents loss of body fluids
- **Bitter** - sedates heat; drains downwards; dries damp
- **Salty** - purges excess; softens hardness (cysts)
- **Bland** - promotes urination
- **Astringent** - stabilizes/binds; prevents loss of fluids

# Herb Terms and Concepts

- **Tonics & Adaptogens**

- Promote Healing and Health - strengthens, nourishes
- Possible Pharmacological Effects
  - **Immunologic** – increase white blood and lymphocyte
  - **Adaptogenic** – increase resistance to stresses
  - **Endocrinological** – increase endogenous hormones
  - **Metabolic** – may lower plasma glucose or cholesterol
- Potential Herb-Drug Interactions
  - **Immunosuppressants** – caution with organ transplant
  - **Hormones** – caution with other supplements
  - **Cardiovascular Agents** – caution with cardio meds

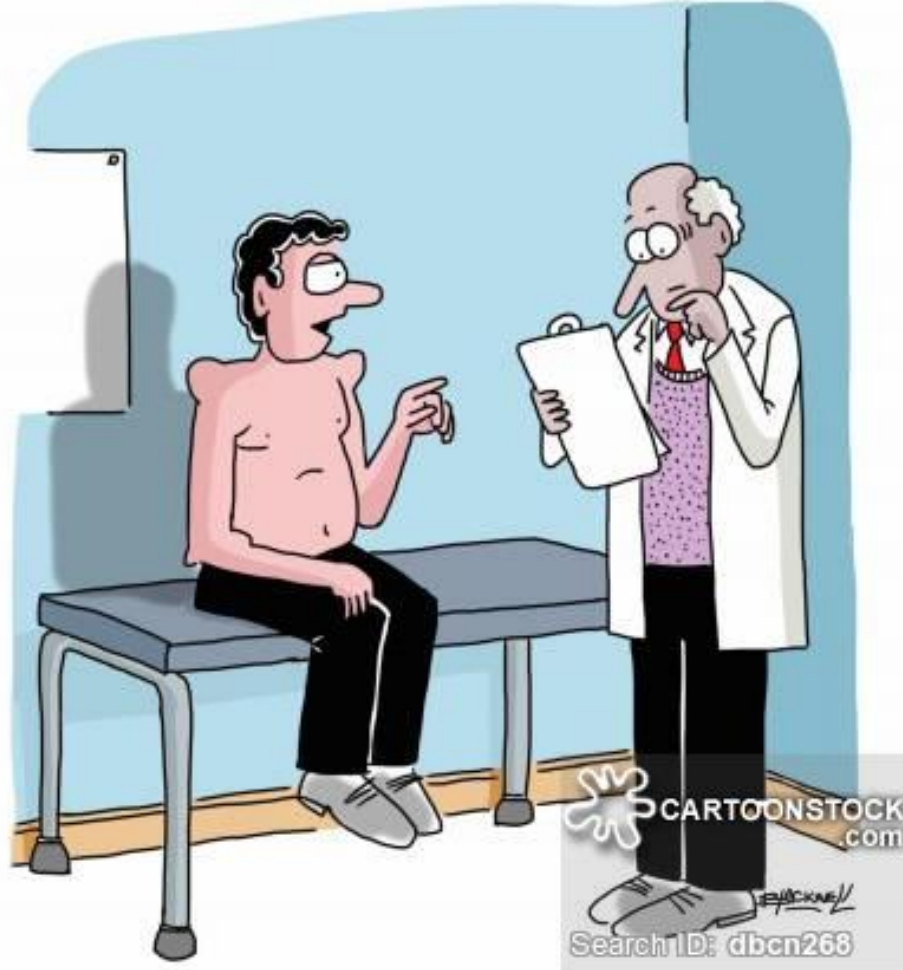
# Marketed Herbs Quiz

## True or False

- Turmeric is a root \_\_\_\_ Turmeric is a tuber \_\_\_\_
- Turmeric is warming \_\_\_\_ Turmeric is cooling \_\_\_\_
- Pure Turmeric can decrease inflammation \_\_\_\_
- Reishi mushroom is low in polysaccharides \_\_\_\_
- Astragalus does not increase energy \_\_\_\_
- Butterbur is a healthy herb to address headaches \_\_\_\_
- Kratom is a healthy herb to address pain \_\_\_\_
- Kava Kava is a healthy herb to improve sleep \_\_\_\_



# Marketed Herbs



"THE NURSE SAID TO LIST THE DRUGS I'M TAKING... I WROTE THE LEGAL IN THE LEFT COLUMN... ILLEGAL ON THE RIGHT."

# Marketed Herbs

## Peruvian Ginseng (Maca)

- High in Nutrients
- Contains polysaccharides
- Reported aphrodisiac properties
- Related to radishes and turnips
- **Toxicology:** Low; > goiters



# Marketed Herbs

- **Butterbur (Petasites)**

- Hay Fever
- Migraines
- Asthma
- **Herb-Drug Interaction:** drugs that induce liver enzyme CYP3A4; St. John's Wort, Carbamazepine, Phenytoin, Rifampin
- **Toxicology:** pyrrolizidine alkaloids; toxic to the liver
- **Side Effects:** restlessness, excitability, mania, tremor, muscle stiffness, and muscle spasms



# Marketed Herbs

## St. John's Wort

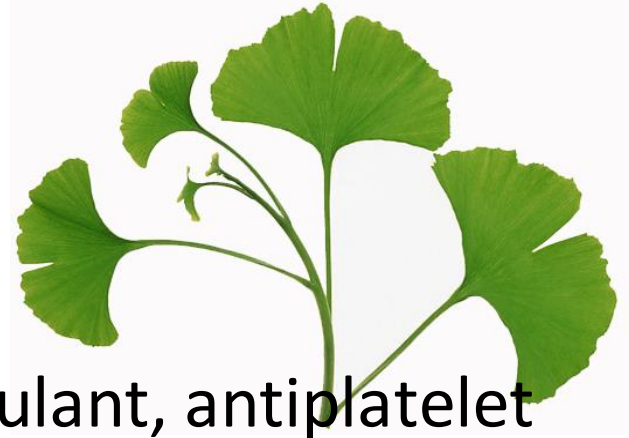
- Clears Heat and Toxins
- Stops Bleeding
- Relieves Depression
- **Herb-Drug Interaction:** SSRIs, Antivirals, Digoxin (Lanoxin), some oral contraceptives; may lower plasma levels of many drugs through induction of cytochrome P-450 system of liver
- **Toxicology:** Low
- **Pharmacological Effects:** antitussive, analgesic, antibiotic, antidepressant



# Marketed Herbs

## Ginko Biloba

- Astringes Lung
- Relieves Chest Pain
- **Herb-Drug Interaction:** anticoagulant, antiplatelet
- **Toxicology:** > salivation, nausea/vomiting, diarrhea
- **Pharmacological Effects:** antispasmodic, decreases plasma cholesterol, vasodilator (decreases blood pressure)



# Marketed Herbs

## Kava

- Calms mind; induces sleep
- Calms muscle spasm
- Relieves pain
- **Toxicology:** > skin lesions, weak eyesight, emaciation
- **Pharmacological Effects:** sedative, diuretic
- **Chronic use associated with:**
  - Skin lesions-liver poison - accumulation of alkaloids
  - Weakening eyesight – over relaxation of eye muscles
  - Emaciation - depression of appetite



# Marketed Herbs

## **Salvia Divinorum**

- Perennial herb in the mint family
- Psychoactive plant - can induce visions and spiritual experiences
- Has no legitimate medical use
- Listed by the DEA as a Drug and Chemical of Concern
- Salvia is not controlled by DEA
  - online companies advertise as legal psychotropic



# Marketed Herbs

## Ketum or Kratom

- Thought to behave similarly to a  $\mu$ -opioid receptor agonist like morphine
- Used for managing chronic pain and recreationally
- May not be detected by typical drug screening tests, but metabolites can be detected by more specialized testing
- Side effects include itchiness, vomiting, constipation, decreased effort to breathe, seizure, addiction, psychosis
- Naloxone may be used to treat an overdose that results in a decreased effort to breathe
- Listed by the DEA as a Drug and Chemical of Concern





