



# INTEGRATIVE APPROACHES TO (CHRONIC) PAIN MANAGEMENT

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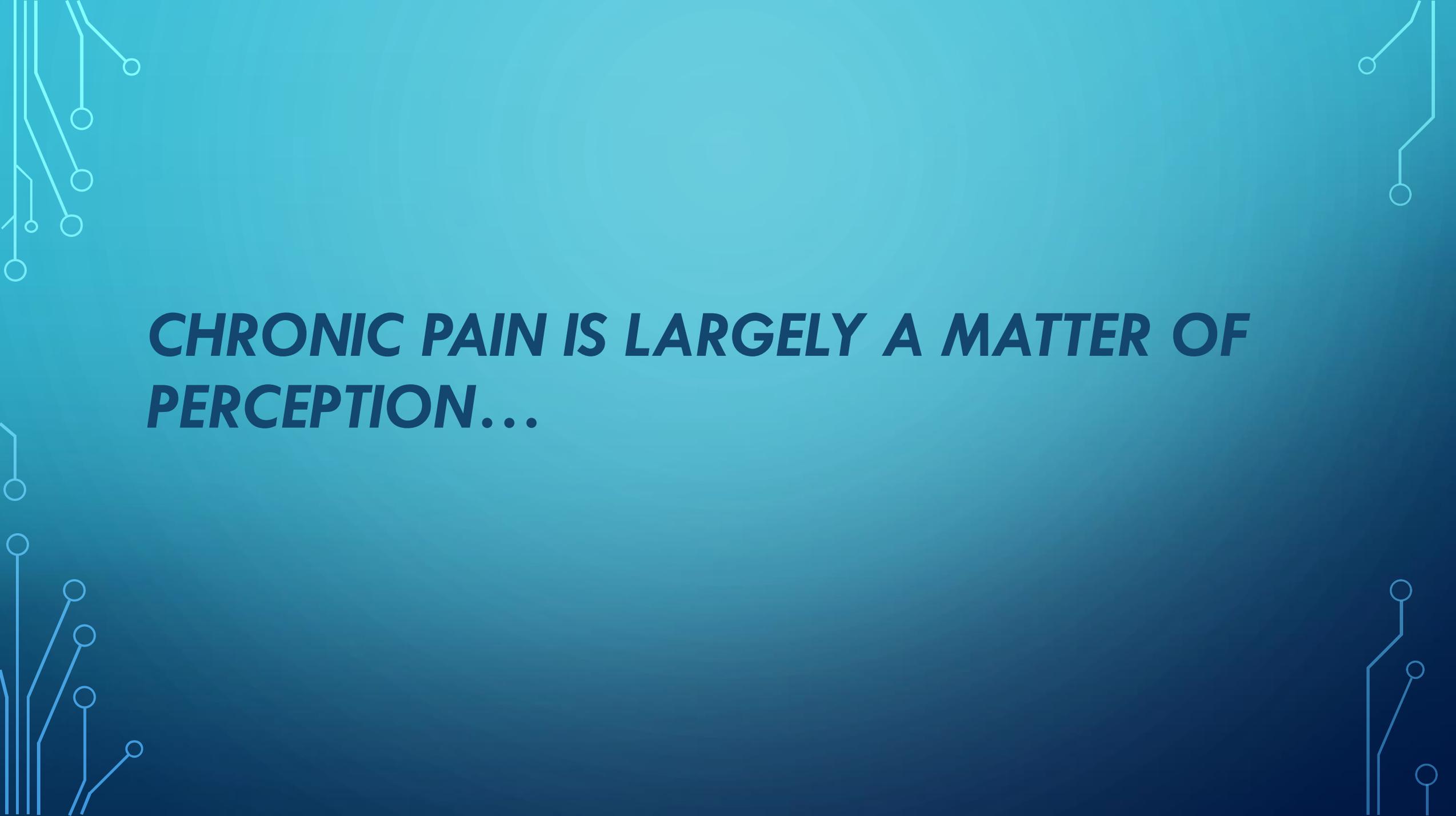
NEWARK, DE

MARCH 16, 2019



# LEARNING OBJECTIVES

- Review the current evidence base and clinical guidelines for the use of unconventional pain therapies including meditation, manual medicine, nutrition, exercise, etc.
- Describe at least three integrative therapies that can be prescribed or recommended in an ambulatory setting
- Develop a basic understanding of the mechanisms behind the most well-known integrative therapies
- Discuss the perspective of the chronic pain patient, his or her need for validation of their symptoms, and their desire for the clinician to be a “partner” in the management of their pain, even when no clear promise of cure exists

The background is a solid teal color with a subtle gradient. In the four corners, there are decorative white line-art elements resembling circuit traces or neural pathways. These lines connect to small white circles, creating a network-like pattern. The text is centered in the middle of the page.

***CHRONIC PAIN IS LARGELY A MATTER OF PERCEPTION...***

## NAVY SEALS...

**PAIN  
IS  
WEAKNESS**  
LEAVING THE BODY



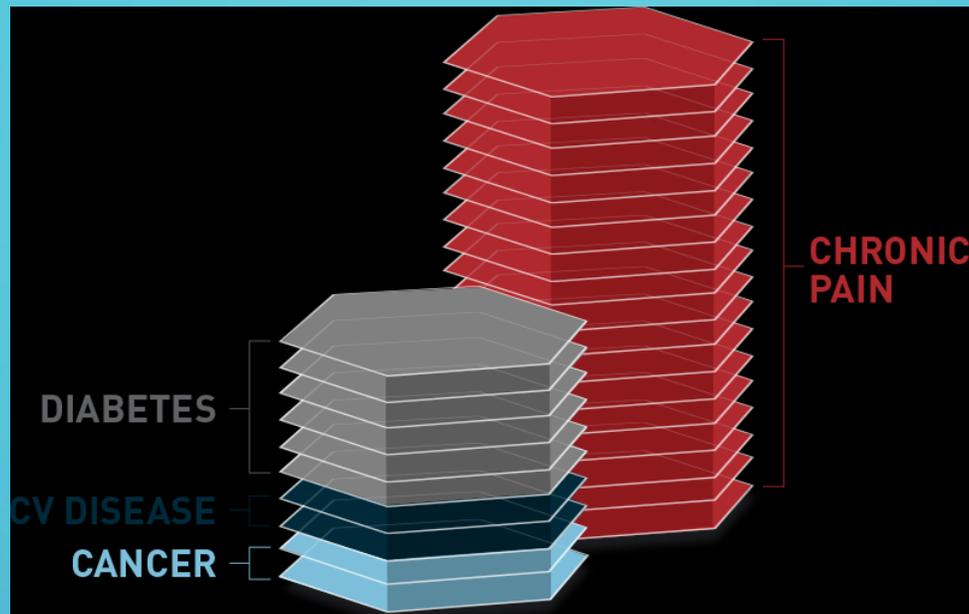
FAMILY DOCTORS...

**Back pain is youth leaving the  
body.**



# THE PROBLEM

- In primary care, the most common **physical symptom** is **pain**.
- The most common **psychological symptom** is **depression**.
- Chronic pain and depression are the two most debilitating disorders in the U.S.
- At least **116 million adults** in the U.S. suffer from some form of chronic pain.
- The cost to the economy ranges from \$560-635 billion annually.
- **Chronic pain is the most common cause of long-term disability.**
  - Back pain is the most common complaint.



IN THE UNITED STATES,  
**CHRONIC PAIN**  
**AFFECTS MORE PEOPLE**  
THAN CARDIOVASCULAR DISEASE,  
CANCER, AND DIABETES **COMBINED**<sup>8</sup>

AAPM facts and figures on pain.

[http://www.painmed.org/patientcenter/facts\\_on\\_pain.aspx](http://www.painmed.org/patientcenter/facts_on_pain.aspx).



## WHAT THEY TAUGHT ME ABOUT PAIN MANAGEMENT IN RESIDENCY

(CIRCA 2002)

You must pay attention to your patient's pain!

Pain is as important as the other vital signs. In fact, it's the fifth vital sign!

Give enough medication (i.e., opioids) to adequately control your patient's pain.

As long as your patient is in pain, he/she will not become addicted to prescription medication.

# 10 FACTS ABOUT PRESCRIPTION DRUG AND OPIOID ABUSE IN DELAWARE

- Most abused opioids are free, bought or stolen from friends or family.
- About **1 out of every 100** Delawareans is dependent on opioids.
- 4 out of 5 new heroin users started out misusing prescription painkillers.
- Delaware has the 13<sup>th</sup> highest fatal opioid overdose rate in the U.S.
- Treatment capacity in DE for opioid dependency is a third of what is needed.
- Delaware has the 3<sup>rd</sup> highest per capita health care costs in the nation from opioid abuse at \$117/person.
- For the first half of 2016, there were 912 prescription drugs prescribed per 1,000 Delawareans. Over half of which were for prescription opioids.
- 32% of victims of opioid overdoses in DE are between 25-34 years old.
- More Delawareans die from overdoses than motor vehicle fatalities or gun fatalities.
- 67% of drug overdoses are opioid-related.

