PainWeek®

When East Meets West: Using an Integrative Approach to Treat Chronic Overlapping Pelvic Pain Disorders

Kathryn Witzeman, MD, FACOG

Title & Affiliation

Kathryn Witzeman, MD, FACOG
Associate Professor, University of Colorado
Director, Women's Integrative Pelvic Health Program
Department of OBGYN
Denver Health Medical Center
Follow on Twitter @KWitzeman

Disclosure

- No relevant financial disclosures

- Other disclosures:
  - Pelvic Health Educational Services, LLC (sole proprietor)

Learning Objectives

- Summarize the underlying psychoneuroimmunologic contribution to chronic overlapping pelvic pain disorders (COPPD)
- Describe non-pharmacologic treatment modalities as primary options or adjuncts in treatment of COPPD
- Describe treatment modalities that address multiple contributing factors of COPPD

How Did I Arrive at Integrative Medicine?

Chronic Overlapping Pain Conditions (COPCs)

- 2 Defining Features
  - – Etiologies are multifactorial
  - –Clinical manifestations of COPCs are diverse and present as a mosaic of risk determinants

– Maixner W, et al. **Overlapping Chronic Pain Conditions: Implications for Diagnosis and Classification** J Pain. 2016 September ; 17(9 Suppl): T93–T107. doi:10.1016/j.jpain.2016.06.002.

Chronic Overlapping Pain Conditions (COPCs)

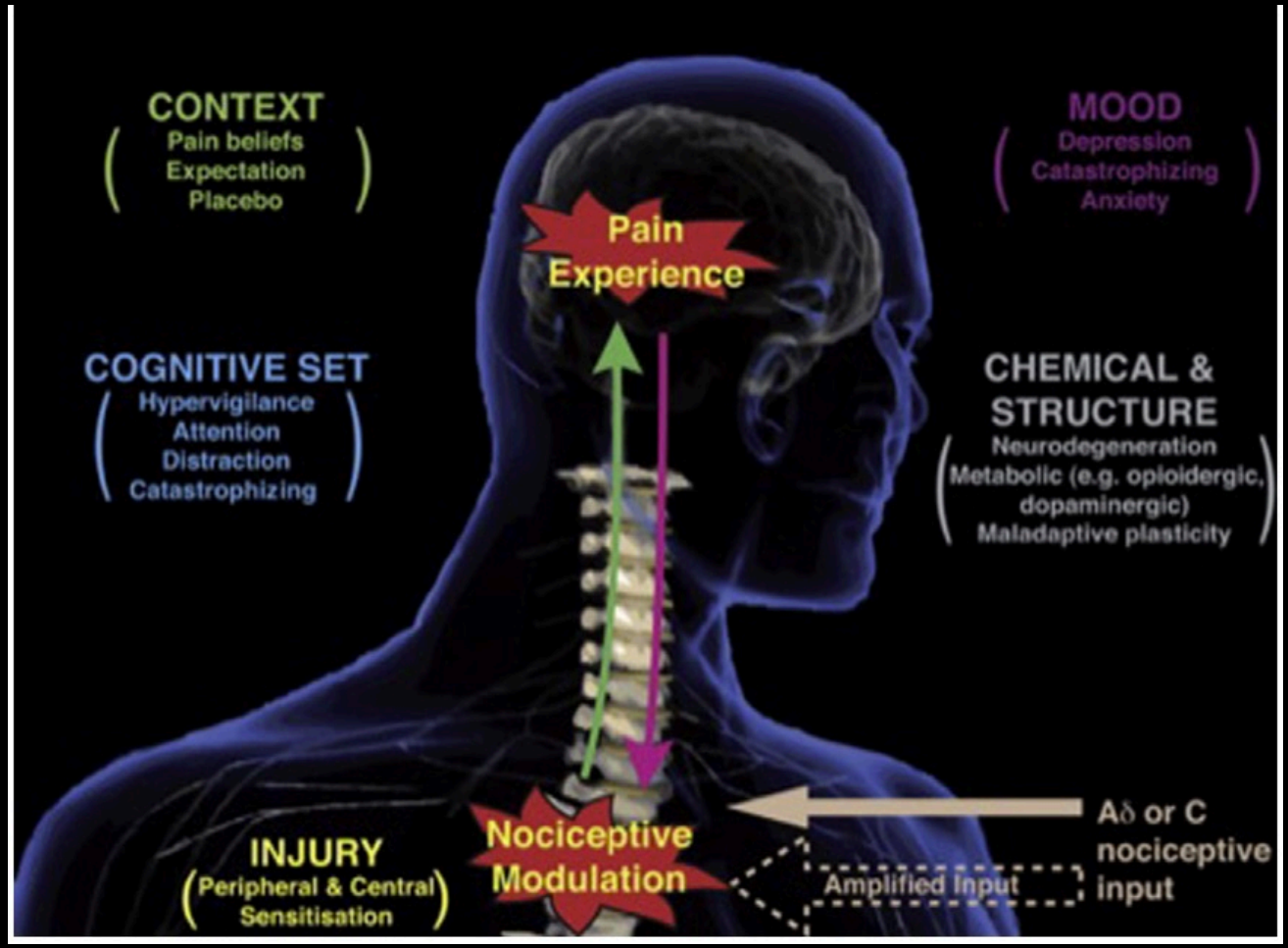
- Temporomandibular disorder (TMD)
- Fibromyalgia (FM)
- Irritable bowel syndrome (IBS)
- Vulvodynia
- Myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS)
- Interstitial cystitis/painful bladder syndrome (IC/BPS)
- Endometriosis
- Chronic tension-type headache
- Migraine headache
- Chronic low back pain (CLBP)
- Dry eye syndrome

» **Maixner, W. et al. Overlapping Chronic Pain Conditions: Implications for Diagnosis and Classification** J Pain. 2016 September ; 17(9 Suppl): T93–T107. doi:10.1016/j.jpain.2016.06.002.

» Levitt, A. et al. Evidence that dry eye represents a chronic overlapping pain condition Molecular Pain. 2017 Jan-Dec;13:1744806917729306. doi: 10.1177/1744806917729306.PMID: 28814146

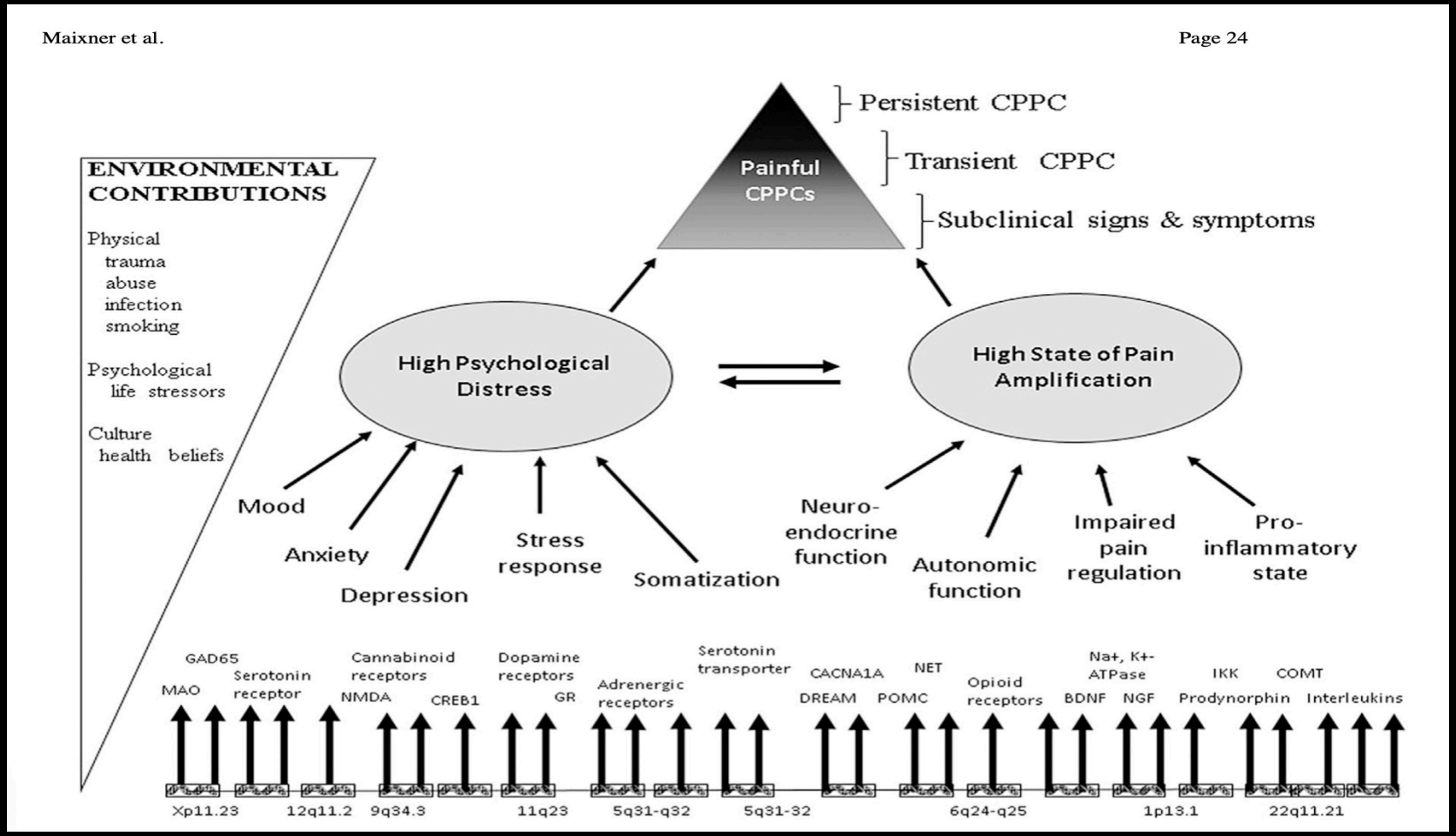
Factors Influencing How Much Pain is Felt

- Extreme stress (though it can render someone pain free during a crisis)
- Chronic toxic stress
- Anticipation of pain relief
- Anticipation of pain exacerbation
- Gender and hormonal influences
- Neuroendocrine milieu
- Pain beliefs — conceptualization
- Cognition
- Evaluation – associated fears
- Autonomic system dysregulation
- Central sensitization syndrome



L. Coxon et al. Pathophysiology of endometriosis-associated pain: A review of pelvic and central nervous system mechanisms Best Practice & Research Clinical Obstetrics and Gynaecology 51 (2018) 53e67

Chronic Overlapping Pelvic Pain Disorders



Maixner, W. et al. Overlapping Chronic Pain Conditions: Implications for Diagnosis and Classification J Pain. 2016 September ; 17(9 Suppl): T93–T107. doi:10.1016/j.jpain.2016.06.002.