# Marketed Herbs

- **Prepared via Distillation Process**
    - Vaporizing (heat) and condensing (cool)
- Gathered at the end of distillation

Production is labor and time consuming

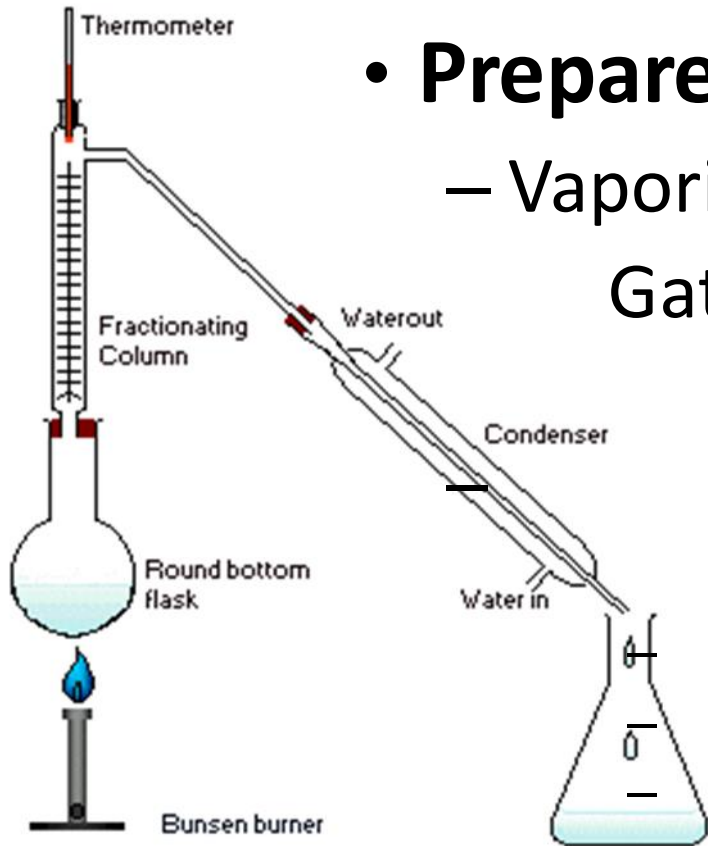
May not extract chief ingredients

Extraction of constituents requires:

Boiling in hot water

Soaking in alcohol

Grinding to a powder



# Marketed Herbs

- **Essential Oils**

- Can be very dangerous when consumed
- Many multi-level marketing scams
  - Targets people who mean well
    - Falsely advertises health benefits
    - Facilitates dissemination of incorrect information

# Herb Therapy



# Herb Therapy

## Professional Herbs Contain Nutrients

- Alkaloids
- Organic Acids
- Polysaccharides
- Amino Acids
- Glucosides
- Triptenes
- Lectins



# Herb Therapy

## Herbs that are Adaptogenic

- Promote healing and health
- Strengthen, nourish, and build
- Possible pharmacological effects:
  - **Immunologic** – may enhance cellular and humoral immunity
  - **Adaptogenic** – increase resistance and helps regulate systems
  - **Endocrinological** – increase endogenous hormones



# Herb Therapy



# Herb Therapy

## Reishi (Ganoderma)

- Therapeutic Actions:
  - Nourishes Heart, calms Mind
  - Reduces cough and wheezing
  - Nourishes energy and Blood
- Toxicology: low
- Pharmacological Effects: antineoplastic, cardiovascular, antibiotic, hepatoprotective, antidiabetic, antitussive



# Herb Therapy

## Astragalus

- Therapeutic Actions:
  - Increases metabolism, reduces edema
  - Relieves numbness and pain
  - Treats thirst and frequent urination
- Toxicology: low
- Herb-Drug Interaction: aminoglycosides
- Pharmacological Effects: immunostimulant, metabolic, antibiotic, antihypertensive, sedative, and analgesic





# Herb Therapy

## Asian Ginseng (Panax)

- Greatly nourishes energy, organ function
- Calms Mind and improves mental function
- Treats thirst and frequent urination
- **Toxicology:** Low > rash, itch, headache
- **Herb-Drug Interaction:** antidiabetics, antidepressants
- **Pharmacological Effects:** CNS adaptive, cognitive, reproductive, immunostimulant, hypoglycemic



# Evidence-Based Practice

Zhou, S. et al (2016). **Gut microbiota-involved mechanisms in enhancing systemic exposure of ginsenosides by coexisting polysaccharides in ginseng decoction.** Scientific Reports, 6, 22474. <http://doi.org/10.1038/srep22474>

Oral decoctions of traditional Chinese medicines (TCM) serve for therapeutic and prophylactic management of diseases for centuries. Small molecules and polysaccharides are dominant chemicals co-occurred in TCM decoctions.

Here we explore a gut microbiota-involved mechanism by which TCM polysaccharides restore the homeostasis of gut microbiota and consequently promote the systemic exposure of concomitant small molecules in the decoction.

As a case study, ginseng polysaccharides and ginsenosides were investigated. Results indicated that ginseng polysaccharides improved intestinal metabolism and absorption of certain ginsenosides, reinstated the holistic gut microbiota, and particularly enhanced the growth of *Lactobacillus* spp. and *Bacteroides* spp., two major metabolic bacteria of ginsenosides. By exploring the synergistic actions of polysaccharides with small molecules, these findings shed new light on rationalization of classic TCM decoctions in human health care.

# Herb Therapy

## Angelica Root

- Blood Tonic
- Invigorates Blood Circulation and Relieves Pain
- Moistens Intestines and Unblocks Bowels
- **Toxicology:** low > fatigue, itching, stomach ache
- **Herb-Drug Interaction:** may potentiate warfarin; antiplatelet
- **Pharmacological Effects:** cardiovascular, antiplatelet, hepatoprotective, immunostimulant, antibiotic



# Herb Therapy

## Prepared Rehmannia

- Nourishes Liver and Kidney
- Calms cough or wheezing
- **Toxicology:** none noted
- **Herb-Drug Interaction:** aminoglycosides
- **Contraindications:** dampness, poor digestion
- **Pharmacological Effects:** anti-inflammatory, diuretic, antibiotic, endocrine – increases plasma levels of adrenocortical hormone



# Herb Therapy

## Polygonum (foti)

- Eliminates Toxins
- Moistens Intestines and Unlocks Bowels
- Lowers Cholesterol
- **Toxicology:** none
- **Contraindications:** magnetitum, haematitum, loose stools
- **Pharmacological Effects:** cardiovascular, immunostimulant, antiaging, gastrointestinal, endocrine (hormonal secretion)



# Herb Therapy

## Cordyceps

- Nourishes and warms Kidney
- Nourishes lung
- Resolves phlegm
- **Toxicology:** low > respiratory distress, spasms, excitation
- **Herb-Drug Interaction:** antidiabetics, antidepressants
- **Contraindications:** dehydration, febrile disease, heat
- **Pharmacological Effects:** adrenocortical, immunostimulant, male reproductive, sedative, cardiovascular, respiratory



# Herb Therapy

## **Herbs that Promote Sleep**

- Calming
- Sedative
- Possible pharmacological effects
  - **Antidepressant**
  - **Antispasmodic**

# Herb Therapy

## Chamomile

- Reduces anxiety and irritability
- Better for early onset insomnia
- Calms irritable bowel
- **Contraindications:** Same as other ragweed
- **Herb-Drug Interaction:** None known
- **Toxicology:** Low
- **Note:** German chamomile tastes better and is better for upset stomach, while Roman chamomile is a better antispasmodic





# Herb Therapy

## Holy Basil (Tulsi)

- Sedative
- Relieves Depression
- **Toxicology:** Low
- **Herb-Drug Interaction:** may speed elimination of some medications
- **Pharmacological Effects:** antibacterial, antidepressant, antiviral, diuretic