# OPIOID-INDUCED HYPERALGESIA

- Defined as a state of nociceptive sensitization caused by exposure to opioids.
- Characterized by a paradoxical response whereby a patient receiving opioids for the treatment of pain could actually become more sensitive to certain painful stimuli.
- The type of pain experienced might be the same as the underlying pain or might be different from the original underlying pain.
- Appears to be a distinct, definable, and characteristic phenomenon that could explain loss of opioid efficacy in some patients.

A comprehensive review of opioid-induced hyperalgesia.  
Lee M1, Silverman SM, Hansen H, Patel VB, Manchikanti L.  
Pain Physician. 2011 Mar-Apr;14(2):145-61.

# SYMPTOMS OF OPIOID-INDUCED HYPERALGESIA

- A more widespread or diffuse pain when the underlying cause is stable or improving
- Increased pain severity in spite of the underlying cause remaining stable or improving
- Increased pain after opioid dosage goes up
- Decreased pain when you take fewer painkillers

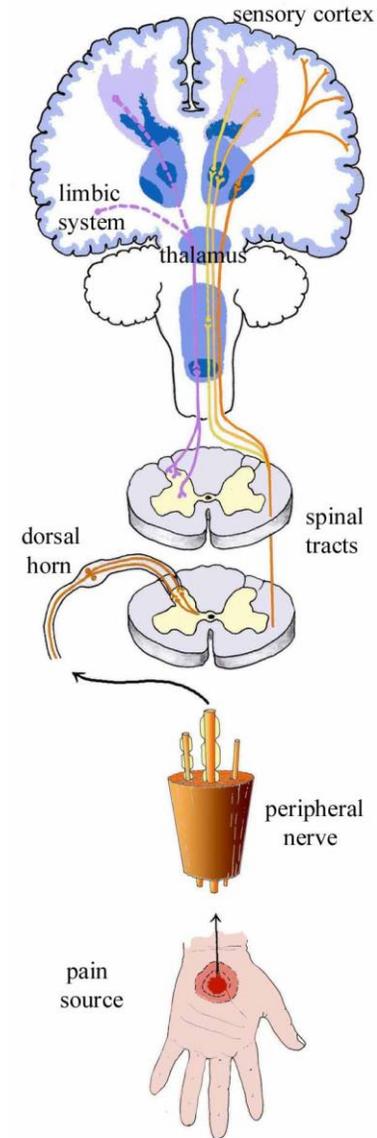
[www.verywellhealth.com/opioid-induced-hyperalgesia-and-allodynia-4149530](https://www.verywellhealth.com/opioid-induced-hyperalgesia-and-allodynia-4149530)

# ACUTE PAIN PATHWAY

- Painful stimulus
- Peripheral nerves
  - Myelinated A fibers
  - Unmyelinated C fibers
- Dorsal horn synapse
- Spinal cord
- Spinothalamic tract
- Primary/Secondary Somatosensory Cortices

## Second order

- 1<sup>st</sup> order cell bodies in dorsal horn
- Synapse w/second order neurons
- Glutamate, substance P
- Excitatory neurotransmitters
- AMPA, NMDA receptors
  - Bind glutamate
  - AMPA acute pain



## Third order

- Thalamus/cerebral cortex
- Nociceptive cortical matrix
  - Initial response to pain
- Second order perceptual matrix
  - Individual responses to similar nociception

## Spinothalamic tract

- Balance between excitatory and inhibitory functions
- Determines transmission of nociceptive stimuli to brain

## First order

- Primary afferent neurons
- Myelinated A $\delta$  fibers
- Unmyelinated C fibers
  - Nociceptive
- Hot, cold, mechanical, chemical
- Bradykinin, prostaglandins, sub P, cytokines, NO
- Inflammatory soup

# TRANSITION FROM ACUTE TO CHRONIC PAIN

- Acute Pain

- Adaptive, protective
- Changes in the nervous system usually reversible once tissue healing is completed
- Restoration of normal homeostasis

- Chronic Pain

- Purpose unclear
- Continuous or repetitive painful stimulation leads to pathologic changes in pain processing
- Affects all levels from periphery to the brain
- Disordered physiology

# MULTIVARIATE LOGISTIC REGRESSION ANALYSIS TO PREDICT THE DEVELOPMENT OF CHRONIC PAIN

<u>Predictors</u>	<u>Odd ratios</u>	<u>95% CI</u>
<b>Female</b>	<b>1.26</b>	1.19–1.33
<i><u>Mechanism of injury</u></i>		
Fall		Reference
<b>Motor vehicle accident</b>	<b>1.06</b>	0.99–1.14
Weapon or blunt object	0.87	0.78–0.98
<b>Other</b>	<b>1.12</b>	1.00–1.25
<i><u> AIS injury regions</u></i>		
<b>Spinal cord</b>	<b>3.94</b>	3.40–4.55
Disc, vertebra	1.58	1.46–1.70
<b>Thorax/skeletal (rib/sternum)</b>	<b>1.19</b>	1.10–1.28
Loss of consciousness	1.19	1.05–1.34
Brain, brainstem, cerebellum	0.83	0.76–0.91
<b>History of alcoholism (%)</b>	<b>1.41</b>	1.18–1.69
<b>History of depression (%)</b>	<b>1.26</b>	1.13–1.41
<b>History of anxiety (%)</b>	<b>1.36</b>	1.24–1.49

(N = 62,669)

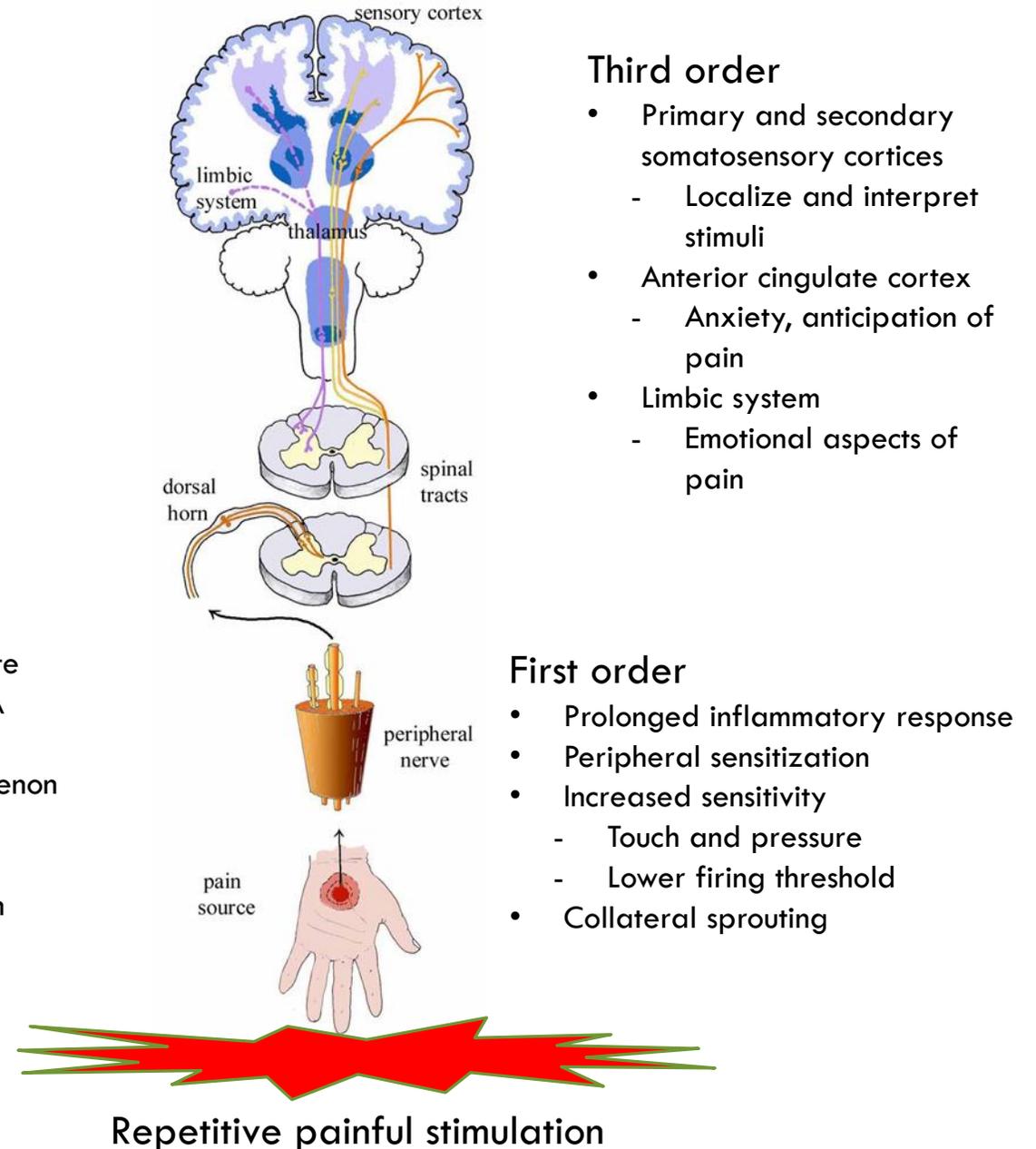
Early Factors Associated with the Development of Chronic Pain in Trauma Patients  
Pain Research and Management. Volume 2018, Article ID 7203218, 8 pages  
<https://doi.org/10.1155/2018/7203218>