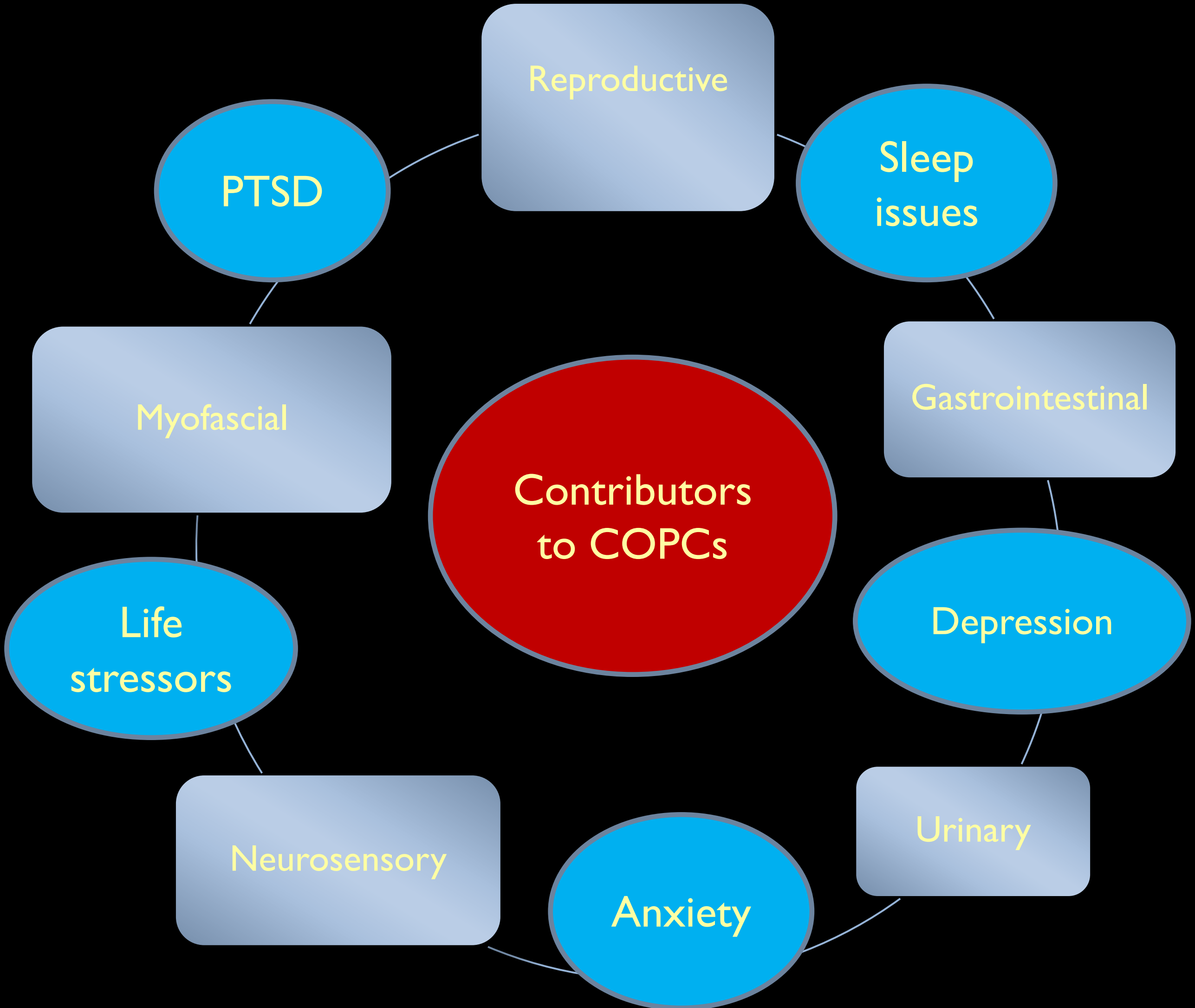
Chronic Overlapping Pelvic Pain Disorders

- Instead of treating the presenting symptom or disease entity separately (e.g., headache, irritable bowel syndrome, fibromyalgia), consider looking for common underlying contributors like stress, inflammation, biomechanics and problematic nutrition

Case – Janet

42 year old G2P2002 with a 10 year history of worsening chronic pelvic pain now including daily pain with routine activity, bowel movements, urination; and currently avoids sexual intercourse due to dyspareunia. She is distraught and concerned about losing both her job and intimate partner.

Case – Janet
What Could be Contributing Factors for Janet?




THE
MIND-BODY
CONNECTION

Autonomic Nervous System Dysregulation and Pain Processing

- Autonomic nervous system (ANS) is made up of the sympathetic and parasympathetic systems, which have different roles in general, and specifically are part of different stages of inflammation
- Sympathetic nervous system (SNS) has been shown to be involved in both the development and severity of chronic inflammatory diseases
- SNS is involved in the initial phases of inflammation, and it gives rise to a proinflammatory environment that can sensitize nerve endings through adrenoceptors
  - Capellino S, Straub RH. Chapter 1 neuroendocrine immune control mechanisms and their in!uence on autoimmune disease. In: Walker SE, Jara LJ, editors. Handbook of systemic autoimmune diseases. 9. Elsevier; 2008. p. 3e12.
  - L. Coxon et al. Pathophysiology of endometriosis-associated pain: A review of pelvic and central nervous system mechanisms Best Practice & Research Clinical Obstetrics and Gynaecology 51 (2018) 53e67

Autonomic Nervous System Dysregulation and Pain Processing

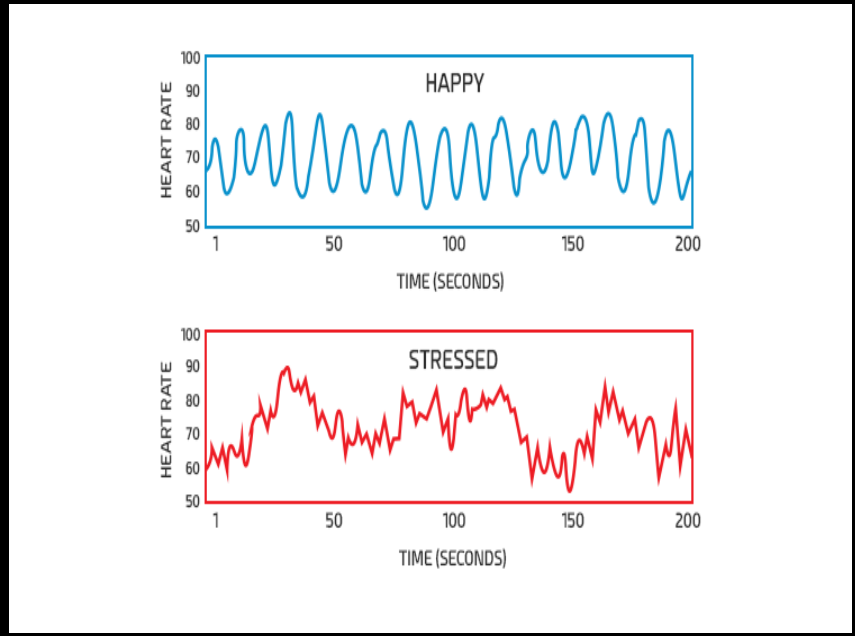
- Dysregulation of the ANS in favor of the SNS may lead to a system in favor of a pro-inflammatory state

- Enhanced pain perception experience by patients with COPCs may result from a dysregulation in the peripheral, central (including ANS) nervous systems which may contribute to central sensitization and wind-up

Maixner, W. et al. Overlapping Chronic Pain Conditions: Implications for Diagnosis and Classification J Pain. 2016 September ; 17(9 Suppl): T93–T107. doi:10.1016/j.jpain.2016.06.002.

Breathing Techniques and Heart Rate Variability (HRV): Balancing the Autonomic Nervous System

- Bottom-up regulation
  - HRV has been determined to be a good measure of how well the autonomic nervous system is working
  - HRV measures the relative balance between the (sympathetic) SNS and the (parasympathetic) PNS
  - Poor HRV (lack of fluctuation in the HR in response to breathing) has negative effects on thinking, feeling, and the body's response to stress and can lead to a variety of physical illnesses from heart disease to cancer to PTSD and depression



Cohen, H. et al. Biological Psychiatry 44, 10 (1998): 1054-59.