# Herb Therapy

## Lemon Balm

- Promotes cognitive functions
- Improves mood
- Relieves headaches and calms stomach
- **Toxicology:** Low
- **Contraindications:** Acts as a thyroxine inhibitor in large doses; avoid with Hashimoto's and hypothyroid
- **Herb-Drug Interaction:** Possible antagonistic interactions with Synthroid and Levoxyl



# Herb Therapy

## Herbs for Pain

- Blood invigorating
- Warming to facilitate movement
- Opens blood vessels
- Disperses Blood stagnation
- Breaks static blood

*“Where there is no free flow, there is pain”*

# Herbs for Pain

## Turmeric Root (Curcuma)

- Moves Blood, Eliminates Blood Stasis
- Opens Channels to Relieve Pain
- Reduces Swelling
- **Toxicology:** low
- **Herb-Drug Interaction:** antiplatelet, anticoagulant
- **Pharmacological Effects:** anti-hyperlipidemic, cholagogic, anti-inflammatory, uterine stimulant, anti-platelet



# Herbs for Pain

## **Turmeric Tuber (Curcuma)**

- Circulates blood
- Activates flow and relieves pain
- Clears heat and cools blood
- **Toxicology:** low
- **Herb-Drug Interaction:** antiplatelet, anticoagulant
- **Pharmacological Effects:** hepatoprotective, anti-hyperlipidemic; gastrointestinal – lowers pH



# Herbs for Pain

## Corydalis

- Promotes blood circulation
- Strongly relieves pain
- Non addictive, no drug tolerance
- **Toxicology:** can decrease heart rate; strongly sedates
- **Herb-Drug Interaction:** antiplatelet, anticoagulant
- **Pharmacological Effects:** analgesic, sedative, anti-ulcer, anti-inflammatory, cardiovascular, adrinocortical



# Herbs for Pain

## Frankincense

- Relieves pain
- Reduces swelling
- Promotes advanced healing (myelination of nerves)
- **Contradictions:** patients with sensitive stomachs should take with food
- **Pharmacological Effects:** analgesic – marked effect



# Herbs for Pain

## Myrrh

- Activates blood circulation
- Reduces swelling
- Promotes healing
- Relieves pain
- **Contradictions:** should take with food
- **Pharmacological Effects:** anti-hyperlipidemic -  
market effect in reducing blood cholesterol





# Herbs for Pain

## Red Ginseng (Dan Shen)

- Activates blood circulation
- Reduces swelling of sores and abscesses
- Nourishes blood, calms mind
- **Contraindications:** hyper-menorhea, hemoptysis, hematuria
- **Herb-Drug Interaction:** antiplatelets, anticoagulants
- **Pharmacological Effects:** cardiovascular, anticoagulant, thrombolytic, hepatoprotective, antineoplastic, CNS suppressant



# Herbs for Pain

## Carthamus Flower

- Activates Blood Circulation
- Opens Channels
- Regulates Menstruation
- **Contraindications:** pregnancy; do not exceed dose
- **Herb-Drug Interaction:** antiplatelets, anticoagulants
- **Toxicology:** use low dose; no organ toxicology found
- **Pharmacological Effects:** Antiplatelet, CNS Suppressant  
Cardiovascular



# Herbs for Pain

## Lovage (Chuan Xiong)

- Activates Qi
- Circulates Blood
- Disperses Wind and Relieves Pain
- **Contraindications:** Hyper-menorrhea and dehydrated
- **Chemical Composition:** 12 alkaloids, 12 acids, 8 essential oils
- **Pharmacological Effects:**
  - Cardiovascular - dilates vessel to reduce blood pressure
  - Antiplatelet and Anti-coagulant – marked effect
  - Sedative – CNS; counters caffeine



# Herb Formulas for Pain



# Herb Formulas for Pain

## Augmented Four Substance

- Nourishes Blood and Kidney
- Regulates Liver (Qi)/Menses
- Moves Qi and Blood
- Relieves menstrual discomfort
- Treats muscle tension; general pain with depression; lower abdomen pain; restlessness, anxiety, irritability
- **Composition:** Lovage, Carthamus, Rehmannia, Peach Seed, Peony
- **Contraindication:** pregnancy and severe blood loss

# Herbs for Pain

## Drive Out Stasis

- Strongly moves blood/helps alleviate pain
- Dissipates congealed blood
- Reduces swelling/promotes healing
- Treats congealed blood with pain, traumatic injury, fractures, severe pain, sprain, torn tendons, broken bones, cramps, back pain, sore legs, generalized body pain
- **Composition:** Carthamus, Myrrh, Frankincense, Lovage, Peach Seed, Achyranthes, Drynaria, Dong Quai
- **Contraindication:** pregnancy

# Eat Your Weeds

Name	Benefit	Use	
<b>Chickweed</b>	High in vitamins and minerals	Good in smoothies and pesto	
<b>Cleavers</b>	Lymph-mover	Good in smoothies and tinctures	
<b>Comfrey</b>	Reduces inflammation, promotes cell growth	Use in ointments and salves	
<b>Curley Dock</b>	Boil roots for liver detox	Eat leaves when young	
<b>Dandelion</b>	Cooling, liver detoxifying	All parts useable, very healthful	
<b>Dead Nettle</b>	High in vitamins, iron, Anti-microbial/fungal	Use in soups or dry for winter greens	
<b>Lemon Balm</b>	Reduces stress, supports liver, aids digestion	Brew as tea, tincture, or use as salve	



# Eat Your Weeds

Name	Benefit	Use	
<b>Mugwort</b>	Warming medicinal Herb	Brew as beer, tea, tincture or salve	
<b>Plantain</b>	Excellent for wounds and stings	Use in salves	
<b>Purslane</b>	Rich in Omega-3 fatty acids	Can be eaten raw or cooked	
<b>Rose Hips</b>	Rich in Vitamin C	Brew as tea	
<b>Stinging Nettle</b>	High in vitamins and minerals	More protein than any other vegetable	
<b>Turkey Tail</b>	Anticarcinogenic medicinal mushroom	Use in tinctures and tea	
<b>Yarrow</b>	Antiphlogistic, antinflammatory, astringent	Use as a tincture or salve	



# Pragmatic Acupuncture for Pain



# Pragmatic Acupuncture for Pain

## What is Acupuncture

- According to the National Institutes of Health, “Acupuncture is among the oldest healing practices in the world.
- Acupuncture technique most often studied scientifically involves penetrating the skin with thin, solid, metallic needles that are manipulated by hands or by electrical stimulation.
- Acupuncture techniques significantly enhance treatment.
- Treatment based on diagnosis and presentation of patient.

# Pragmatic Acupuncture for Pain

## How Does Acupuncture Work?

- Insertion into muscle with specific techniques can release pain relieving endorphins that reduce pain perception and help relax muscles.
- Insertion into connective tissue with specific twisting techniques can stimulate inherent blood vessels and nerves to transmit sensory signals.
- Insertion into specific acupuncture points with appropriate needle techniques can facilitate blood/humoral flow with or without engagement of fascia.

# Pragmatic Acupuncture for Pain

## How Does Acupuncture Work?

- Addition of electric stim to appropriate points with correct frequency and MHz can increase stimulation.
- Can increase serotonin and histamines that promote healing response and reduce inflammation.
- Can release trigger points or congested areas that often press on nerves, affecting large regions.
- Correct insertion in ear points can calm mind, ease withdrawal, stop pain, and improve sleep.

# Pragmatic Acupuncture for Pain

## How Can Acupuncture Treat Pain?

- Pain can occur at dermal, neuropathic, and organ level.
- Pain receptors can be thermal, mechanical, and chemical.
- According to theory, pain arises from lack of free flow.
  - fluid stagnation, inhibited nerve conduction, tissue congestion
- Stagnation of blood results in stabbing pain quality while blood leaving the vessels results in a cramps or spasms.
- Insertion of acupuncture needles can affect neurotransmitters, connective tissue, muscles, blood, and nerves.
- Insertion can be direct, indirect, and auricular (ear).