# TRANSITION TO CHRONIC PAIN

- Repetitive Nociceptive Stimulation
- Prolonged inflammation
- Peripheral and central sensitization
- Hyperexcitability
- Wind up phenomenon
- Glial cell activation
- Neuroplastic changes

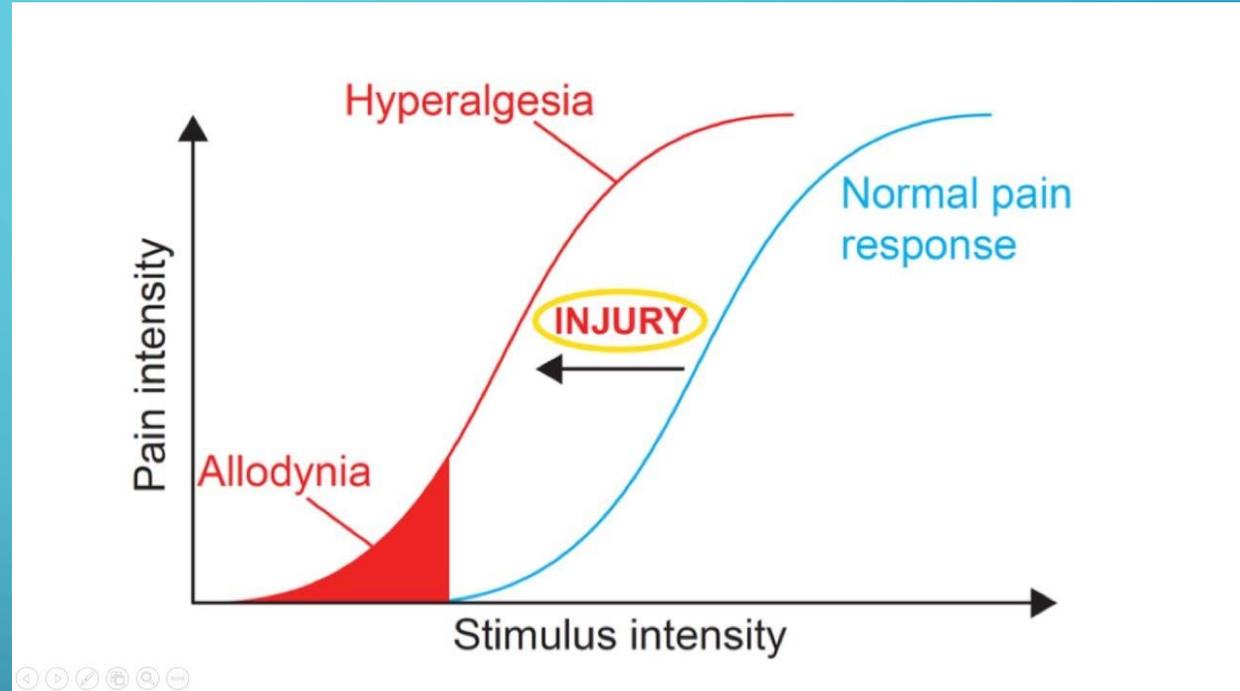
## Second order

- Up regulation of receptors and ion channels
- Hyperexcitable state
- Activation of NMDA receptors
- “Wind up” phenomenon
- Allodynia
- Glial cell activation
- Central sensitization



# CHRONIC PAIN CHANGES

- Allodynia – pain due to a stimulus that does not normally provoke pain.
- Hyperalgesia - increased pain from a stimulus that normally provokes pain.



# CHRONIC PAIN CHANGES

## Neuroinflammation

### Glial mediators:

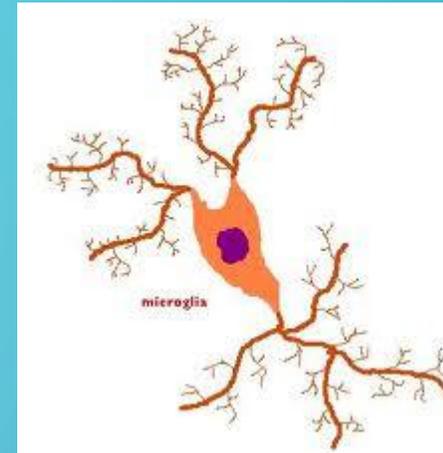
- Produced and secreted by glial cells, including:
  - Small molecules (for example, glutamate, ATP and nitric oxide) and
  - Large molecules (for example, pro-inflammatory cytokines and chemokines, as well as growth factors)
- Modulate nociceptor excitability and nociceptive synaptic transmission

### Glial activation:

- The process of transcriptional and/or translational changes (gene expression), post-translational changes (phosphorylation), morphological changes and the proliferation of glial cells in the peripheral nervous system (PNS) and central nervous system (CNS), which is implicated in the development and maintenance of chronic pain.
- Glial cells have different activation states.

### Neurogenic inflammation:

- Triggered by the activation of primary afferent neurons and the subsequent local release of inflammatory mediators, such as substance P and calcitonin gene-related peptide.
- Neurogenic inflammation is responsible for the pathogenesis of migraine.



# neu·ro·plas·tic·ity

/,n(y)oʊrō,plɑ'stɪsədē/

## **noun**

the ability of the brain to form and reorganize synaptic connections, especially in response to learning or experience or following injury.

# CHRONIC PAIN CHANGES

Increased receptive fields centrally and peripherally

- Area where patient feels pain can enlarge due to changes in the brain, spinal cord and peripheral nervous system
- Pain sensations can progress from unilateral to bilateral
- Pain sensations can descend and ascend



# THE BRAIN'S WAY OF HEALING

NORMAN DOIDGE, M.D. 2015

"...areas that fire in chronic pain...many of those areas also process thought, sensations, images, memories, movements, emotions, and beliefs—when they are not processing pain.

That observation explained why, when we are in pain, we can't concentrate or think well; why we have sensory problems and often can't tolerate certain sounds or light; why we can't move more gracefully; and why we can't control our emotions very well and become irritable and have emotional outbursts."

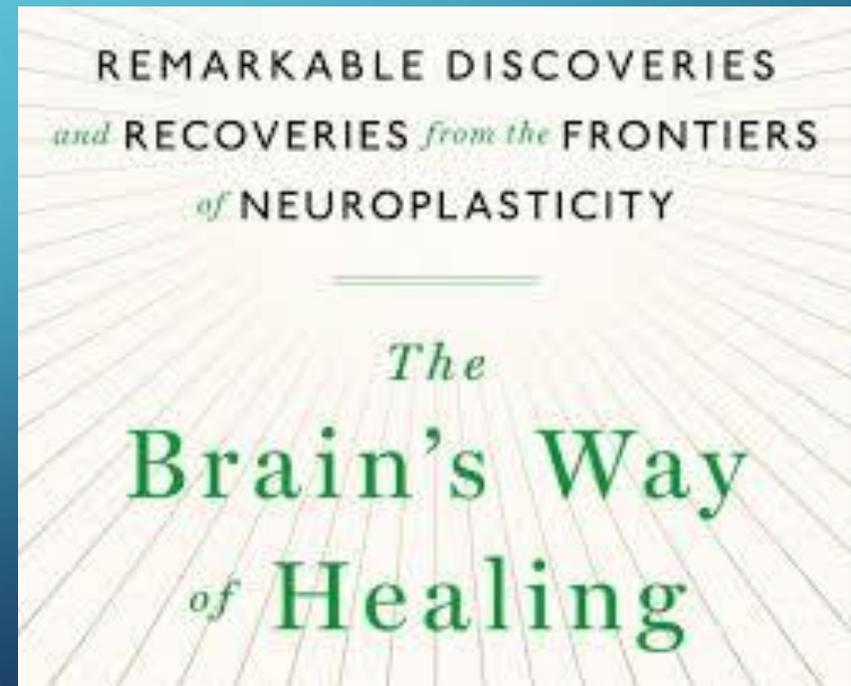
REMARKABLE DISCOVERIES  
*and* RECOVERIES *from the* FRONTIERS  
*of* NEUROPLASTICITY