Breathing Techniques and Heart Rate Variability: Balancing the Autonomic Nervous System

- Using ‘belly’ or diaphragmatic breathing method
  - Inhale over the mental count of 4
  - Hold the breath for a mental count of 7
  - Exhale slowly through the mouth over a mental count of 8

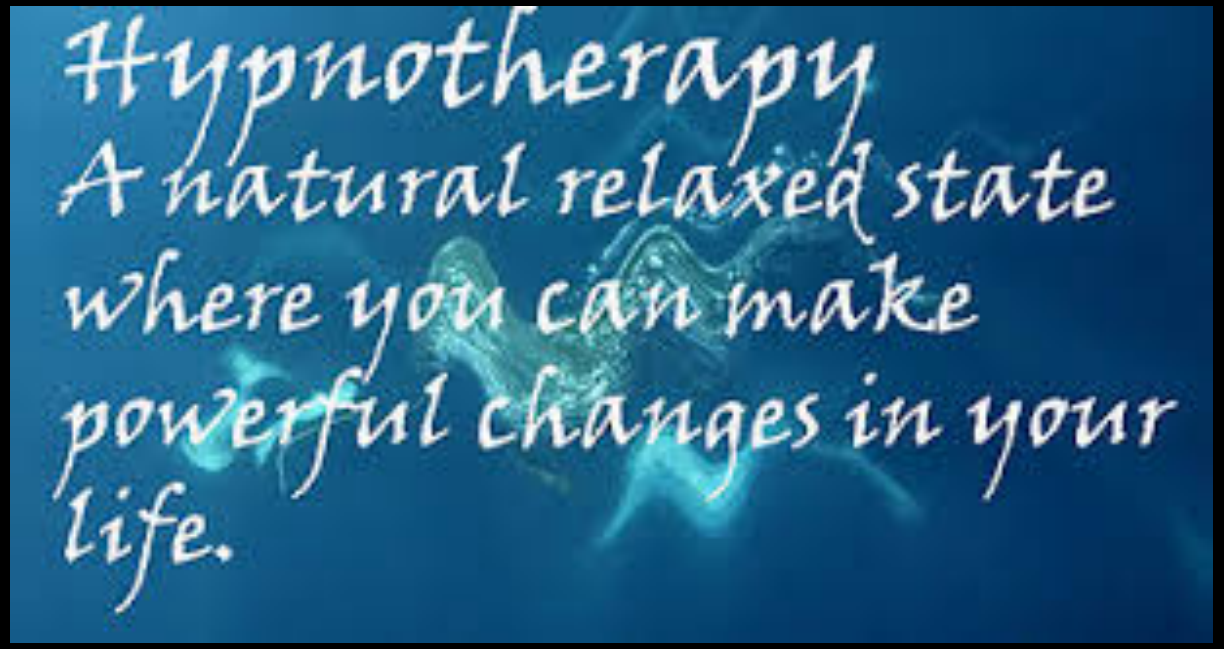
Breathing Techniques and Heart Rate Variability: Balancing the Autonomic Nervous System

- Using 'belly' or diaphragmatic breathing method
  - Inhale over the mental count of 4
  - Hold the breath for a mental count of 7
  - Exhale slowly through the mouth over a mental count of 8

Group Experiential with 4-7-8- breathing technique

PainWeek

Clinical Hypnosis (Hypnotherapy)



IS
NOT

Clinical Hypnosis

- Clinical hypnosis was recognized by the AMA and the American Psychiatric Association in 1958
- Has been widely studied for chronic pain management in both children and adults
- Hypnosis interventions consistently produce significant decreases in pain associated with a variety of chronic pain problems
- Found to be more effective than non-hypnotic interventions such as attention, physical therapy, and education
- Lack of standardization of the hypnotic interventions examined in clinical trials, and numbers in trials were low

Elkins etal. Int J Clin Exp Hypn. 2007 July ; 55(3): 275–287

Clinical Hypnosis and IBS

- **Long-term effects of hypnotherapy in patients with refractory irritable bowel syndrome**
  - 208 patients, who all had received gut-directed hypnotherapy, were retrospectively evaluated
  - 103 of 208 patients (49%) were responders and 75 of these (73%) had improved further at the follow-up 2-7 years after hypnotherapy (mean 4 years).
  - Majority of the responders still used hypnotherapy on a regular basis at follow-up (73%)
  - Responders reported a greater reduction in healthcare seeking than non-responders

Lindfors, P. et al. Long-term Effects of Hypnotherapy in Patients With Refractory Irritable Bowel Syndrome; Scand J Gastroenterol. 2012 Apr;47(4):414-20

Clinical Hypnosis and Dysmenorrhea

- **The Effect of Hypnosis on Dysmenorrhea**
  - Randomized control trial studied the effect of hypnosis on dysmenorrhea
  - One group was given hypnosis and the other given medications for pain relief for 3 menstrual cycles, followed by 3 cycles without any treatment
  - Significant improvement in quality of life after the third cycle in both groups compared to baseline. The effect of hypnosis and medications on quality of life was similar in both groups at the third and sixth cycles

Shah, M etal. Intl. Journal Clinical Experimental Hypnosis, 62(2):164-178, 2014

Clinical Hypnosis

- Many patients can also be taught **self-hypnosis,** which may help to build a sense of control and empowerment

- In addition to helping in pain management, hypnosis has been shown to have important positive effects in the anticipatory anxiety that often accompanies painful medical procedures

- Benefits of using hypnosis in the medical setting are its flexibility (no technical support or equipment needed)

Elkins etal. Int J Clin Exp Hypn. 2007 July ; 55(3): 275–287

Guided Imagery

Guided Imagery

Guided Imagery

- GI involves the generation of different mental images (either sensory or affective) using the capacities of visualization and imagination
- Typically visualized with the goal of evoking a state of relaxation, possibly with a specific outcome in mind (eg, pain relief)
- GI was suggested to be an effective treatment for pain in a variety of clinical conditions and is said to modulate the immune system, de-activate the neuroendocrine system, and facilitate mind-body healing

Posadski, P etal. Clin J Pain. 2011 Sep;27(7):648-53

Guided Imagery

- Guided imagery is often coupled with hypnosis, breathing exercises, music therapy or progressive muscle relaxation in the clinical approach to chronic pain
- Making study of it in an isolated sense challenging
- Too few rigorous RCTs testing the effectiveness of GI in the management of musculoskeletal pain

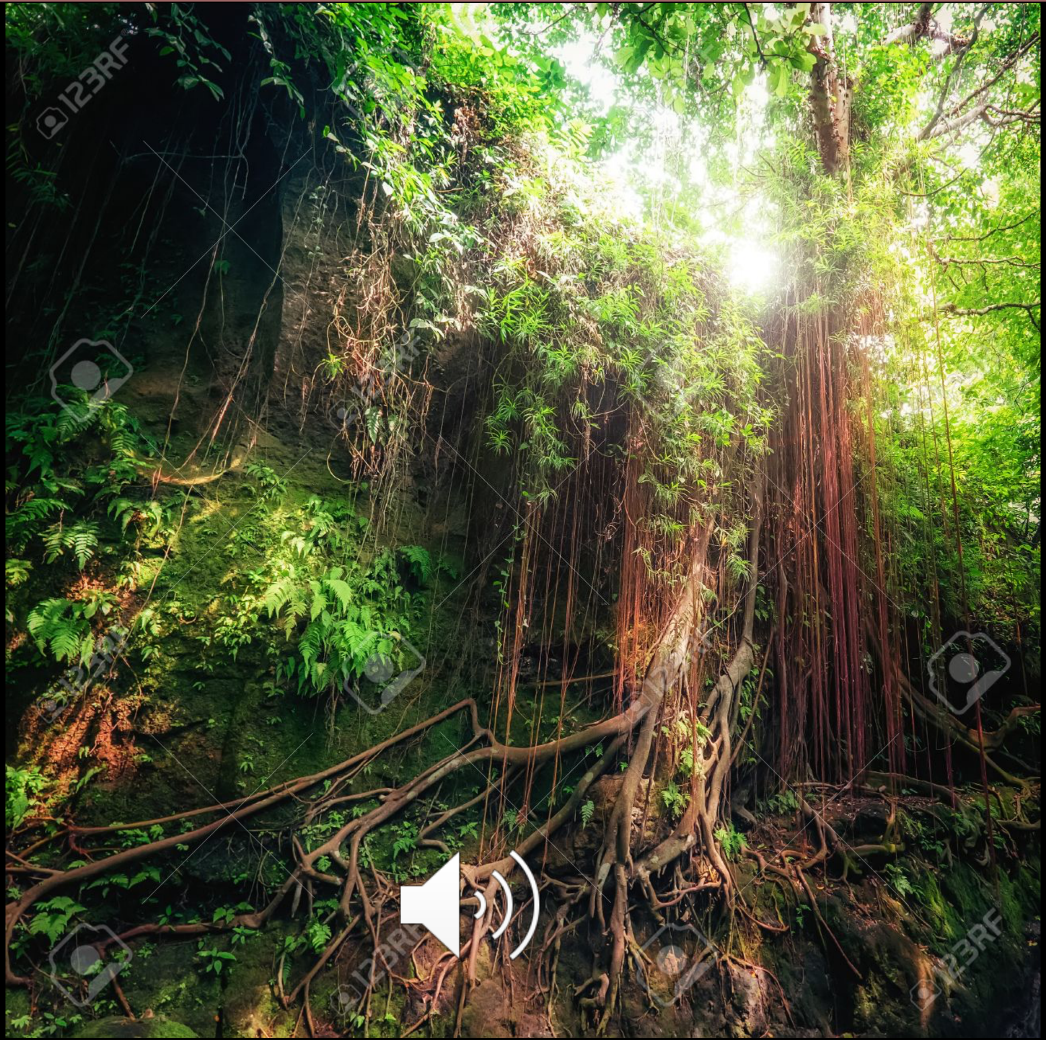
Posadski, P etal. Clin J Pain. 2011 Sep;27(7):648-53