# Pragmatic Acupuncture for Pain

## Which Insertion Approaches are used?

- **Direct Needling** - insertion in the dysfunctional area.
- **Indirect Needling** - insertion away from the dysfunction that has a direct affect on pain receptors and psyche.
- **Electric Stimulation** – direct or indirect needling with metal handle needles that are connected to a machine, which can deliver a range of pain relieving frequencies.
- **Trigger Therapy** – a direct needling protocol to release tight muscles and alleviate pain.
- **Auricular** – insertion of ear tacks placed in specific ear points to rapidly address pain and comorbid issues.

# Pragmatic Acupuncture for Pain

## Needle Approach Examples

- **Direct Needling**
  - Degenerative Disk Disease
- **Indirect Needling**
  - Reactive Paraspinal Muscles
- **Electric Stimulation**
  - Iliotibial Band (IT) Syndrome, Radiculopathy
- **Trigger Therapy**
  - Myofascial pain

# Pragmatic Acupuncture for Pain

## **Degenerative Disk Disease**

- Dysfunctional muscles can diminish blood flow necessary for tissue repair to areas of the vertebral column.
- Cells essential for tissue repair (chondrocytes) may be inadequate and tissue essential for replacing the gelatin-like substance between vertebra (fibro cartilage) may also degenerate.
- Degeneration leads to narrowing, protrusion, and detachment between vertebra.
- Both structural changes and process of tissue repair can affect associated nerves which can result in mild to debilitating pain.
- Acupoints lateral to depression below spinal process are extra points (Hua Tou Jia Ji). Manipulation and e-stim can relax paraspinal muscles and facilitate blood flow.



# Pragmatic Acupuncture for Pain

## Reactive Paraspinal Muscles

- Jumping out of planes, hauling rucksacks, and heavy lifting can cause dysfunctional mid low back paraspinal muscles.
- Dysfunctional mid low paraspinal muscles can become reactive with recurrent cramps and spasm.
- Recurrent muscle cramps sensitizes lower back region.
- Indirect needling aimed at relaxing the low and mid back muscles, desensitizes and facilitates follow-on direct acu.
- Initial – LV3, LV 4, GB 34, GB 26, LV 13, and ST 36
- Follow-on – Lower Hua Tou Jia Ji and or UB and Ashi points.

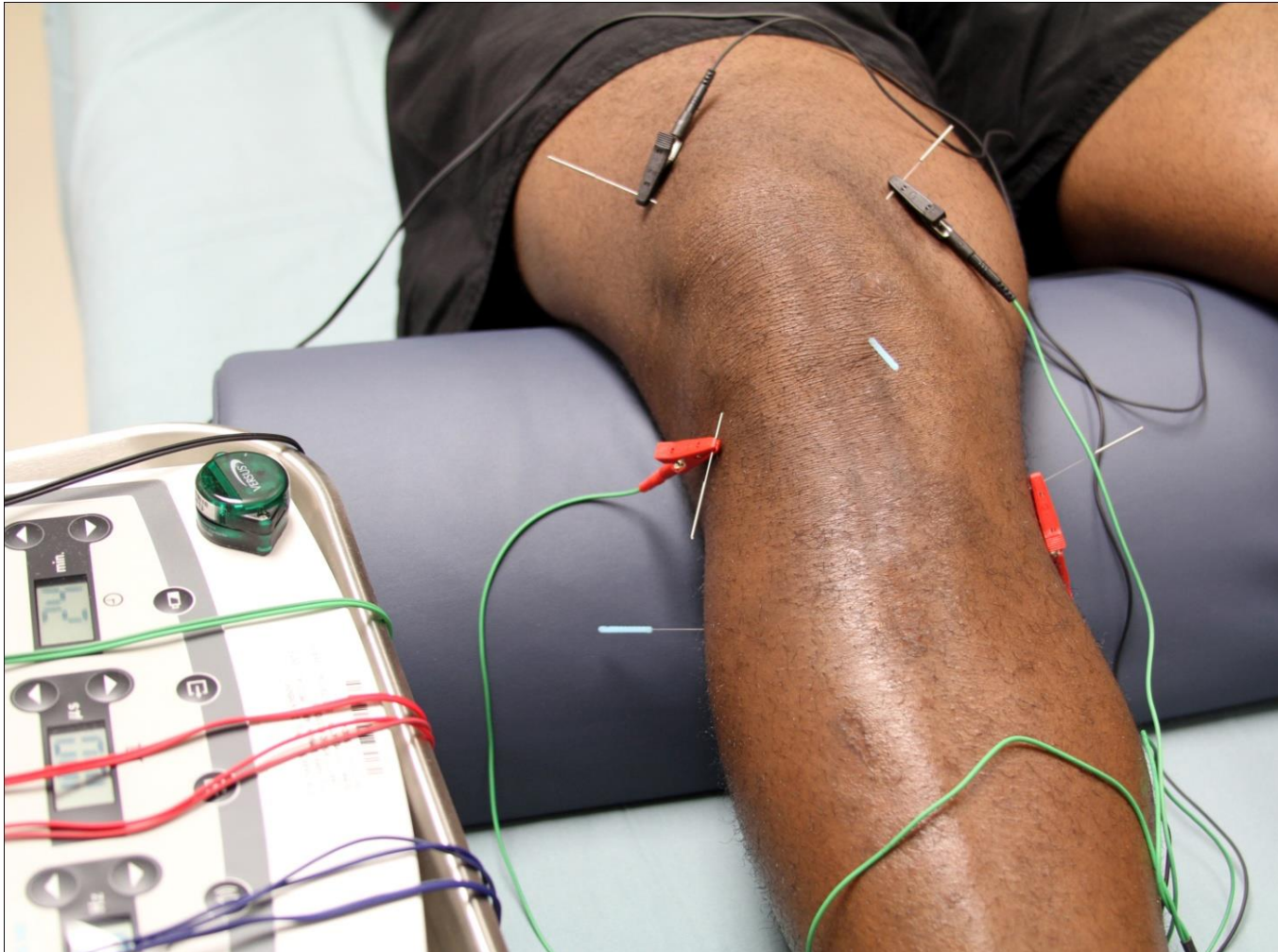
# Pragmatic Acupuncture for Pain

## Iliotibial Band (IT) Syndrome

- Running, cycling, weightlifting, and hiking can strain lateral leg muscles from hip to knee and tighten IT band.
- Tight IT band causes pain from knee and upper lateral leg.
- E-Stim from upper thigh (GB 30) to superior knee (Heding) & medial superior knee (GB 32) to lateral upper thigh (ST 31) at 100Mz x 20 min and 30Mz x 20 min under infrared heat.
- GB 30, GB32, and ST 31 activates channel respective channels and alleviates pain.