*The*  
Brain's Way  
*of* Healing

# THE BRAIN'S WAY OF HEALING

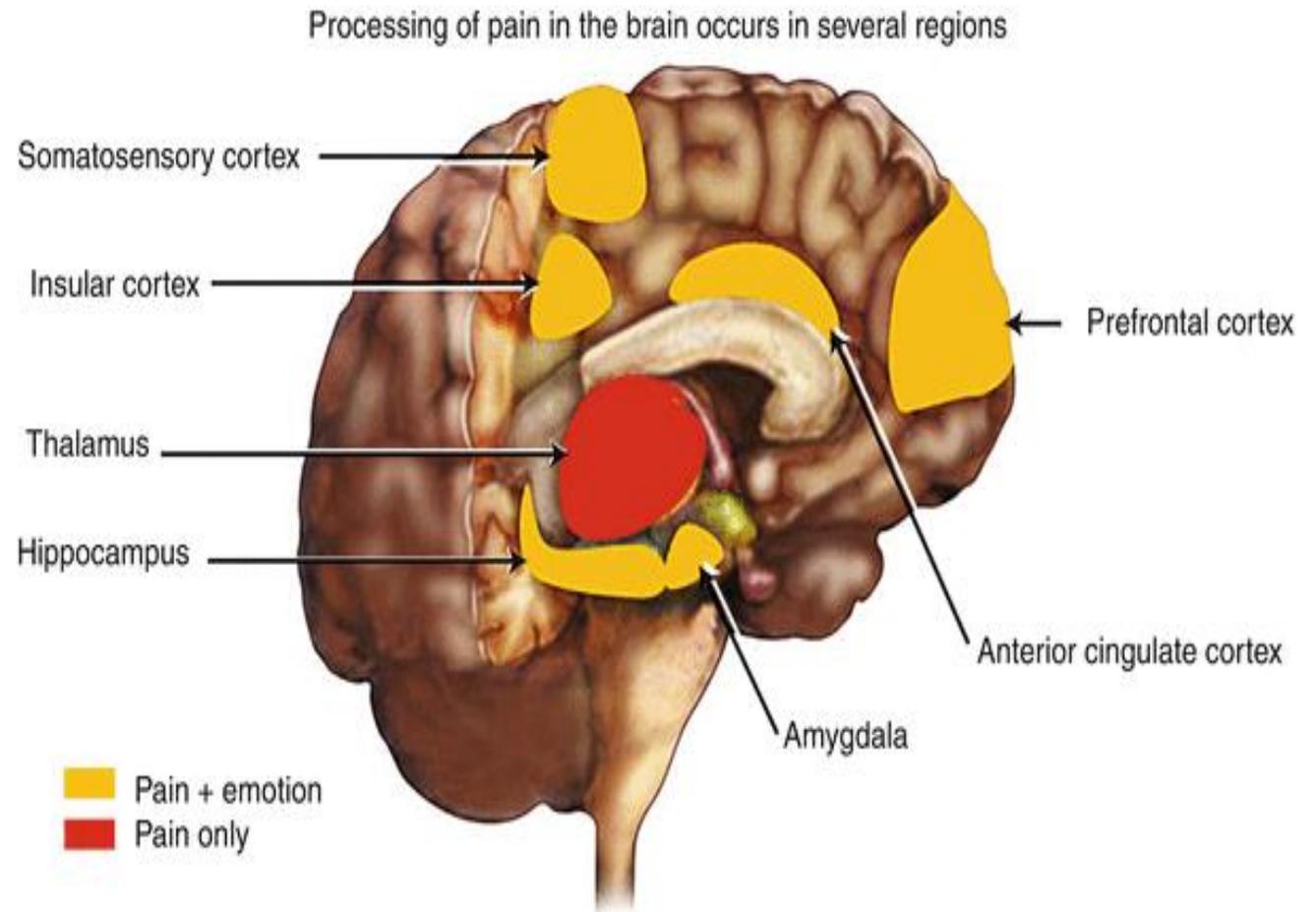
NORMAN DOIDGE, M.D., 2015

“The areas that regulate these activities have been hijacked to process the pain signal.”



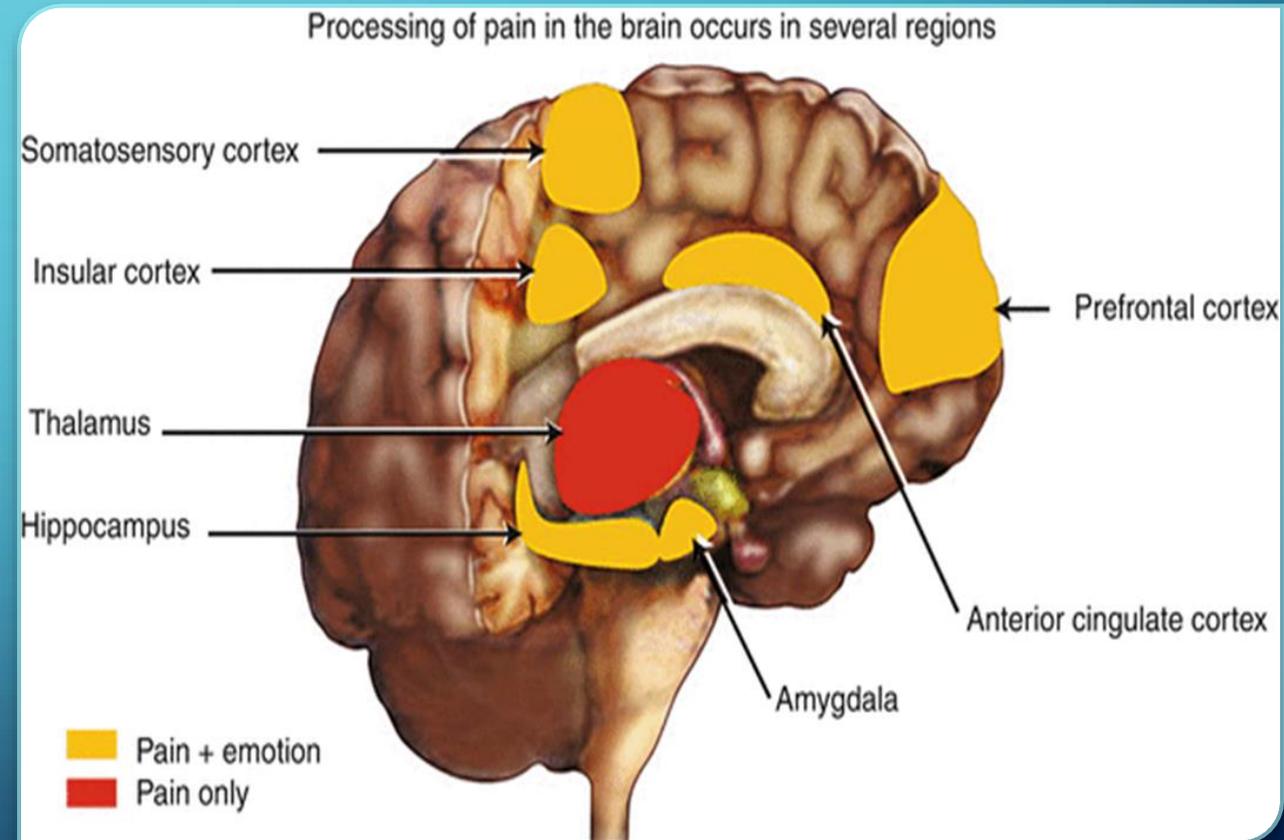
# AREAS IN BRAIN WHERE PAIN IS PROCESSED

- **Somatosensory 1 and 2:** pain, touch, temperature, pressure, position, vibration, movement
- **Prefrontal cortex:** pain, executive function, creativity, planning, empathy, action, emotional balance, intuition
- **Anterior Cingulate:** pain, emotional self-control, sympathetic control, conflict detection, problem solving
- **Posterior Parietal Lobe:** pain, sensory, visual, auditory perception



# AREAS IN BRAIN WHERE PAIN IS PROCESSED

- **Supplementary Motor Area:** pain; planned movement, mirror neurons
- **Amygdala:** pain; emotion, emotional memory, emotional response, pleasure, sight, smell, emotional extremes
- **Insula:** pain; quiets amygdala, temperature, itch, empathy, emotional self-awareness, sensual touch, connects emotion with bodily sensation, disgust
- **Posterior Cingulate:** pain; visuospatial cognition, autobiographical memory retrieval
- **Hippocampus:** helps to store pain memories
- **Orbital Frontal Cortex:** pain, evaluates pleasant vs. unpleasant, empathy, understanding, emotional attunement





# CURRENT MODEL OF CHRONIC PAIN TREATMENT

## “Physical Cure” Model

- Patient is passive recipient
  - Advice, medications, procedures, referral
- Patient is constantly seeking:
  - 1) Clear cause/diagnosis
  - 2) Fix/cure
- Patient repeats this approach with multiple “specialists,” and repeated PCP visits, hoping to find the “cure” to the pain
- In the event that a cure cannot be found, medications often added/increased
- Patients often put lives on hold waiting for “cure”
- Increasing frustration for practitioners, patients, families, employers, etc.

