INTEGRATIVE HEALTH CARE FOR PAIN AND STRESS
Objectives

- Summarize the underlying physiological, emotional and cognitive dis-regulation resulting from chronic pain.
- Describe how to apply an integrative approach to treating chronic pain.
- Experience three different integrative modalities that can be used for self-care and for patients with chronic pain.
Neurological changes

- Activating pain pathways in persons with chronic pain syndrome activates anterior cingulate cortex. The degree of activation correlates positively with anxiety, stressful life events and history of abuse.
  - (Ringel et al., 2008)
Neurological Changes

- **Increased Vigilance**
  - Based on anticipatory anxiety and level of anxiety sensitivity
    - (Koster, Crombez, Verschuere, Van Damme, & Wiersema, 2006)

- **Decreased Emotional Variance/Increased Negative Affect**
  - Positive and negative emotional states become dichotomous
    - (Dimova et al., 2015)

- **Decreased Introspection**
  - Increased focus on major symptom leads to decreased awareness of all other introspective sensations
    - (Tsay, Allen, Proske, & Giummara, 2015)
Physiological Changes

- Decreased heart rate variability
- Sustained sympathetic activation/sustained parasympathetic activation
- Increased inflammation
- Decreased immune function
- Increased allostatic load

(Bartley, Rhudy and Williams, 2009)
Disruption of the inflammatory negative feedback loop

- Sustained cortisol levels result in failure to down regulate pro-inflammatory cytokines such as IL-6
  - (Cowin, E., 2000)
- Perpetuates "sickness behavior" beyond what is beneficial for the person
  - (Wilson, Finch and Cohen, 2002)
Emotional dysregulation

- Anxiety and depression may have preceded chronic pain—or—
- Symptoms themselves may initiate anxiety
- Fear avoidance and pain
  - (Meier, M., Stampfi, P., and Vrana, A., et al. 2015)
- Selective attentional bias toward pain
  - (Vago and Nakamura 2011)
Adverse Childhood experience (ACE)

- Smaller pre-frontal cortex volume with poorer executive function
- Greater startle response in amygdala
- Poorer attention
- Higher cortisol basal levels with flatter profile and blunted response
- Elevated inflammatory levels
- Higher T-cytotoxic : T-helper ratio and greater type IV hypersensitivity

(Danse and McEwen, 2012)
How do I help??????

Intractable and unpredictable symptoms
Symptom and disease progression mismatch
Noncompliance
Why do people use Integrative therapy?

- People with chronic conditions, especially those with multiple chronic conditions
- People who perceive that they have not been treated well in traditional health care system
- Those with a life threatening condition and are experiencing psychological distress

(Bishop, F., Lewith, G., 2008)
What interferes with using Integrative therapies

- Lack of understanding
  - (Trail-Mahan, Mao et al. 2013)
- Lack of hands on training
  - (Avino 2011)(Little 2013)
- Proliferation of non-health care professionals learning and applying integrative therapies
- New age jargon
The pain may be due to your yin and yang being out of celestial alignment, but humour me and let's see if your broken leg is part of the problem.
Integrative approach to patient interaction

- Establishing a partnership between patient and practitioner
- Employing a holistic approach to health care that considers all factors influencing the health of the individual
Integrative approach to intervention selection

- Consideration of all appropriate and effective interventions beginning with those most natural and less invasive
Integrative approach to health care practitioner development

- Health care practitioners that exemplify the principles of holistic care by being committed to self-exploration and self-development
Integrative approach to care

- Requires presence
- It requires a layered approach to assessment and prescription
- Goal is to bring the patient more fully into their body and aware of their current situation
- Does not separate psychological and physical processes
- Acknowledges energy
Taking the scenic route

Mind body employs techniques to improve self and symptom awareness as the number one approach. This has the potential to make distraction (when needed) more effective.
Integrative care for pain and stress

- Improved interoception
- Improved emotional processing
- Facilitate experiences that include a wide range of sensations
- Caregiver empathy
How to guide a patient through difficult times

- Affirmations
- Visualizations
- Belleruth Naparstek
  - Connects the process or procedure to the body in a realistic but non-threatening manner
  - Allows the individual to envision a good outcome
Belleruth Naparstek

Make space for the flow of the Universe

HandsOnGratitude.com
Energy work

**Reiki**
- Begun by Janet Mentgen, RN, BSN,
- Created Healing touch international in 1989
- Review: 66 clinical studies found strong evidence for reduction in pain in pain populations and cancer patients.
  - (Jain & Mills, 2010)
- Review of 49 articles indicated moderate evidence for reduction of pain in cancer patients.
  - (Thrane & Cohen, 2014)
- Anne Vitale PhD, APN, AHN-BC
  - Innerlight research

**Healing touch**
- Begun by Doctor Usui
- Review of 49 articles indicated moderate evidence for reduction of pain in cancer patients.
  - (Thrane & Cohen, 2014)
- Anne Vitale PhD, APN, AHN-BC
  - Innerlight research

- Begun by Janet Mentgen, RN, BSN,
- Created Healing touch international in 1989
- Review: 66 clinical studies found strong evidence for reduction in pain in pain populations and cancer patients. Also, moderate evidence for reduction in negative behavioral symptoms in dementia and reduction in anxiety for hospitalized patients.
  - (Jain & Mills, 2010)
Massage Therapy

- Increase peripheral circulation
  - (Portillo-Soto, Eberman, Demchak, & Peebles, 2014)

- Reduce muscle restrictions resulting in improved muscle function
  - (Field, Diego, Gonzalez, & Funk, 2014)

- Improved nerve conduction
  - (Kassolik et al., 2014)

National Certification Board for Therapeutic Massage
http://www.nctmb.org
Regaining connection with the body
QIGONG

- Facilitates interoception, the connection between brain and body
QiGong practices

- You can use the word “imagine”
- How to be in your body
- Releasing
- Improving flow
- Walking meditation
Three suns
Lung Release
Lung meditation
Walking meditation

- Three steps on the inhale and three on the exhale
- Walk on grass
- Labyrinth

Walk as if you are kissing the Earth with your feet.