# Pragmatic Acupuncture for Pain

## Knee Pain



# Pragmatic Acupuncture for Pain

## **Radiculopathy**

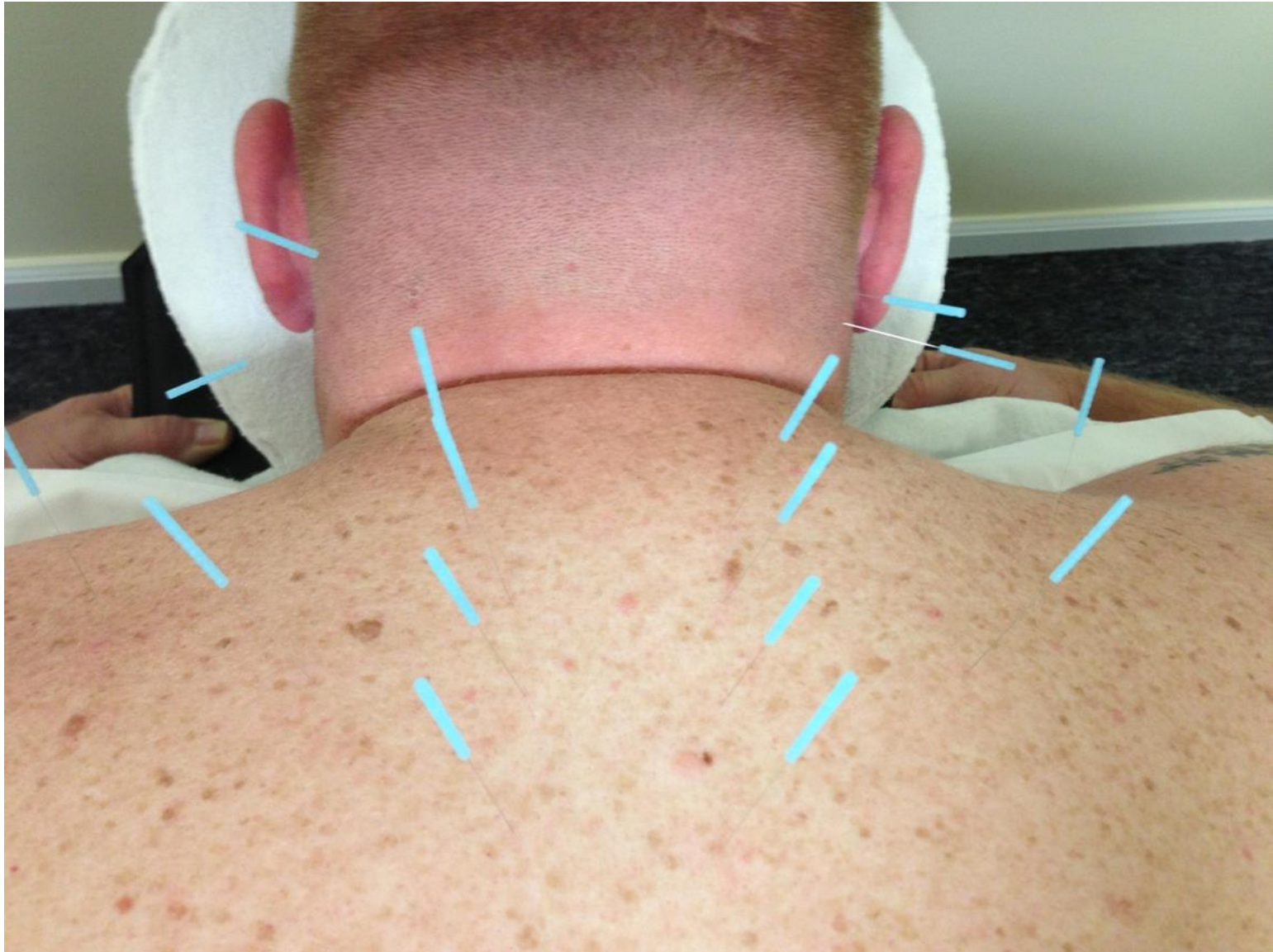
- Structural changes in vertebrae, process of tissue repair, continued lack of blood flow, and disease can adversely affect one or more nerve roots.
- Compressed or deteriorated nerve roots can cause dysfunction along entire nerve band resulting in pain, numbness, and weakened parts of the body served by the nerve (neuropathy).
- Assessment of nerve involvement will direct selection of 2 paraspinal points on left and 2 paraspinal points on the right. Electric stimulation between the 2 points
  - Do not cross spine

# Pragmatic Acupuncture for Pain

## **Radiculopathy**

- For example, pain and numbness with tingling fingers in the right hand may point to dysfunctional nerve roots in C5-C8
  - A right-side acupoint lateral to and above C5-C8 and a right-side acupoint lateral to and below C-5-C8 would be appropriate
  - Electric stimulation between these two points at a comfortable frequency (100mhz) for 20 minutes can facilitate blood flow to the nerve root

# Pragmatic Acupuncture for Pain



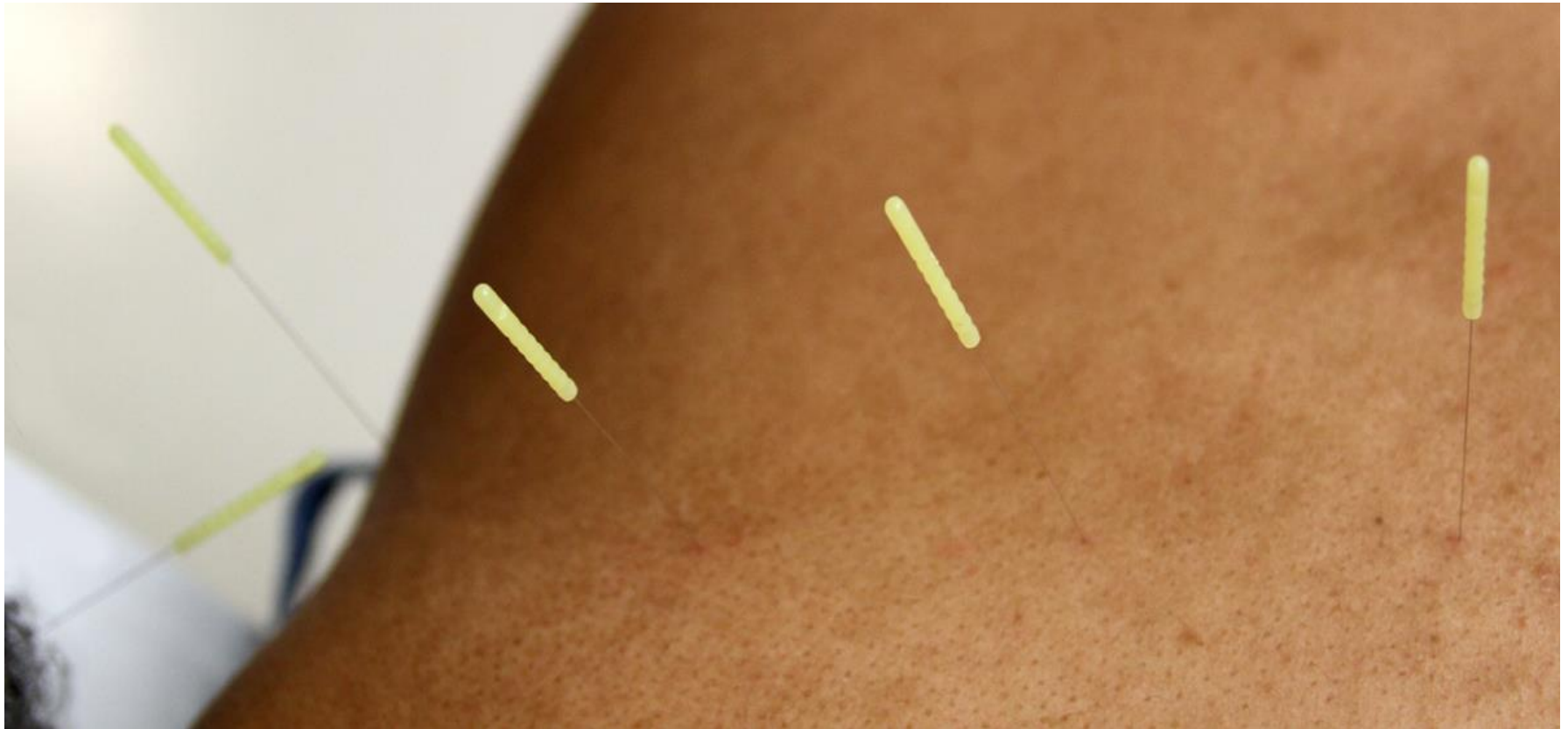


# Pragmatic Acupuncture for Pain

## Myofascial Pain

- Overuse & hyperextension can cause dysfunctional muscles.
- Dysfunctional muscles contract and can remain fixed - reducing blood flow, lymph drainage, and range of motion.
- Chronic contraction leads to weakened function, increased tone, taunt bands, and ropy knots.
- At the center of ropy knots are often hyperirritable trigger points that can become extremely symptomatic.
- Trigger points can be released with acupuncture needles through gentle tapping and insertion.