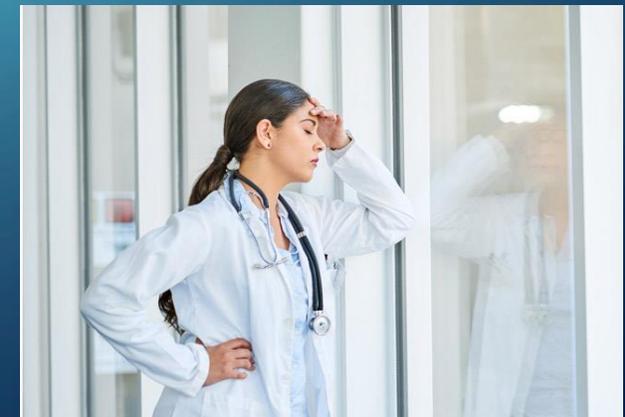
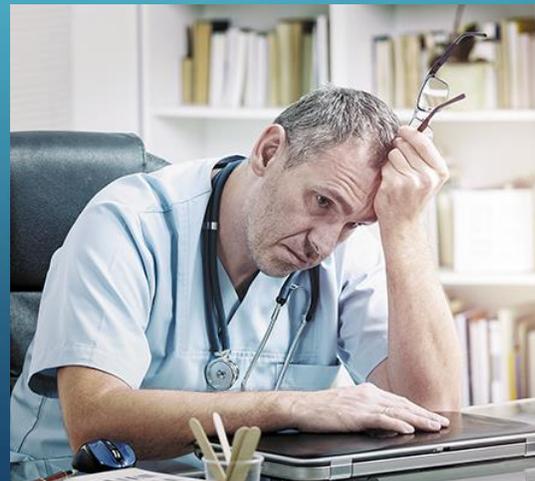
# CURRENT MODEL OF CHRONIC PAIN TREATMENT

- Isolating for patient, family
- Practitioner, usually the PCP, experiences frustration, limitation, isolation, helplessness, resentment, burnout

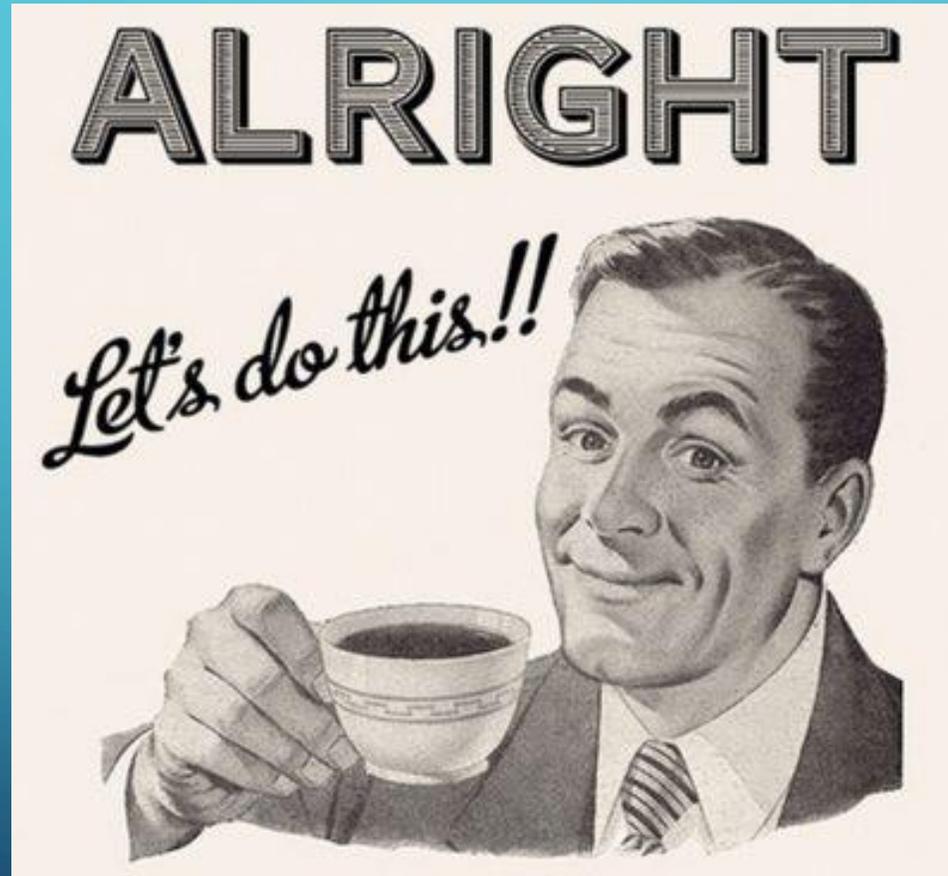
Standard Physician Burnout Meme



# MORE PHYSICIAN BURNOUT MEMES IN CASE YOU WEREN'T SURE WHAT PHYSICIAN BURNOUT LOOKS LIKE



We need to change the conversation...



# JCAHO: NONPHARMACOLOGIC PAIN TREATMENT

Leadership (LD) (Hospital and Hospital Clinics/Hospitals)

Pain Management – LD.04.03.13 EP 2

Leadership Responsibilities for Providing Nonpharmacologic Modalities for Managing Pain –

One of the new pain management elements of performance requires that organizations provide nonpharmacologic pain treatment modalities.

To what specifically does this refer and is there evidence-based literature to support the efficacy of these nonpharmacologic modalities?

Organizations are required to provide nonpharmacologic pain treatment modalities relevant to its patient population and assessed needs of the patient. These modalities serve as a complementary approach for pain management and may potentially reduce the need for opioid medication in some circumstances.

# COST SAVINGS FROM REDUCING PAIN THROUGH THE DELIVERY OF INTEGRATIVE MEDICINE (IM) PROGRAM TO HOSPITALIZED PATIENTS

## OUTCOME MEASURES:

Change in pain on an 11-point numeric rating scale before and after initial IM sessions; total costs for hospital admissions.

## RESULTS:

Both LOS and age were found to increase cost, as did being white, male, married, and having APR-DRG severity coded as extreme. For patients receiving IM therapies, pain was reduced by an average of 2.05 points and this pain reduction was associated with a cost savings of \$898 per hospital admission.

## CONCLUSIONS:

For patients receiving integrative medicine therapies, pain was significantly reduced and costs were lowered by about 4%.

# **NONINVASIVE TREATMENTS FOR ACUTE, SUBACUTE, AND CHRONIC LOW BACK PAIN: A CLINICAL PRACTICE GUIDELINE FROM THE AMERICAN COLLEGE OF PHYSICIANS**

***Recommendation 2:*** For patients with chronic low back pain, clinicians and patients should **initially select nonpharmacologic treatment** with exercise, multidisciplinary rehabilitation, acupuncture, mindfulness-based stress reduction (moderate-quality evidence), tai chi, yoga, motor control exercise, progressive relaxation, electromyography biofeedback, low-level laser therapy, operant therapy, cognitive behavioral therapy, or spinal manipulation (low-quality evidence). (Grade: strong recommendation)

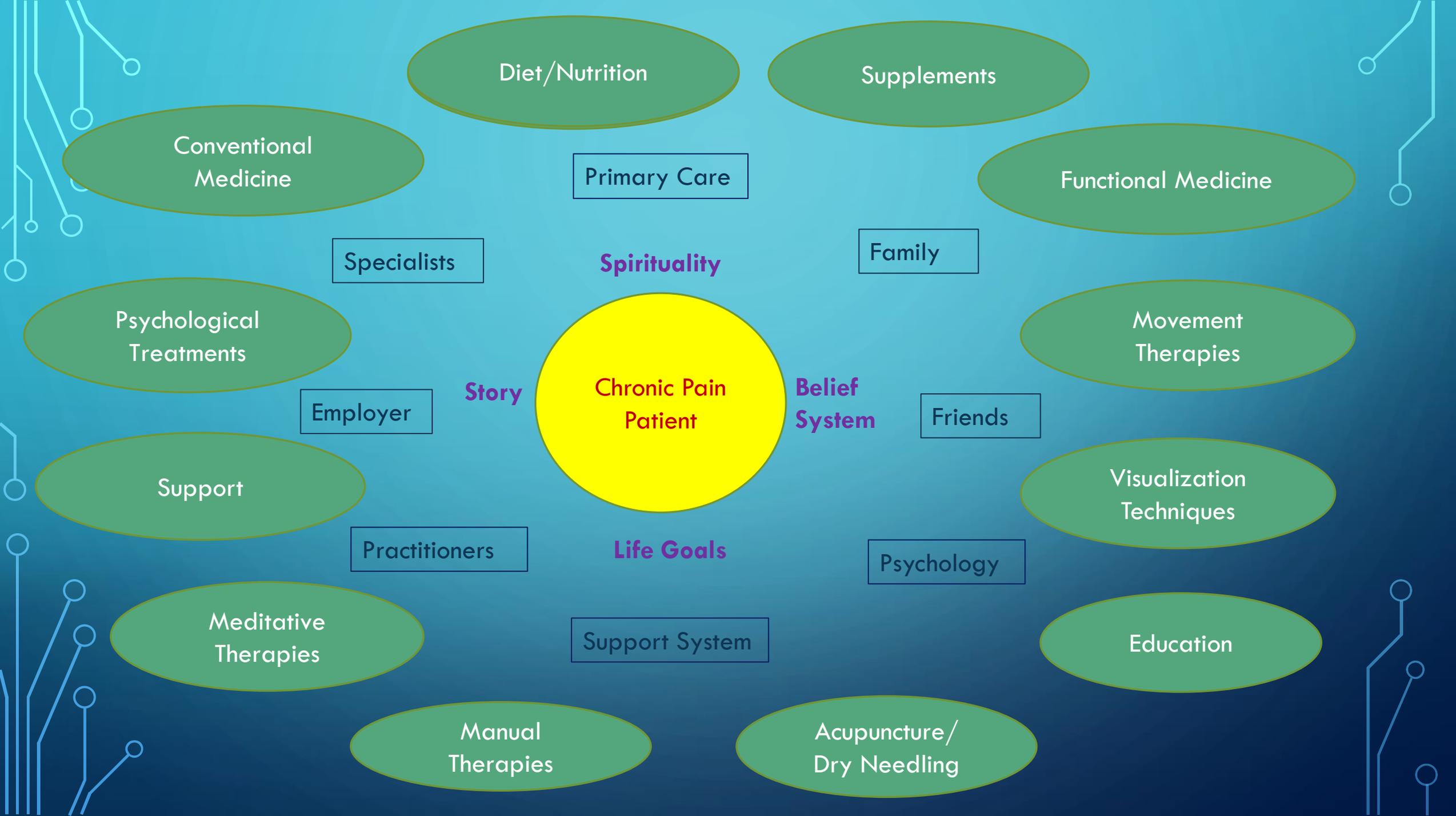
# EVIDENCE-BASED EVALUATION OF COMPLEMENTARY HEALTH APPROACHES FOR PAIN MANAGEMENT IN THE UNITED STATES

MAYO CLINIC PROCEEDINGS 2016; 91 (9): 1292-1306

- ...current evidence suggests that the following complementary approaches may help some patients manage their painful health conditions: acupuncture and yoga for back pain; acupuncture and tai chi for OA of the knee; massage therapy for neck pain with adequate doses and for short-term benefit; and relaxation techniques for severe headaches and migraine.
- Weaker evidence suggests that massage therapy, SM, and osteopathic manipulation might also be of some benefit for those with back pain, and relaxation approaches and tai chi might help those with fibromyalgia.