Guided Imagery and Music Therapy

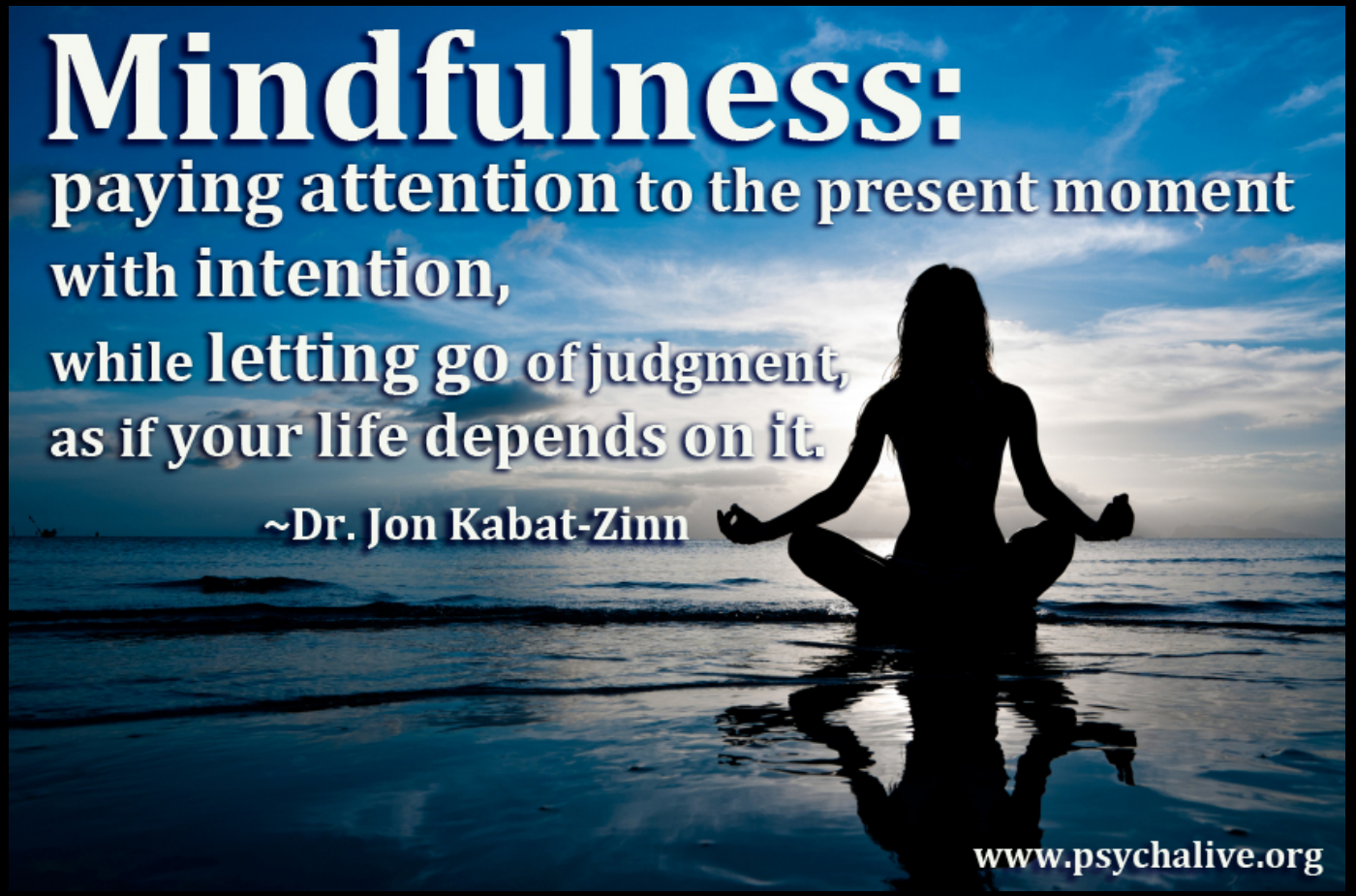
- Studies evaluating the mixed use of guided imagery with music therapy have shown benefit in a variety of cancer treatment and other pain related conditions as well as for treatment of associated anxiety of depression
- Use of music has been documented in diverse cultures worldwide, for ailments ranging from pain and cancer to depression and posttraumatic stress disorder

Beebe, LH, etal. J Psychosoc Nurs Ment Health Serv. 2009 Jan;47(1):29-33.

Short Guided Imagery Experiential for Chronic Pain with permission from HealthJourneys.com



What is Mindfulness?



Focusing on an Experience (Mindfulness—Being in the Moment)

Focusing on an Experience (Mindfulness—Being in the Moment)

Medical Yoga

Medical Yoga

- Currently yoga is classified by WHO as a Mind-Body Practice
- Yoga combines physical exercise, meditation, and respiratory techniques that strengthen the muscles and relieve stress
- Helps the body and mind to modulate depression and anxiety

Saxena, R. etal. Int J Yoga. 2017 Jan-Apr; 10(1): 9–15.
Goncalves, A, et al. J Alt and Com Med. Volume 23, Number 1, 2017, pp. 45–52.
Huang, A, et al. Pain Medicine 2017; 0: 1–9

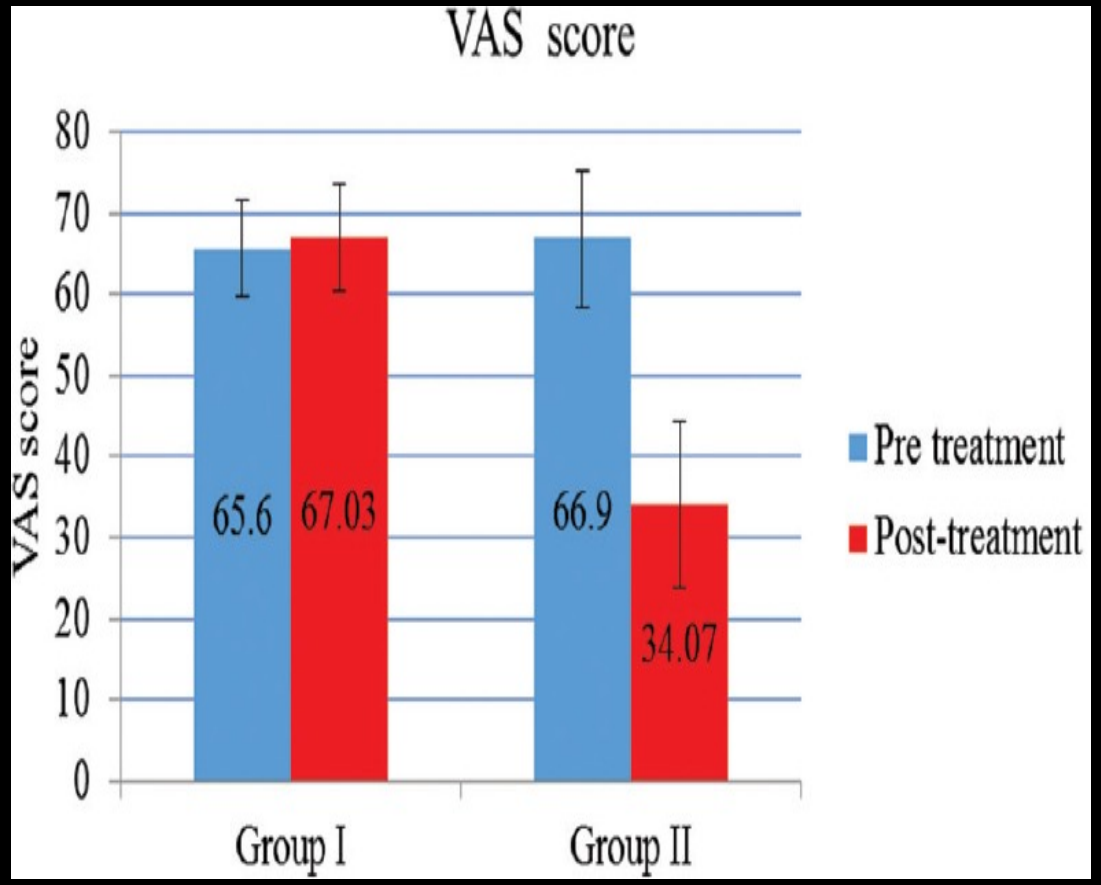
Medical Yoga

- Growing evidence supports that practice of yoga can reduce reported levels of chronic pelvic pain and improve QOL measures
- Significant improvement in women with both proven endometriosis and with CPP of unknown source
- Increasing body of evidence supports the qualitative improvement of outcomes when yoga is used to treat functional pain syndromes.