# Pragmatic Acupuncture for Pain





# Pragmatic Acupuncture for Pain

## Peripheral Nerve Injury

- Damage to nerve and connective tissue undergo process of degeneration/regeneration in stages that elicit pain sensations
- Neurapraxia – low level damage to nerve with intact signaling
- Axonotmesis – 2nd degree damage to axon with intact connective tissue
- Neurotmesis – 3rd degree damage to axon and connective tissue
- Wallerian degeneration – clearing process to start regeneration
- Chromatolysis – metabolic process for axon regeneration
- Neurotrophic promoting factors generate nerve/myelin sheath growth
- E-Stim can encourage nerve and myelin regeneration
  - Select acupoints along nerve bands at connective tissue depths
  - E-stim between points and massage can reduce pain and stimulate blood flow through relaxed tissue

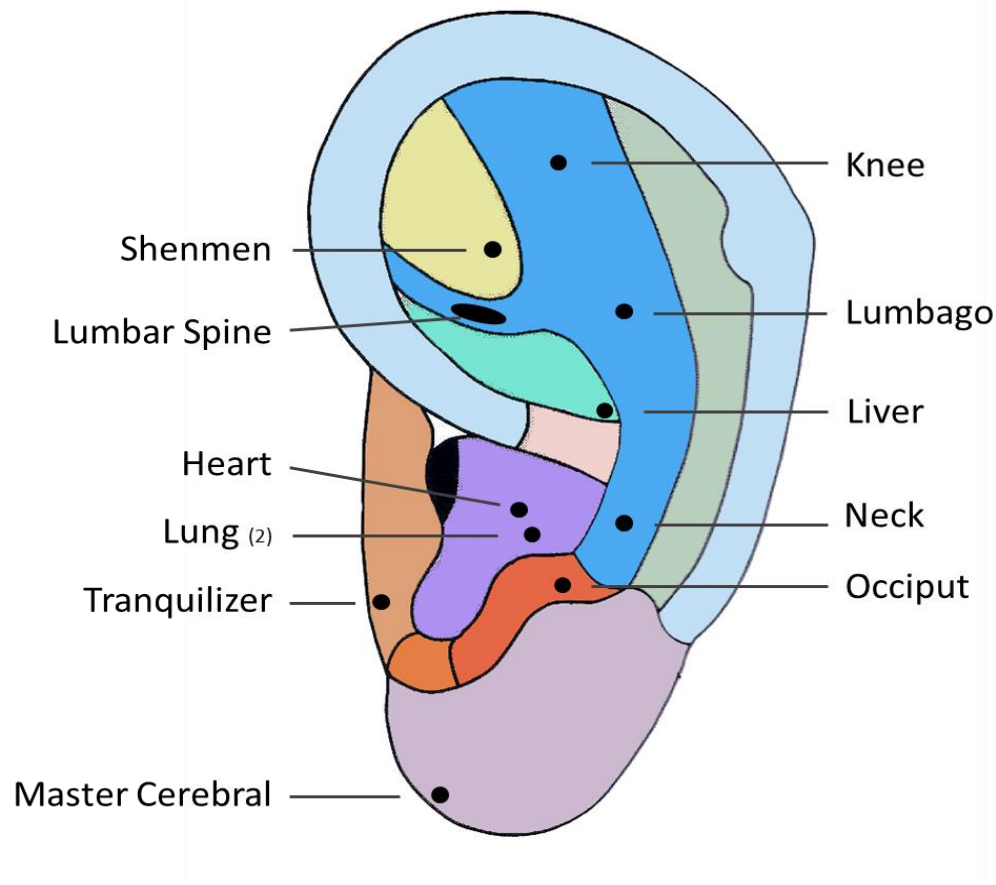
# Pragmatic Acupuncture for Pain

## Complex Regional Pain Syndrome

- Peripheral nerve injury, nicotine, or disease can predispose dysfunction of nervous system - can result in excruciating pain that is difficult to manage.
- Dysfunction of nervous system can result in nociception - release of toxic (noxious) neural byproduct - skin highly sensitive to touch (allodynia).
- Stage 1 – burning pain, temperature changes, and skin color changes at injured area.
- Stage 2 – intensifying pain with swelling, diminished hair growth, nail bed changes, osteoporosis, and muscle atrophy.
- Stage 3 – entire limb pain with irreversible skin and bone changes
- Distal acupuncture followed by e-stim should be started cautiously
  - Acupoints are selected outside of and around affected areas.
  - Electric stimulation between points at a comfortable high frequency (300 Mz) is more comfortable. Reset to lower frequency (200 Mz; 100 mz; 50mz; 5 mz) every 10 minutes, provided there is no discomfort.

# Pragmatic Acupuncture for Pain

## Airborne Auricular Acupuncture (A<sup>3</sup>) Treatment Protocols



Knee Pain

Shenmen, Knee, Liver

Neck Pain

M. Cerebral, Neck, Occiput

Stress Headache

Tranquilizer, Occiput, Liver

Low Back Pain

Shenmen, Lumbago, Lumbar Spine

Paratrooper Pain Prevention (P<sup>3</sup>)

Tranquilizer, Lumbago, Knee

Addiction, Stress, Pain (ASP) Tx

Shenmen, M. Cerebral, Heart, Lung, Liver

# Ear Acupuncture for Pain

## Common Auricular Protocols



1. Shenmen
2. Autonomic/Sympathetic
3. Kidney
4. Liver
5. Lung

NADA Protocol  
For Addiction



3. Omega 2
5. Shenmen
4. Point Zero
2. Thalamus
1. Cingulate Gyrus

Battlefield Protocol  
For Acute Pain



3. Autonomic/Sympathetic
2. Heart
1. Tranquilizer

LIFE Protocol  
For Stress

# Tui Na for Pain

- Tui Na is one of the primary treatments of CM that was officially recognized by the Chinese government in 1949 for its benefits and results.
- Tui Na translates to “push and grasp.” A refined style of medical massage to treat injuries, pain, & internal disorders.
- Tui Na promotes health
- Tui Na can restore injured tissues
- Tui Na can be modified for children, elderly, sports, and as an adjunct to the two other primary CM treatments to attack the root of the pain, move blood stasis, and fight off disease.
- Tui Na moves can be applied to acupuncture as techniques

# Western Acupuncture Challenges and Kilig

- *Accredited Medical Acupuncture Programs*
  - Medical schools are accredited and curriculums often consistent with ACAOM accredited programs.
- *Non-Accredited Acupuncture Certification Courses*
  - May or may not be approved to grant continuing education units (CEU).
  - Introduce concepts or basic technical level treatments such as acupuncture pain formulas, trigger therapy dry needling, or auricular acupuncture protocols.
  - Do not culminate in licensure or authority to practice acupuncture by recognized regulating body

# Western Acupuncture Challenges and Kilig

- Significant research to postulate as evidence based
- Increased demand for acupuncture therapy
- Western acupuncture training
  - Limited to procedure of acupuncture
    - reduced tenants of CM through lens of biomedical phenomenon that conform to simple point formulas
    - minimalized therapies can be effective but not exclusive and not inclusive of the actual purpose of CM, which is to promote health and healing

# Western Acupuncture Challenges and Kilig

- Practice without meeting preparation standards as licensed acupuncturists may be confusing, misleading, and dangerous to the public
  - Privileging and credentialing are different steps
    - Credentialing is verifying accredited training, licensure, and background
    - Privileging authorizes a practitioner's specific scope of services
    - Most military and VA physicians privileged to do acupuncture based on attending Helms program



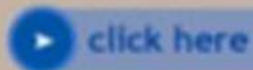
# Western Acupuncture Challenges and Kilig

## Educating Physicians in the Science and Art of Acupuncture

Helms Medical Institute educates physicians in the science and art of medical acupuncture. HMI sponsors the oldest ongoing medical acupuncture training program in North America. It is the only training that offers a comprehensive foundation in all dimensions of acupuncture.