# THE CHRONIC PAIN TOOL BOX





Diet/Nutrition

Supplements

Conventional  
Medicine

Primary Care

Functional Medicine

Specialists

**Spirituality**

Family

Psychological  
Treatments

Movement  
Therapies

Employer

**Story**

**Chronic Pain  
Patient**

**Belief  
System**

Friends

Support

Visualization  
Techniques

Practitioners

**Life Goals**

Psychology

Meditative  
Therapies

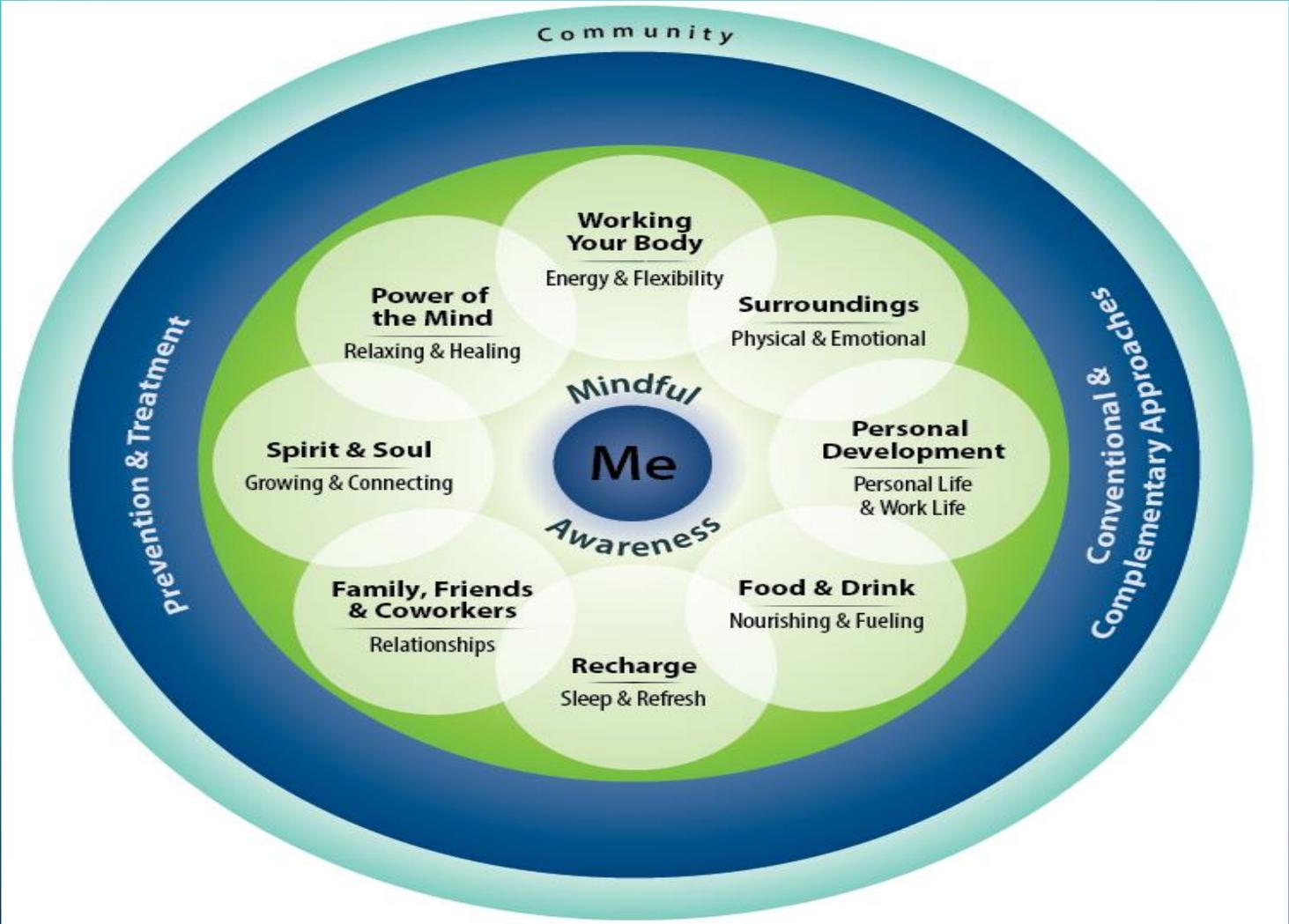
Education

Support System

Manual  
Therapies

Acupuncture/  
Dry Needling

# VA WHOLE HEALTH MODEL





The Circle of Health acknowledges each person's uniqueness, putting him or her at the center of it all. From there, they are empowered through mindful awareness and self-care.

They are supported and guided by a team of professionals, who may draw from both conventional and complementary approaches. They are embraced by their community.

Using the Circle of Health, patients and other individuals identify what matters most to them, and then they work with their Whole Health Team to create a Personal Health Plan that will move them closer to what is important to them.

<https://wholehealth.wisc.edu/>

# INTEGRATIVE PAIN MANAGEMENT

## Definition of Integrative Medicine

- Emphasizes relationship-centered care
- Integrates conventional and complementary methods for treatment and prevention
- Involves removing barriers that may activate the body's innate healing response
- Uses natural, less invasive interventions before costly, invasive ones when possible
- Engages mind, body, spirit, and community to facilitate healing
- Maintains that healing is always possible even when curing is not

## Diet/Nutrition

- Foods can both contribute to and reduce pain, and inflammation, in the body
- Most pain syndromes are associated with chronic inflammation
- Metabolic syndrome and related conditions can contribute to development of pain
  - Diabetic neuropathy, peripheral vascular disease (including circulation to lumbar spine)
- Chronic pain can contribute to development of metabolic syndrome
  - Poor diet, sedentary, chronic inflammation, depression, weight gain
- Food sensitivities and nutrient deficiencies are associated with common pain syndromes
  - Non-Celiac Gluten Sensitivity

# DIET, NUTRITION AND OSTEOARTHRITIS

Rayman MP. BMC Musculoskelet Disord. 2015; 16(Suppl 1): S7.

- Dietary factors associated with OA symptoms or progression:
  - Overweight
  - Elevated serum cholesterol
  - Low 25(OH)D
  - Low vitamin K
- Recommendations
  - 10% or greater weight loss combined with exercise
  - Reduce plasma cholesterol through dietary means
  - Increase omega-3 FA intake by eating oily fish 2x/week
  - Safe level of sun exposure, eat rich vitamin D dietary sources or take vitamin D supplements,  $\leq 25 \mu\text{g}/\text{d}$
  - Increase vitamin K intake via leafy green vegetables

# ADHERENCE TO THE MEDITERRANEAN DIET IS ASSOCIATED WITH BETTER QUALITY OF LIFE: Data from the Osteoarthritis Initiative

Veronese N, Stubbs B, Noale M, et al. The American Journal of Clinical Nutrition. 2016;104(5):1403–1409

**Conclusion:** Higher adherence to a Mediterranean diet is associated with better QOL and decreased pain, disability, and depressive symptoms.

# Diet/Nutrition

- Food journaling
- Empiric elimination diet
  - Gluten may be a good starting point
- Food allergy/food sensitivity testing
  - Many on the market; of varying quality, reliability, validity
- Pick a nutritional model/approach
  - Mediterranean, Ornish, DASH, Pritikin, Vegetarian, Vegan, Ethnic
  - Not Keto, Paleo
  - Many “anti-inflammatory” diet books

## Meditative Therapies

### Mindfulness meditation

- Mindfulness-based stress reduction
  - Jon Kabat-Zinn, PhD, Founder (UMASS)
  - “Mindfulness is awareness that arises through paying attention, on purpose, in the present moment, non-judgmentally,” says Kabat-Zinn. “And then I sometimes add, in the service of self-understanding and wisdom.” - Mindful, January 17, 2017



# MINDFULNESS MEDITATION-RELATED PAIN RELIEF: Evidence for unique brain mechanisms in the regulation of pain

Zeidan, F, Grant JA, Brown CA, McHaffie JG, et al. *Neurosci Lett.* 2012 Jun 29; 520(2): 165–173.

“...growing evidence that mindfulness meditation, a volitionally initiated cognitive act, can significantly attenuate the subjective experience of pain.”