Saxena, R. etal. Int J Yoga. 2017 Jan-Apr; 10(1): 9–15.
Goncalves, A, et al. J Alt and Com Med. Volume 23, Number 1, 2017, pp. 45–52.
Huang, A, et al. Pain Medicine 2017; 0: 1–9
Roshan Sutar, Suresh Yadav & Geetha Desai (2016) Yoga intervention and functional pain syndromes: a selective review, International Review of Psychiatry, 28:3, 316-322, DOI: 10.1080/09540261.2016.1191448

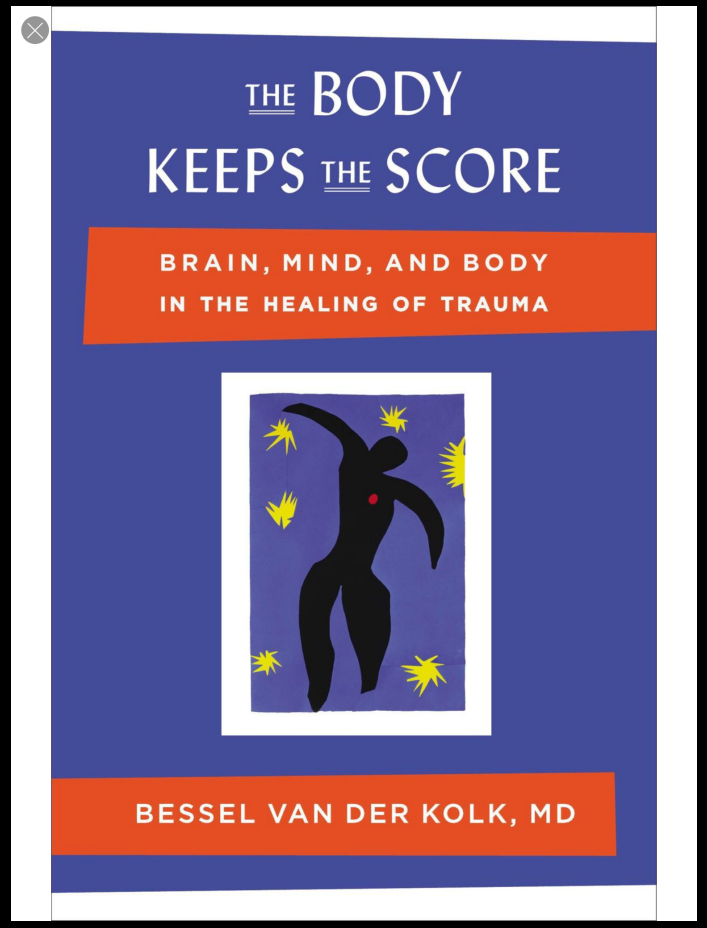
Yoga and CPP

- Randomized case-control study
- 80 women with CPP ages 18-45
- Group I – NSAIDs only
- Group II – 8 week yoga instruction and practice (1hr 5x/week) with expert yoga instructor
- Significant improvement in both VAS and QOL from pre- to post-testing



Saxena, R. etal. Int J Yoga. 2017 Jan-Apr; 10(1): 9–15.

Trauma Informed Yoga (TIY) Therapy



- Learning to inhabit your body: yoga
  - Annie's journey from the depths and numbness of PTSD as someone who experienced childhood sexual trauma to a place of calm and peace in her own body through the practice of yoga

Van der Kolk, B. et al. J Clin Psychiatry. 2014 Jun;75(6):e559-65.

Trauma Informed Yoga Therapy

- An optimally functioning ANS returns to homeostasis after SNS arousal; however, individuals with PTSD-related hyperarousal symptoms may take much longer than others to self-regulate and return to a more balanced physiological state
- A healthy ANS requires use of both the PSNS and SNS
- Yoga, as a mind-body practice, engages downregulating practices that emphasize activation of the PSNS as well as upregulating practices that stimulate the SNS. Mindful use of up- and downregulating practices over time helps individuals learn to discern cues from their ANS, recognizing when they are either hyper- or hypoaroused, and teaches them how to recalibrate or balance their ANS

Justice, L. et al. Bridging Body and Mind: Considerations for Trauma-Informed Yoga; International Journal of Yoga Therapy — No. 28 (2018)

Trauma Informed Yoga Therapy

- Provides students with practices that help them access the ANS in general (e.g., through breath control) and re-engage the PSNS in particular
- Many athletic yoga practices are geared toward inducing hyperarousal and may thus be contraindicated for individuals with trauma symptoms
- Heterogeneity of yoga practices can make referrals by health practitioners ambiguous and misleading for clients seeking treatment for trauma-related symptoms

Justice, L. et al. Bridging Body and Mind: Considerations for Trauma-Informed Yoga; International Journal of Yoga Therapy — No. 28 (2018)

Trauma Informed Yoga Therapy

- Yoga significantly reduced PTSD symptomatology
- Effect sizes comparable to well-researched psychotherapeutic and psychopharmacologic approaches
- Yoga may improve the functioning of traumatized individuals by helping them to tolerate physical and sensory experiences associated with fear and helplessness and to increase emotional awareness and affect tolerance

Van der Kolk, B. et al. J Clin Psychiatry. 2014 Jun;75(6):e559-65.

Manual Therapeutic Approaches

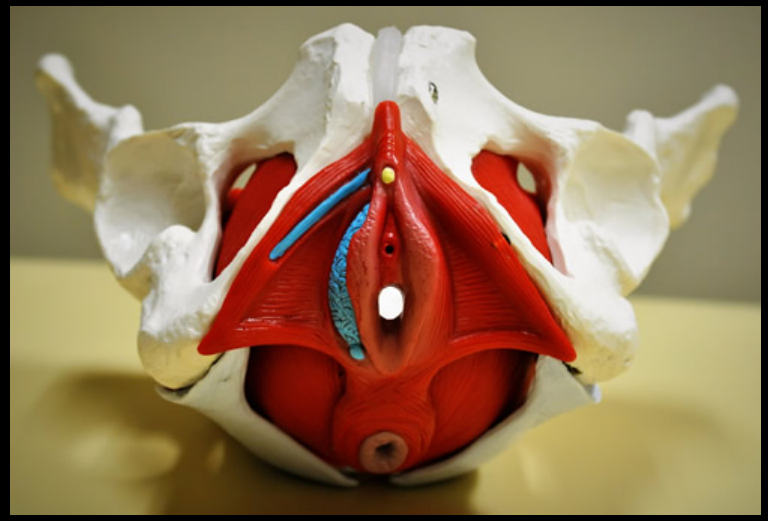
Evaluating the Whole Person: How do Janet's symptoms impact her functionally?

- What activities aggravate her symptoms?
  - Walking
  - Standing
  - Sitting
  - Lifting
  - Climbing

- Has Janet found anything that eases her discomfort and symptoms?
- How do her symptoms impact her ability to do things that are important to her?
- What functional goals does Janet have?

Pelvic Physical Therapy

Clarifying the
PELVIC FLOOR
and the
role of
PHYSIOTHERAPY

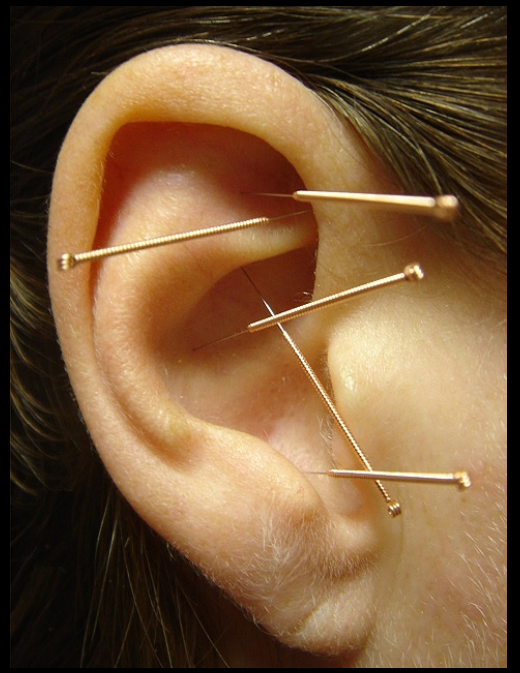


Osteopathic Manipulation, Chiropractic Care, and Massage

- 2016 systematic review with meta-analysis
  - Evaluated the effectiveness of complementary manual therapies for pregnancy related back and pelvic pain
  - 11 articles reporting on 1198 pregnant women included
  - Predominance of OMT and massage represented
  - Results:
    - Positive effects on pain intensity compared to usual care but not when compared to sham intervention
    - Further high quality research needed to examine causal effects including the influence of the therapist on perceived effectiveness

Hall, H. et al. **The effectiveness of complementary manual therapies for pregnancy-related back and pelvic pain: A systematic review with meta-analysis;** 2016 Sep;95(38):e4723. PMID: 27661020

Acupuncture



Acupuncture and Dysmenorrhea Systematic Reviews

Author	Objective	Conclusions
Cho, et al. 2010	Assess the effectiveness of **acupuncture** for the symptomatic treatment of primary **dysmenorrhea** from randomized controlled trials (RCTs). 9 of 27 RCTs met inclusion criteria	Promising evidence in the form of RCTs for the use of **acupuncture** in the treatment of primary **dysmenorrhea** compared with pharmacological treatment or herbal medicine; limited by methodological flaws; further rigorous non-penetrating placebo-controlled RCTs are warranted
Smith, et al. 2016 Cochrane Rev	Determine effectiveness and safety of **acupuncture** and acupressure in treatment of primary **dysmenorrhea** compared with a placebo, no treatment, or conventional medical treatment; 42 RCTs (4640 women)	Insufficient evidence to demonstrate whether or not **acupuncture** or acupressure are effective in treating primary **dysmenorrhea**, and for most comparisons no data were available on adverse events; main limitations were risk of bias, poor reporting, inconsistency and risk of publication bias