Ninety percent of physicians practicing acupuncture in the United States have been trained through Helms Medical Institute's **Medical Acupuncture for Physicians** courses. HMI has been chosen by the US military to teach this discipline to its physicians.

HMI president Dr. Joseph Helms is the founding president of the American Academy of Medical Acupuncture, the professional society representing standards of education and practice of this discipline, and has served as a consultant on acupuncture matters to the World Health Organization and the National Institutes of Health.



Medical Acupuncture Publishers  
Ordering info for Textbook - Slides - Atlas



# Medical Acupuncture

- Helms not recognized by ACAOM, LCME, or other regulating bodies
  - CCME does not provide accreditation
    - program accreditation not required for CME approval
- Helms program is recognized ABMA and AAMA
  - Helms is the founding president of the AAMA
  - ABMA in entity within structure of the AAMA
    - Neither granted authority under regulating bodies of healthcare
  - AAMA encourages physicians to incorporate acupuncture and avoid referring patients to licensed acupuncturists

# Medical Acupuncture

- Non-regulation of medical acupuncture training
- Limited to procedure of acupuncture
  - Rejected or reduced the tenants of CM
  - Altered through lens of biomedical phenomenon
    - Conformed to simple point formulas
      - minimalized therapies can be effective
        - » but not exclusive or inclusive of CM value;
          - to promote health and healing
  - Narrowed to technical level practice

# Medical Acupuncture

- Collaborative Challenges
  - Lack of familiarity with Chinese medicine theory
  - Rejected or redefined using a medical model
  - Inability to share or interpret case reviews and treatment plans
  - Misunderstanding and failure to comprehend or accept CM theory
  - Marginalization
    - Patients prefer L.Ac acupuncture over M.Ac
    - L.Acs outcomes and RVUs exceeded M.Ac

# Western Acupuncture Challenges and Kilig

As a result of this disparity, LAc's had their status reduced **from GS12 credentialed provider** – qualified by their level of education (Masters degree), state licensure (independent provider), and board certification (NCCAOM) – **to GS8 technician status** with a loss of all three levels of recognition and a 35K reduction in pay.

# Western Medical Acupuncture

- Review of Helms' dissertation for Doctor of Theology, Integrative Healthcare at Holos
  - non-accredited university
  - ask patient what color comes to mind at moment
    - stated color then becomes basis for diagnosis
    - if color *blue*, patient diagnosed with kidney pathology and the preponderance for the emotion of fear
      - Not consistent with CM theory or practice
      - Neither logical from a biomedical nor CM perspective
      - Non-quantifiable mysterious ideologies

# Western Medical Acupuncture

- Limited research on Helms' French energetic/medical acu to postulate as evidence-based.
  - PubMed search terms *Chinese medicine AND acupuncture* with filter *clinical trial* identified over 5825 articles.
  - PubMed search using terms *French energetic AND acupuncture* with no filters identified only 11 articles.
    - 5 articles published by Helms and at least one co-authored by Dr. Richard Niemtzow.

# Western Auricular Acupuncture

- Dr. Richard Niemtzow
  - Retired military doctor
  - Developed / Marketed Battlefield Acupuncture
    - Five-point ear protocol designed for acute pain
    - BFA similar to NADA but different points
    - Now used for chronic pain and comorbidities



# Western Auricular Acupuncture

- Challenge
- Systematic review of EA for addiction identified 119 studies of rigorous design/control of conf. variables
  - 85 acknowledged efficacy of ea for treating addiction
    - Most articles cited the NADA protocol
- PubMed Search
  - RCT of Ear acupuncture = 281
  - RCT of Battlefield Ear Acupuncture = 1 RCT
    - For acute sore throat

# Western Auricular Acupuncture

- Was there research for safety or efficacy before experimenting or testing on members of the military, veterans, and family members?
- Dr. Niemtow's paper on BFA generalized that:  
“most likely the Battlefield methodology favors the processing and the modulation of pain in the [CNS] involving the hypothalamus, thalamus, cingulate gyrus and cerebral cortex structures”

# Western Auricular Acupuncture

- Dr. Neimtzow explored functional magnetic imaging (fMRI) on BFA acupuncture points
- “fMRI activity of the anterior cingulate gyrus, thalamus, hypothalamus, and periaqueductal gray was prominently reduced after stimulation of the Battlefield Acupuncture points on the auricle”
  - findings and recent research may underscore why many Soldiers/ veterans with chronic pain and PTSD often respond unfavorably to BFA

# Western Auricular Acupuncture

- Research in PTSD sensitization has shown increased activity in the amygdala and decreased activity in the cingulate cortex
- Increased activity, demonstrated with fMRIs, in the cingulate gyrus, is associated with decreased levels of pain
- Thus, decreasing cingulate gyrus activity through the stimulation of acupuncture on that point may increase pain and perpetuate pain dysregulation, especially in cases of post-traumatic stress comorbidly

# Western Auricular Acupuncture

- Despite limited information regarding research of BFA to postulate the use as evidence-based
- In 2013, Defense & Veterans Center for Integrative Pain Management (via Neimtzow) received grant to teach BFA across military and VA clinical settings
- In 2017, DVCPM reported the certification and training of over 2,800 non-licensed acupuncture providers in BFA

# Western Auricular Acupuncture

- In May 2017, an officer in the U.S. Army was had semi-permanent needles in a slightly inflamed ear
- Soldier reported that a Pharmacologist at Womack Army medical center, who recently completed the BFA training, performed the acupuncture about five days prior
- The needles were in proximity to the BFA points, but remarkably off target ear acupuncture points

# Western Auricular Acupuncture



3. Omega 2

5. Shenmen

4. Point Zero

2. Thalamus

1. Cingulate Gyrus

# Western Acupuncture Training

- BFA Grant was 500,000.
- Average cost for sending military and VA physicians to the Helms program averaged \$30,000 per person.
- One follow-up contract for prior graduates of the helms for BFA refresher training was \$190,000
- Who does this serve?



# Western Acupuncture Training

- Many physicians / providers who complete Western acupuncture training believe they learn more about acupuncture than L.Acs
- Trainers of dry needling technique may have also mislead Physical Therapist profession
  - Dry needling is a term coined by a pair of medical doctors who realized that hypodermic needles need not have a substance injected to effectively release a hyper-irritated band

# Dry Needling

- Consistent with inserting single needle into taut band for the purpose of reducing that tension
  - Recently described by three Physical Therapy doctors in a dry needling clinical commentary (Unverzagt, Berglund, & Thomas, 2015)
    - This clinical presentation of dry needling is far different than the dry needling described and illustrated by Physical Therapist John Rusin (Spencer, n.d) which clearly utilizes classical Chinese acupuncture points and treatment principles

# Framework

- Acupuncture works
- Association with needling is enticing
- Medical providers take CEU and certification classes not recognized by regulating bodies
  - none result in a new medical title or the freedom to bypass standards
  - would be concerning if a doctor of Acupuncture/CM completed certification course and starting using title *Acupuncture Dentist*, or included *Chinese Cavity Therapy* in his scope of practice