“...regulated, sustained attention to the moment-to-moment quality and character of sensory, emotional and cognitive events, (b) the recognition of such events as momentary, fleeting and changeable (past and future representations of those events being considered cognitive abstractions), and (c) a consequent lack of emotional or cognitive appraisal and/or reactions to these events.”

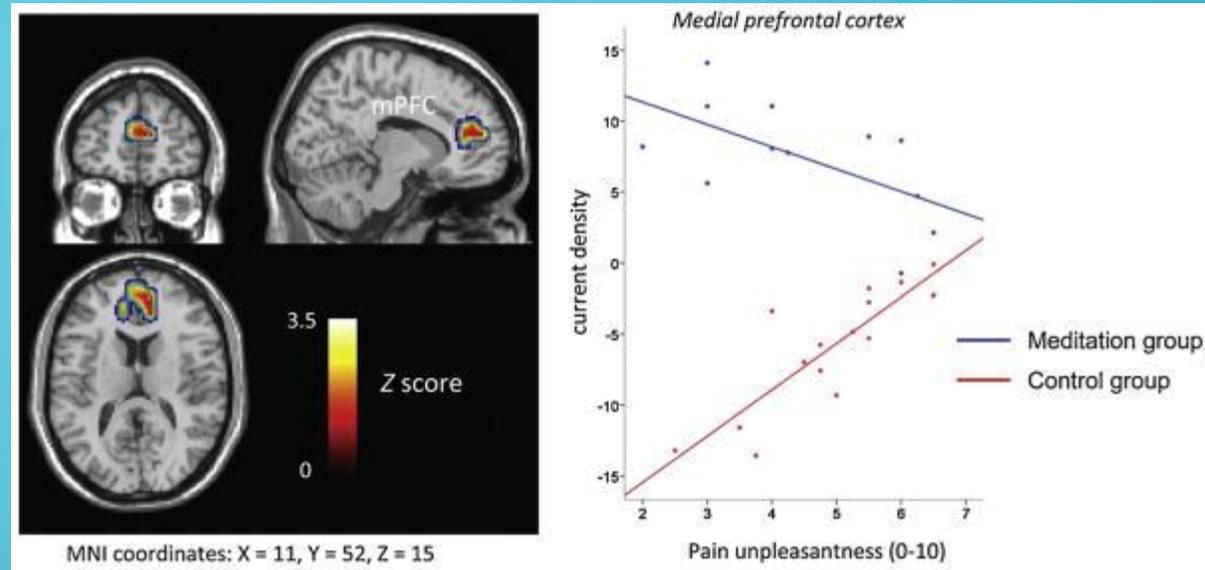
# MINDFULNESS MEDITATION



Over the course of a five-year study, it was found that chronic pain patients who completed an eight-week Mindfulness-Based Stress Reduction (MBSR) program significantly improved their pain symptoms and overall quality of life, even up to four years after completion of this initial training.

[nccih.nih.gov](http://nccih.nih.gov)

## Meditative Therapies



Inverse correlations of pain unpleasantness with anticipatory neural activity in mPFC/rACC in meditators and controls. In a study comparing neural responses during anticipation of pain between a group with meditation experience and a control group with no meditation experience, a region in mPFC/rACC was more greatly activated in the meditation group, with greater activation predicting reducing pain unpleasantness ratings. In the control group, the opposite correlation was found with overall lower activity.

## Meditative Therapies

2016 NCCIH-funded study

Adults aged 20 to 70

Chronic low back pain

- Mindfulness-based stress reduction (MBSR) training
- Cognitive behavioral therapy (CBT)
- Usual care

The MBSR and CBT participants:

- Similar level of improvement
- Greater than those who got usual care
- Long after the training ended
- Greater improvement in functional limitation and back pain at 26 and 52 weeks compared with usual care

## Meditative Therapies

### Relaxation Response - Herbert Benson, M.D.

- Sit in a comfortable position.
- Focus on a single word or phrase of our choosing (such as “one” or “peace” or “shalom” or “love”).
- Practice deep abdominal breathing while silently repeating your focus word.
- Continue for 5 to 10 minutes.

## Movement Therapies



Regular and long-term practice of yoga may improve pain tolerance, according to a recent study. Findings from the study also show that yoga practitioners have more gray matter in multiple brain regions compared with individually matched people who did not practice yoga. The study, supported in part by NCCAM, was published in the journal *Cerebral Cortex*.

[nccih.nih.gov](http://nccih.nih.gov)

# Movement Therapies

## Tai Chi

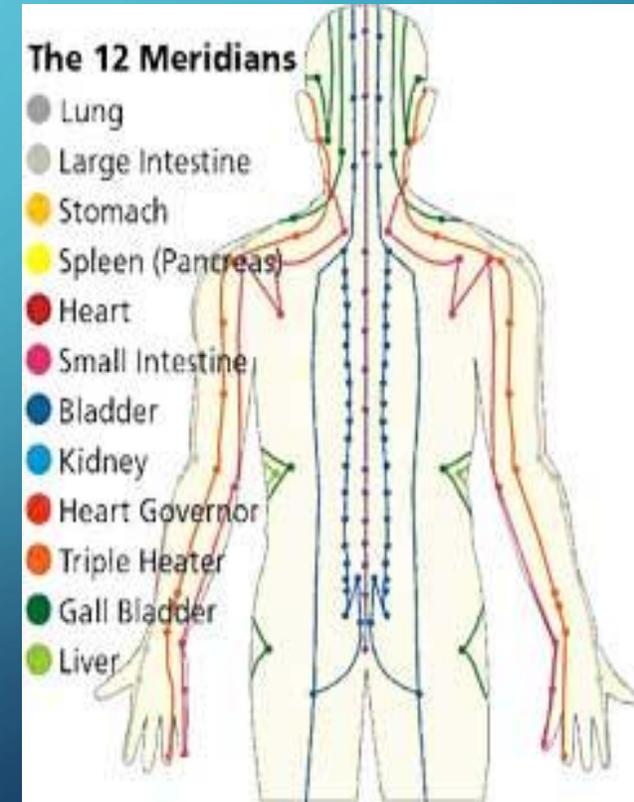
- “Meditation in Motion”
- Promotes better posture
- Reduces strain/wear and tear on joints and tissues
- Improves blood and lymph circulation
- Instills a measure of control
- Improves cognitive function, executive control

Clinical trials have shown benefits of tai chi in back pain, OA, RA, neck pain, fibromyalgia, depression



## Acupuncture/ Dry Needling

- Based on Traditional Chinese Medicine principles
- 5,000 year-old tradition
- Based on careful clinical observation over millennia
- Traditionally combined with herbs, diet, exercise, bodywork
- Seeks to restore balance to the body, mind
- Sees body as integrated in nature
- In U.S., primarily a pain management modality
- Endorsed by American College of Physicians, VA, and other groups for pain management



# ACUPUNCTURE TRIALISTS META-ANALYSIS

- Systemic review using 29 of 31 eligible RCTs; 17,922 patients analyzed
- Acupuncture was superior to both sham and no acupuncture control for back and neck pain, OA and chronic headache (P<0.001 for all comparisons)
- 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.

Acupuncture/  
Dry Needling

## Acupuncture/ Dry Needling

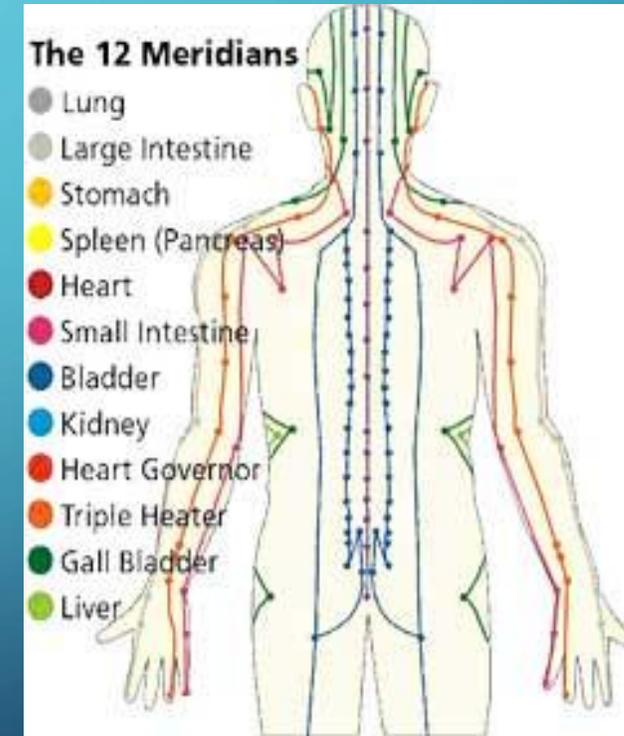
### Western Physiology

- Endorphin release
- Blood flow/circulation
- Activation/deactivation of brain regions associated with clinical effects of acupoints on fMRI

# Acupuncture/ Dry Needling

## TCM Physiology

- 12 main channels/meridians
  - Form network around the body
- Map of the flow of Qi around the body
- Pain, organ dysfunction due to blockage of Qi
- Insertion of needles at certain points along the meridians opens channels to flow of Qi
- Local and distal effects





Matchstick = 4.2mm



Hypodermic Needle = 1.60 mm



Sewing Needle = 1.02mm



Acupuncture Needle = 0.25mm



Facial Acupuncture = 0.12mm

# Acupuncture/ Dry Needling

## Battlefield acupuncture to treat low back pain in the emergency department

The American Journal of Emergency Medicine  
Volume 36, Issue 6, June 2018, Pages 1045-1048

Battlefield acupuncture (BFA) is an ear acupuncture protocol used by the military for immediate pain relief.