Acupuncture and Dysmenorrhea Systematic Reviews

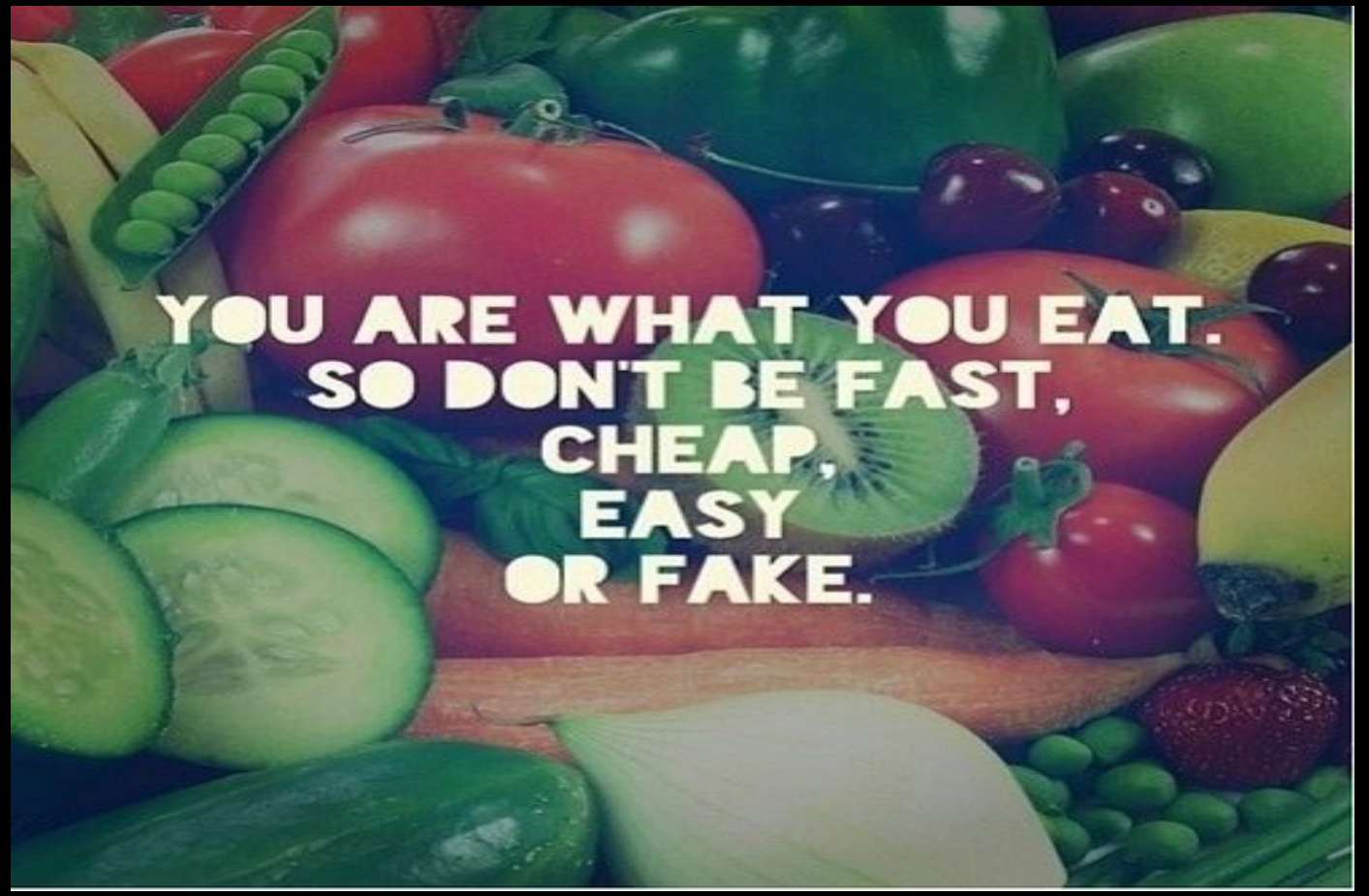
Author	Objective	Conclusions
Abaraogu, et al. 2015	Evidence on the effectiveness of acupuncture and acupressure interventions for primary dysmenorrhea; 8 studies systematically reviewed, 4 included in meta-analysis; moderate methodological quality	Acupressure significantly reduced the pain associated with primary dysmenorrhea and that acupuncture improved both the physical and the mental components of quality of life. Magnitude unclear if clinically worthwhile, but costs and risks of interventions are low, results may be clinically useful; further higher-quality trials are needed.
Armour, M and Smith, C. 2016	To explore the relationship between the 'dose' of the acupuncture intervention and menstrual pain outcomes; 11 of 109 studies included for review	Appears to be relationships between treatment timing and mode of needle stimulation, and menstrual pain outcomes. Insufficient for definitive recommendations.

Acupuncture and Endometriosis: Systematic Review

- 10 studies involving 589 patients were included
- Main outcomes assessed were variation in pain level, variation in peripheral blood CA-125 level, and clinical effective rate
- Pain reduction (pre- minus post-interventional pain level—measured on a 0–10-point scale) between the acupuncture and control groups was 1.36 (95% confidence intervals [CI] = 1.01–1.72, P<0.0001)
- Positive effect on peripheral blood CA-125 levels, as compared with the control groups (MD = 5.9, 95% CI = 1.56–10.25, P = 0.008)
- Current literature suggests that acupuncture reduces pain and serum CA-125 levels, regardless of the control intervention used

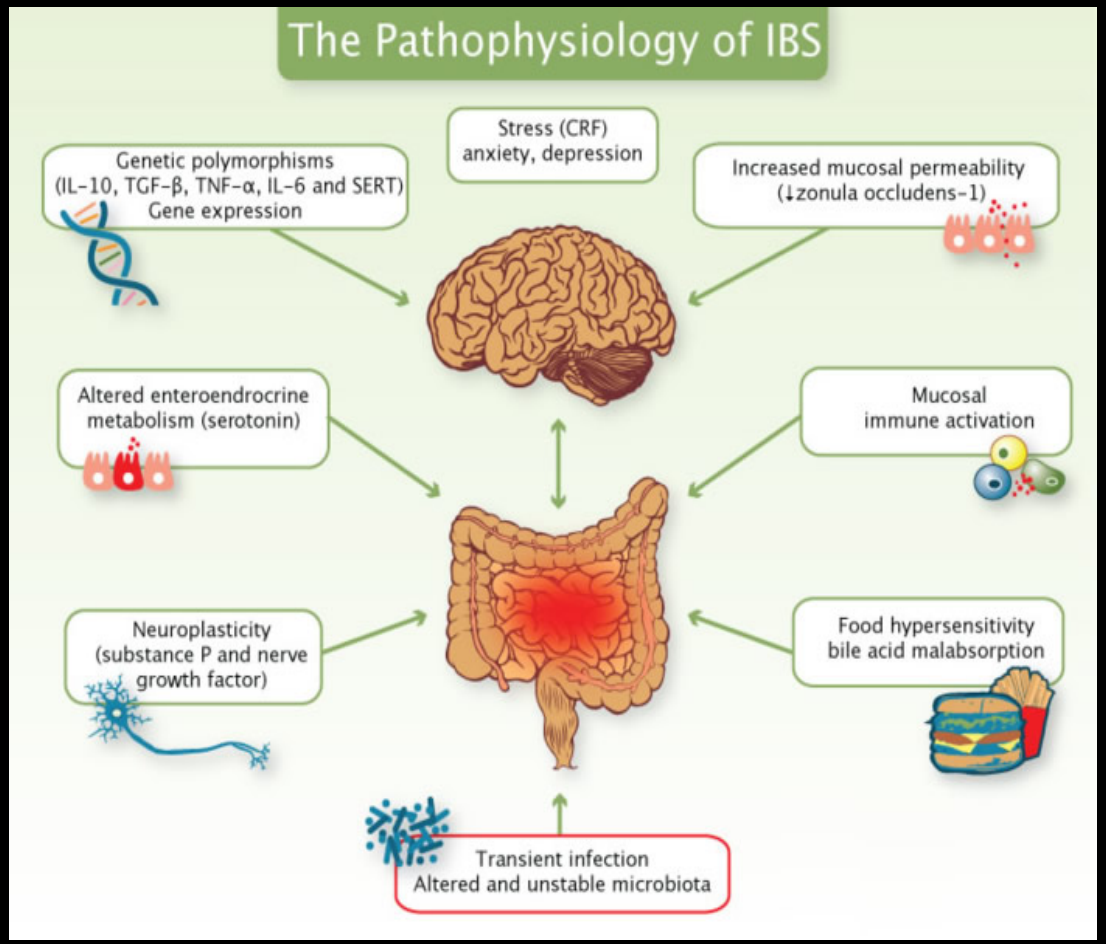
Xu Y, Zhao W, Li T, Zhao Y, Bu H, Song S (2017) Effects of acupuncture for the treatment of endometriosis-related pain: A systematic review and meta-analysis. PLoS ONE 12(10): e0186616. https://doi.org/10.1371/journal.pone.0186616