– Thich Nhat Hanh

www.GoodNGreat.com
Yoga

- Connection to the breath or connection between brain and emotions
- Poses that are completed by pacing the breath.
- Provides physical exertion and flexibility that then supports one's ability to sit in mindful awareness
Alternate nostril breathing
Common Yoga poses for health

**Triangle Pose**: Improves hip hinge pattern for kettlebell swings and deadlift.

**Extended Side Angle Pose**: Improves hip mobility for squats and overhead presses.

**Downward Dog**: Improves ankle mobility, decompresses the spine, and benefits Achilles tendon.

**Low Pyramid Pose**: Great for the IT band and hamstrings.

**Warrior I**: Improves front squat.

**Lunge Variation**: Lengthens psoas - great for desk workers!

**Low Lunge with Quad Stretch Variation**: Assists deep knee flexion and thoracic rotation.

**Pigeon Pose**: Opens the hips and alleviates back pain.

**Shoelace Pose**: Stretches butt muscles you forgot you had.

**Reclined Spinal Twist**: Calms the central nervous system.
Mindfulness of difficult symptoms

- Mindfulness facilitates early symptom awareness
  - Morone et al. 2008
  - Chan 2015

- More accurate Pain awareness
  - (Zeidan, Martucci et al. 2011)
**Exclusive Meditation**

- Sustained attention to a single focus
- Establish resonance breathing
- Mantra/concept

**Inclusive Meditation**

- Open attention to multiple foci in succession
- Maintain resonance breathing
- Contemplation

“The truth will set you free – but first it will make you miserable”

*common 12 step humor*
Mechanisms

- Resonance breathing facilitates increased heart rate variability through central vasomotor and respiratory center signals and peripheral changes in arterial pressure and respiratory movement.
  - 6 breaths/min and decreased I/E ratio
- Neuro-signals
  - Increased CO2 levels trigger sympathetic response
  - Positive breathing triggers parasympathetic response
Active Meditation

Meditation drives breathing patterns – breathing patterns drive increased HRV

Change is immediate

Respiratory pauses coincide with periods of meditation awareness

Increased CO₂ promotes decreased chemosensitivity to CO₂
Respiratory psychophysiology

- Heart Rate variability is a measure of cardiovascular flexibility that is a direct reflection of autonomic balance in the system.
- Autonomic balance is essential for effective immune function, tissue regeneration and metabolic function.
- You can improve this flexibility and facilitate autonomic balance by practicing resonance breathing.
- Do as one web page or app for your phone:
  - http://www.doasone.com/
Attention

Slagter, H., 2008
Improved processing of warning stimuli

Van den Hurk, P. et al. 2010

Complexity

**Exclusive**
- Bio-feedback
- Mantra selection
  - Affirmations
  - Spiritual
- Concentrative focus
  - Loving kindness

**Inclusive**
- Benign foci
- Sounds
- Movement
- Personal awareness
  - Emotions
  - Meaningful sensations
Mantra meditation

- Finding your mantra
  - TM
  - Eswarian Mantran handbook
  - How to use meditation as a bedside spiritual intervention
  - Herbert Benson
  - Lessons learned from teaching meditation
- Linking Mantra to a personal affirmation
Mindfulness meditation

“Paying attention in a specific manner without judgment”

Kabat-Zinn
Self-compassion Meditation

- Loving kindness – metta meditation
- Basis of healthy emotional function
  - (Garcia-Romeu 2010)
- Broaden and build
  - (Fredrickson, Cohn et al. 2008)
- Epigenetics of healthy social networks
  - (Cole 2009)
- Eudemonics and immune system
  - (Abelson, Erickson et al. 2014)
The mindful practitioner

- Therapeutic presence – the practitioner as medicine
- Mindfulness to process emotional burden at work
May I be free from inner and outer harm and danger. May I be safe and protected.

May I be free of mental suffering or distress.

May I be happy.

May I be free of physical pain and suffering.

May I be healthy and strong.

May I be able to live in this world happily, peacefully, joyfully, with ease.
Resources

- Unlearn your pain. A 28 day process to reprogram your brain
  - Howard Schubiner, MD and Micheal Betzold

- Healing with the Arts
  - Michael Samuels, MD and Mary Rockwood Lane, RN, PhD
The role of mindfulness in healthy functioning

- Restoring or introducing flexibility into the system through systematic, planned and supported experiences of difficult or warning signals.
- Improves or establishes the ability to experience these sensations in such a manner as to illicit an appropriate physiological or psychological response.
- Easy when you are healthy – not so easy when you have chronic or terminal illness.