- Pilot feasibility study of BFA as a treatment for acute low back pain (LBP) in the emergency department (ED)
- Randomized 15 patients to BFA plus standard care, and 15 patients to standard care alone
- Post-intervention LBP NRS was significantly lower in the BFA group compared with the standard care group (5.2 vs. 6.9, ANCOVA  $p = 0.04$ )
- GUGT was similar between groups (21.3 s vs. 19.0 s, ANCOVA  $p = 0.327$ ).
- No adverse events from acupuncture were reported



## Acupuncture/ Dry Needling

### **Battlefield acupuncture to treat low back pain in the emergency department**

This pilot study demonstrates that battle field acupuncture is feasible as a therapy for low back pain in the ED. Furthermore, our data suggest that battle field acupuncture may be efficacious to improve low back pain symptoms, and thus further efficacy studies are warranted.



The American Journal of Emergency Medicine  
Volume 36, Issue 6, June 2018, Pages 1045-1048

# ASP – AURICULAR SEMI-PERMANENT NEEDLES

- Embedded in ear at specific points
- Stay in skin approx. 3-4 days



# **Building Capacity for Complementary and Integrative Medicine Through a Large, Cross-Agency, Acupuncture Training Program: Lessons Learned from a Military Health System and Veterans Health Administration Joint Initiative Project**

*Military medicine 183(11) · March 2018*

Richard C. Niemtow, John Baxter, Rollin M Gallagher[...]Chester C Buckenmaier III  
Introduction: Complementary and integrative medicine (CIM) use in the USA continues to expand, including within the Military Health System (MHS) and Veterans Health Administration (VHA). To mitigate the opioid crisis and provide additional non-pharmacological pain management options, a large cross-agency collaborative project...

## Manual Therapies

### Osteopathic Manipulative Medicine

- Four basic principles
  - Body functions as a unit – body, mind and spirit
  - Structure and function are interrelated
  - Body is capable of self-regulation, self-healing, and health maintenance
  - Rational treatment is based on understanding of these principles



## Manual Therapies

Osteopathic Manipulative Treatment, or OMT, is a set of hands-on techniques used by osteopathic physicians (DOs) to diagnose, treat, and prevent illness or injury. Using OMT, a DO moves a patient's muscles and joints using techniques that include stretching, gentle pressure and resistance.

Somatic dysfunction is defined as “impaired or altered function of related components of the somatic (body framework) system: skeletal, arthrodiaral, and myofascial structures, and related vascular, lymphatic, and neural elements.”

## Manual Therapies

The most common areas where Somatic Dysfunction can be diagnosed are:

Cranial, cervical, thoracic, lumbar, pelvis, sacrum, lower extremity, upper extremity

Manual techniques include:

Craniosacral treatment, myofascial release, muscle energy techniques, high velocity techniques, articular techniques

Support

## “CONQUERING PAIN” AT CONCORD

- Meditation and support group for chronic pain patients
- Medicine-Pediatrics practice and Christiana Care’s Concord office in Chadds Ford, PA
- Initially started as a group for instruction in mindfulness meditation
- Also with goal to educate about various aspects of chronic pain management
- Has evolved into support, education, meditation, etc.

Support

## MESSAGES FROM CONQUERING PAIN AT CONCORD

- 15 min visits may not be enough
- Please listen
- Communication is key
- Don't assume I'm drug seeking
- Don't dismiss what can't be measured
- Read notes from last visit
- Open-minded, creative
- Take a few minutes to learn about disorder
- Chances are, I've already been told to lose weight
- Think outside the box
- I don't necessarily expect to be fixed
- I need a knowledgeable partner
- It's okay to say "I don't know"



Support

## LESSONS FROM CONQUERING PAIN AT CONCORD

- Isolation, alienation from family, friends, community is often the norm
- Pain comes to define their lives
- Given time and space, your patients will often tell you why they're in pain
- One size does NOT fit all when it comes to chronic pain treatment
- Stress and psychiatric comorbidities are huge part of chronic pain syndrome
- Witnessing remarkable transformations in our patients as they grow, share and begin to address their pain and underlying issues

# LESSONS FROM CONQUERING PAIN AT CONCORD

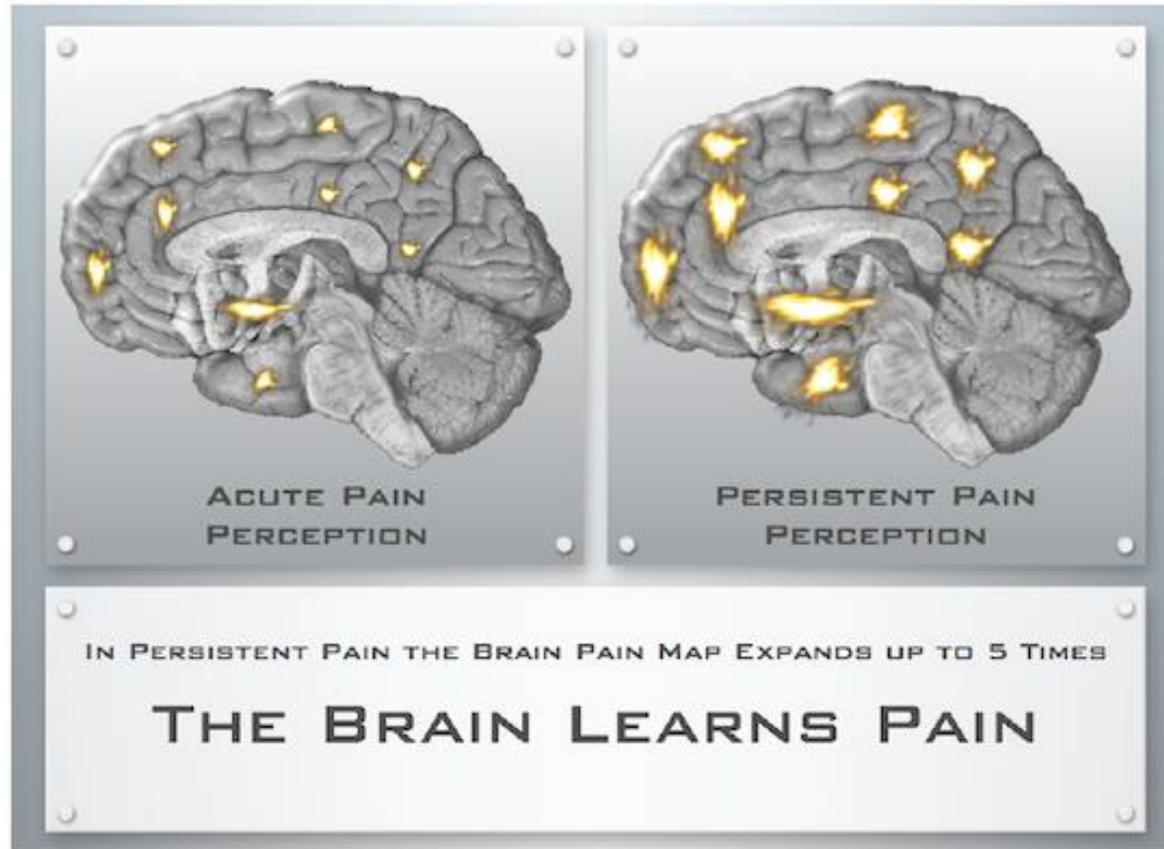
- Validation from a physician is incredibly powerful
- Everyone has a story to tell
- YOU are your most powerful therapeutic weapon

Visualization  
Techniques

# NEUROPLASTIX

- Michael Moskowitz, MD and Marla Golden, DO
- Featured in *The Brain's Way of Healing*
- Dr. Moskowitz developed method to teach patients to re-wire pain processing regions of their brain through intense visualization
- Resulting in significant improvements in chronic pain

# NEUROPLASTIX





- Chronic pain patients were trained to control activation in the rostral anterior cingulate cortex (rACC) and reported decreases in the ongoing level of chronic pain after training. (Stanford University study)



# Control over brain activation and pain learned by using real-time functional MRI

R. Christopher deCharms, Fumiko Maeda, Gary H. Glover, David Ludlow, John M. Pauly, Deepak Soneji, John D. E. Gabrieli, and Sean C. Mackey, 2005

...These findings show that individuals can gain voluntary control over activation in a specific brain region given appropriate training, that voluntary control over activation in rACC leads to control over pain perception, and that these effects were powerful enough to impact severe, chronic clinical pain.

# ADDITIONAL THERAPIES NOT COVERED TODAY

- Biofeedback/neurofeedback
- Class IV laser therapy
  - LiteCure, K-laser
- PRP/Prolotherapy/Stem cell injections
- Dry needling
- Supplements
- Functional medicine
- Herbal medicine
- Chiropractic
- Rolfing, Feldenkrais, Alexander technique



QUESTIONS?