Nutritional Approaches



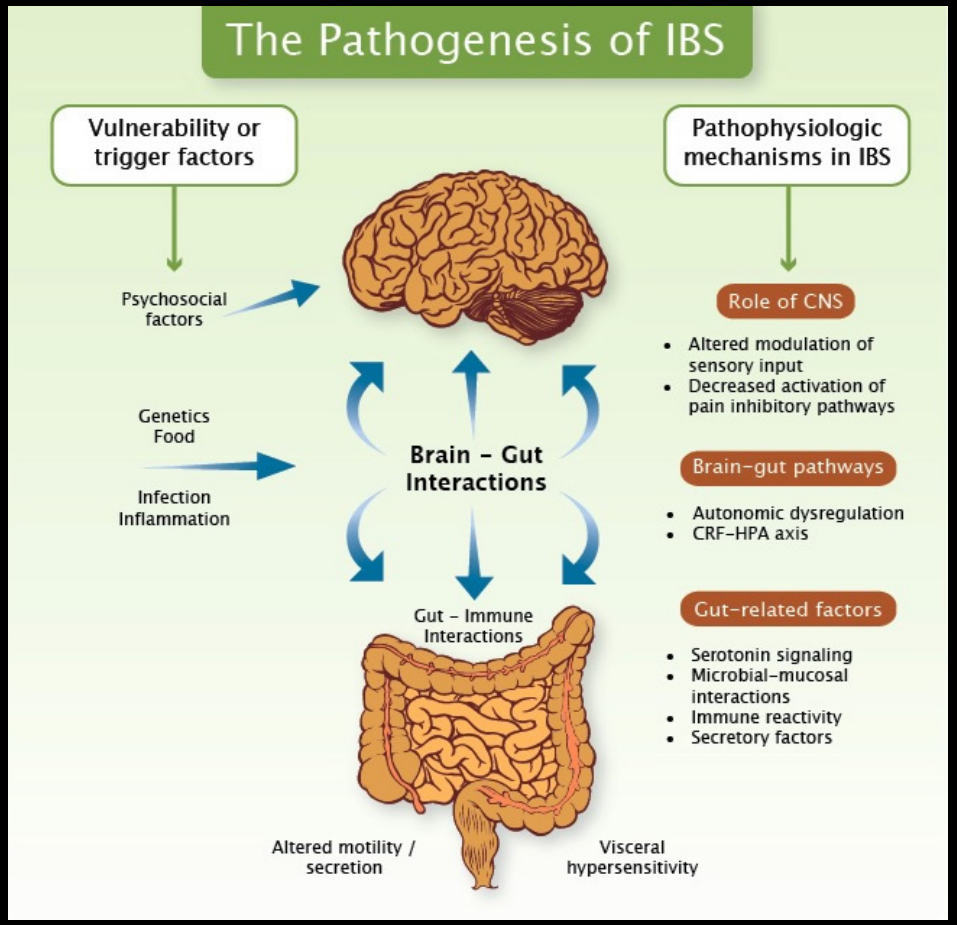
Irritable Bowel Syndrome

- Underlying etiology is unclear and likely heterogeneous with contributions from
  - Diet
    - Food sensitivities and allergies
  - Visceral hypersensitivity
  - Neuroendocrine dysfunction
  - Psychological factors
  - Chronic stress
  - Enteric infection
  - Altered GI flora (microbiome)
  - Genetics



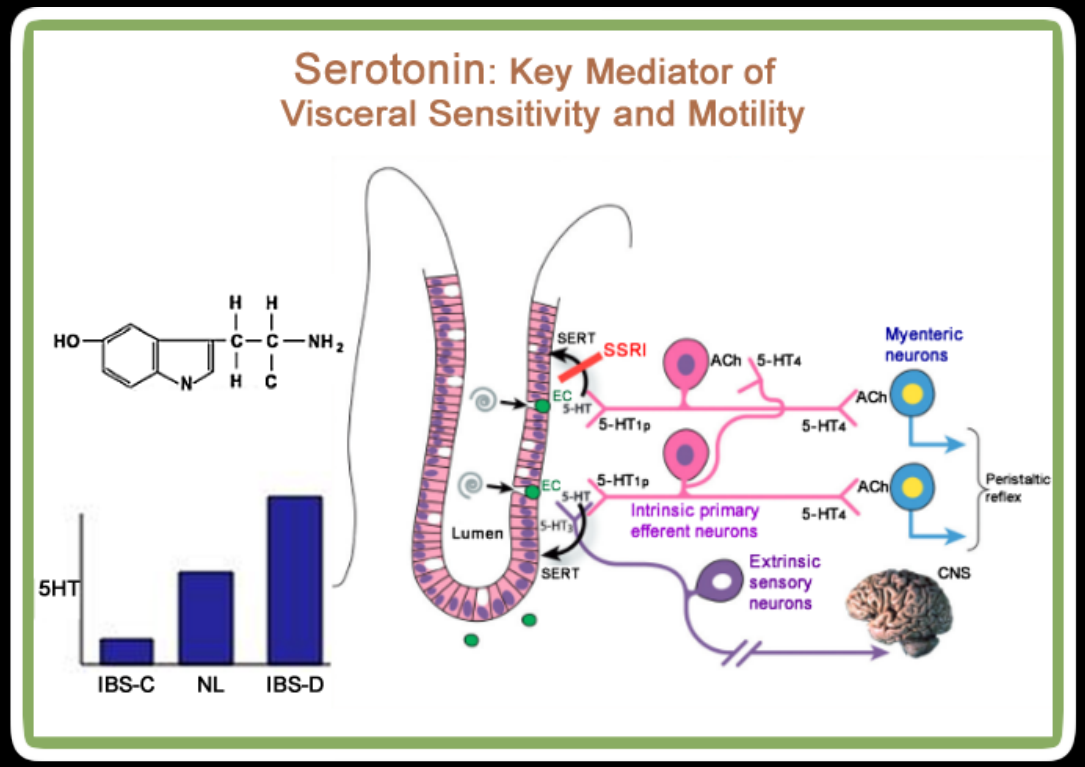
Gut Neuroendocrine and Systemic Inflammation

- The enteric nervous system as the 'second brain'
- Evidence to support the bidirectional communication with the brain
- Brain signaling changes the gut environment, and changes in the gut microflora affect both emotions and pain perceptions by CNS signaling through the vagal afferent nerves



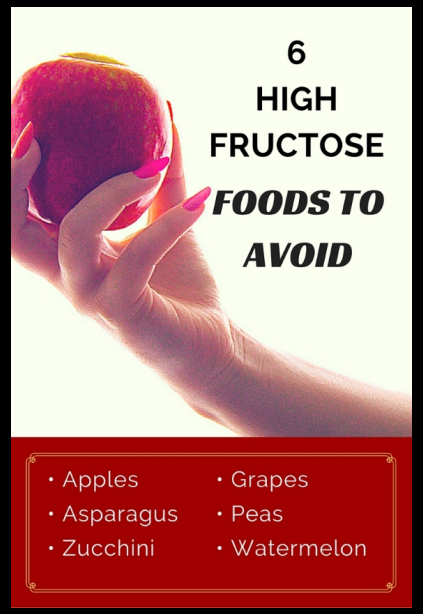
Gershon, M. *The Second Brain: The Scientific Basis of Gut Instinct*. 1998

Gut Neuroendocrine and Systemic Inflammation



- 95% of the serotonin in the body is in the GI tract and not the brain
- Gut signaling arises from gut microflora, serotonin producing enterochromaffin cells and localized inflammation
- Integrative modalities focus on the root causes of individual imbalances to affect diet, inflammation, gut microflora, infection, stress, and mood

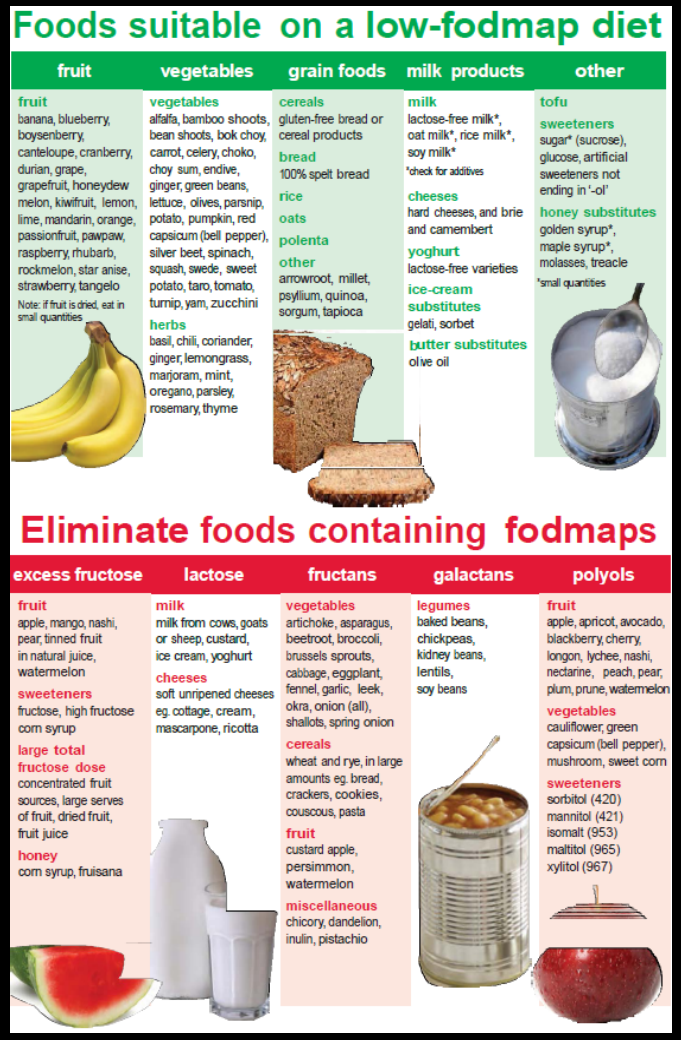
Food Sensitivities and Allergies



- Gluten sensitivity and celiac disease
  - 4-5% of people with IBS have celiac disease
  - 4 fold higher than those w/o IBS
- Dairy – lactose Intolerance
  - 25% of adults (gen. pop.)
  - 35-40% of people with IBS
- Fructose and sorbitol intolerance –similar rates

FODMAP Diet Strategy

- Fermentable carbohydrates
  - **F**oods with
  - **O**ligosaccharides,
  - **D**isaccharides,
  - **M**onosaccharides
  - **a**nd
  - **P**olyols