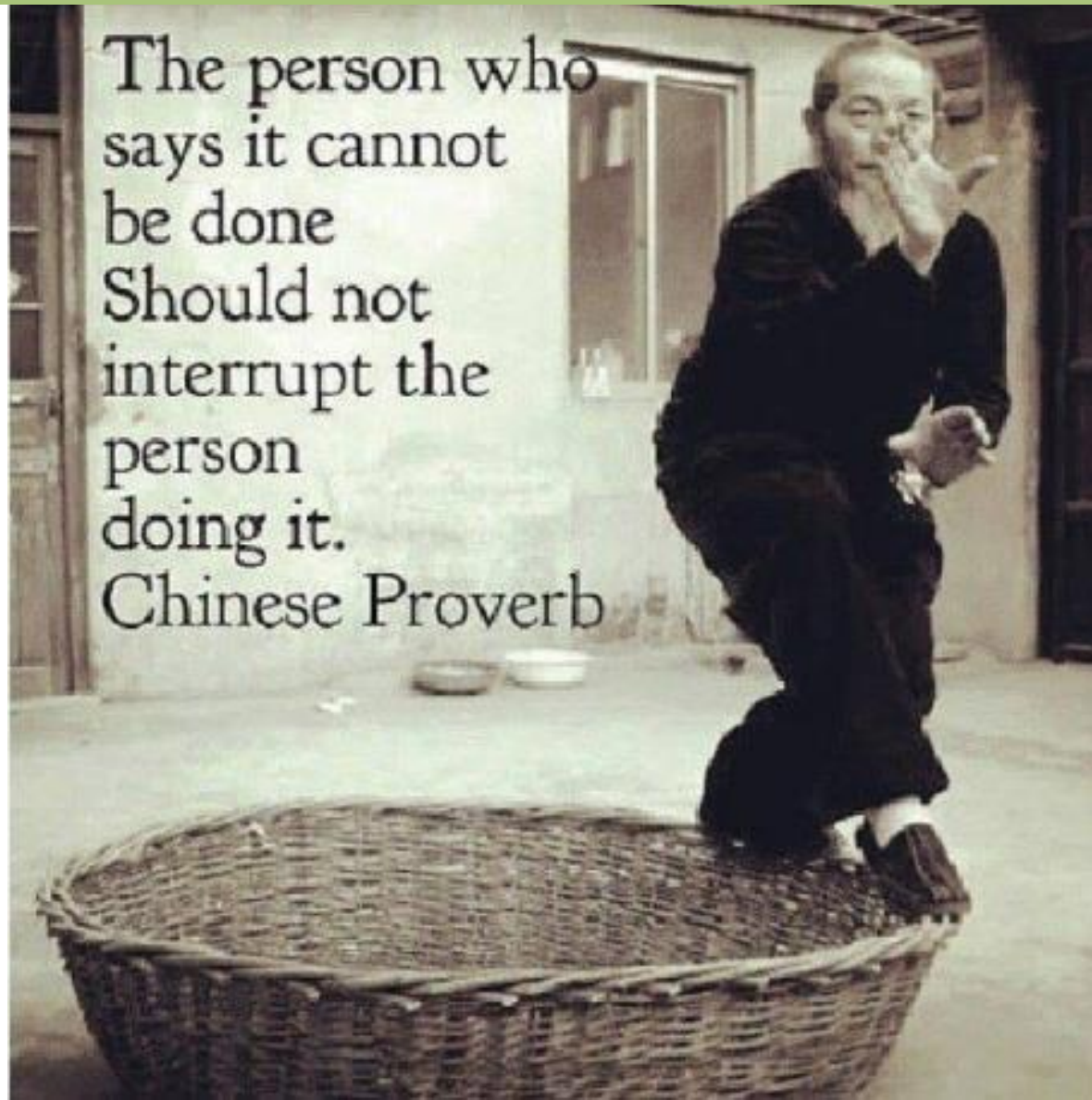
# Framework

- Early pioneers of CM negotiated challenges of legalization, licensure, and acceptance
  - simplification of explanations
  - reduced to acupuncture treatment
    - most basic treatment expression of points
  - Removed complicated framework
    - Theory, diagnosis, and acupuncture techniques
  - resulted in acupuncture appearing easy
  - spared audience of complexity of custom diagnosis and needle techniques

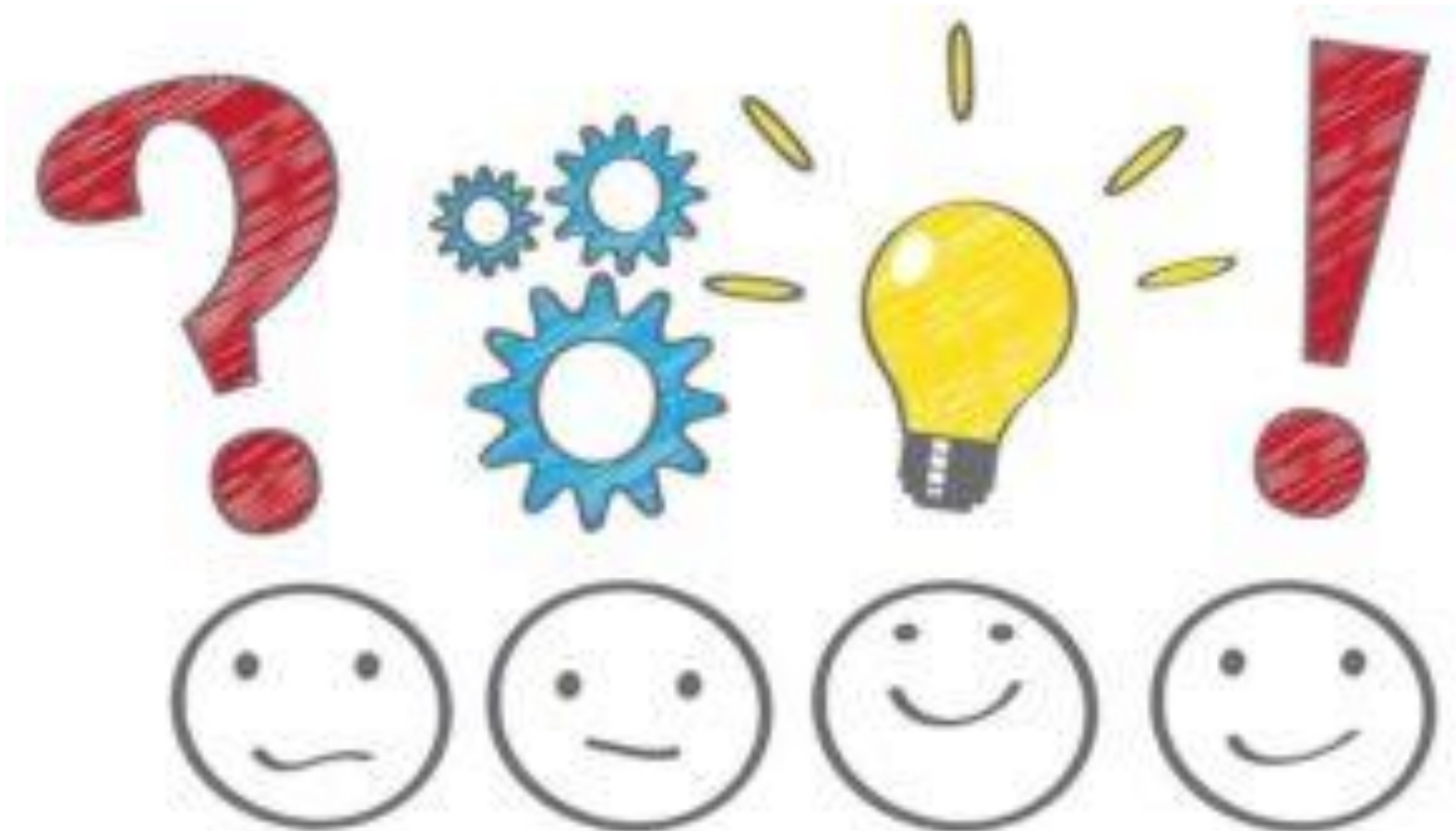
# Framework

- Elucidating needle techniques in research, case studies, and medical notes can
  - Fill gap of why repeated RCT outcomes different
  - Educate providers and public
  - Better explain why non-accredited training results in unintended or classic needle techniques
    - i.e. slow insertion needle deep into a muscle, followed by quick lifting and thrusting results in firming the muscle and bringing heat to the surface
      - Twitch response elicited artificially with intension, often resulting in damaged tissue, hematomas, and cramping

# Ancient Wisdom



# Questions, ideas, thoughts?



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