- Extension of the idea to avoid simple sugars
- Fermentable substrates act as prebiotics and stimulate bacterial growth and gas production
- i.e., Apples, pears, dried fruit, sugar alcohols, mushrooms, avocado, milk, cheese, wheat, rye, onions, artichokes, and inulin

Elimination Diet – 2 Options

- Empiric trial on the patient's part
- Gold standard
  - Remove all 'Sinister Seven' from diet for at least 7 days, better 2 weeks
  - Reintroduce one food at a time and monitor symptoms
  - Very challenging
- Alternative way
    - Remove each food for 7-14 days individually and monitor symptoms

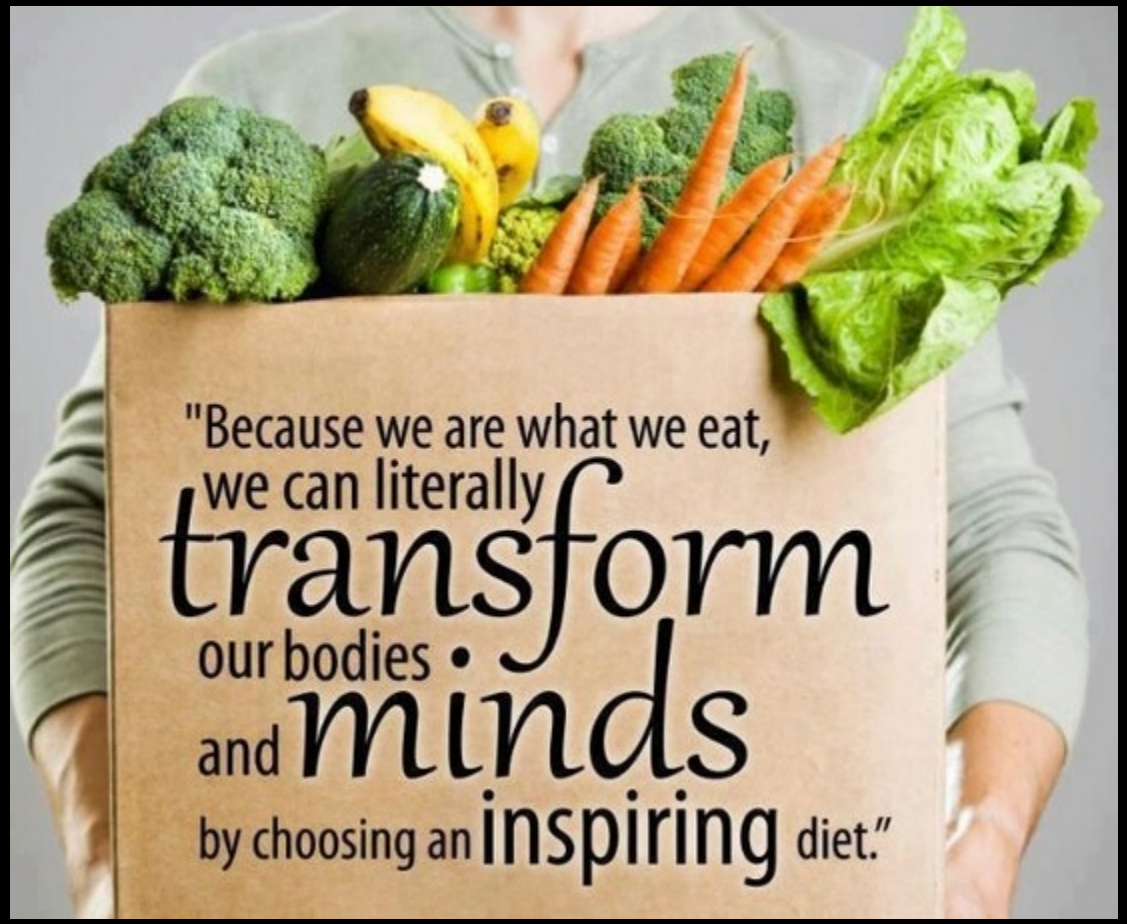
- 'Sinister Seven'
  - Milk (dairy)
  - Wheat
  - Soy
  - Corn
  - Yeast
  - Refined sugar
  - Eggs
  - +/- Artificial flavors/colors
  - +/- Citrus fruits

http://www.fammed.wisc.edu/files/webfm-uploads/documents/outreach/im/handout_elimination_diet_patient.pdf

Anti-Inflammatory Diet

[Rondanelli, 2018; PMID: 29679994]

Food Is Medicine



Phytotherapy – Plant Based Medications

Castor Oil Packs

Peppermint and IBS

Therapy	Trials	NNT
Peppermint Oil	8	2
Hycosamine	22	11
Alosetron	6	7
Tegaserod	8	17
Tricyclics	8	4

Peppermint ESO 0.2ml enteric coated capsule prolongs orocecal transit time and directly inhibits smooth muscle contractions by interacting with the calcium channels

Ford, AC et al. BMJ. 2008; 337: a2313. Effect of fibre, antispasmodics, and peppermint oil in the treatment of irritable bowel syndrome: systematic review and meta-analysis; PMID: 19008265

Carminative Botanicals

- Estimated average prevalence of bloating in IBS is 64%
- No approved pharmaceuticals that specifically treat bloating and/or gas in IBS
- Carminatives are spices and herbs that have been used traditionally to treat bloating and gas

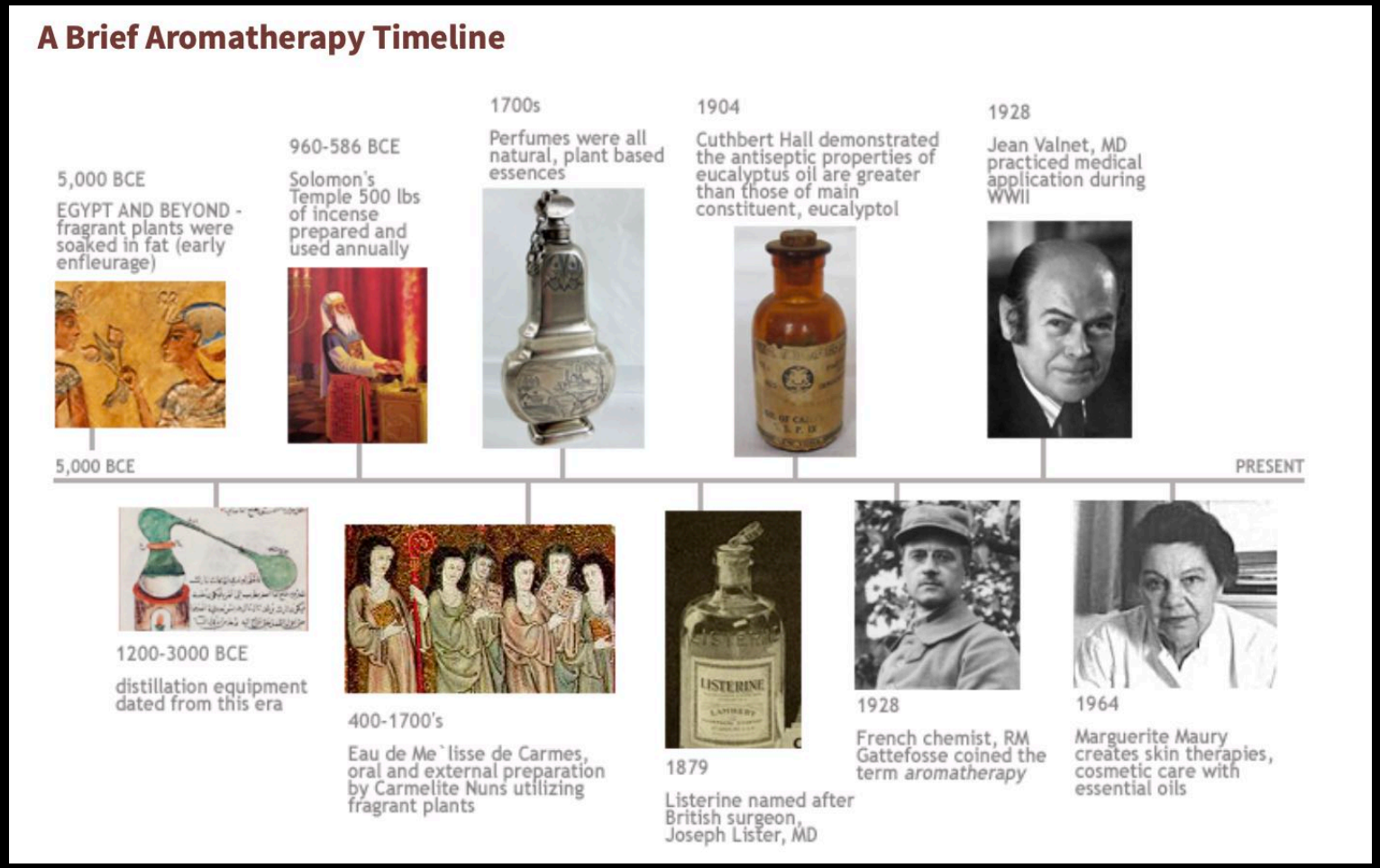
Partial List of Carminatives and Secondary Benefits

- Anise
  - URI, congestion, cough
- Basil
  - Anti-inflammatory
- Caraway
  - Slows GI transit time
- Catmint
  - Nervine relaxant
- Cinnamon
  - Reduces insulin resistance
- Dill
  - Lactogogue
- Fennel
  - URI, congestion, cough
- Ginger
  - Prokinetic, antiemetic, 5-HT3 antagonist
- Lemon balm
  - Anxiolytic
- Peppermint
  - Slows GI transit time
- Sage
  - Hot flashes, sore throats
- Thyme
  - Cough, colds, congestion

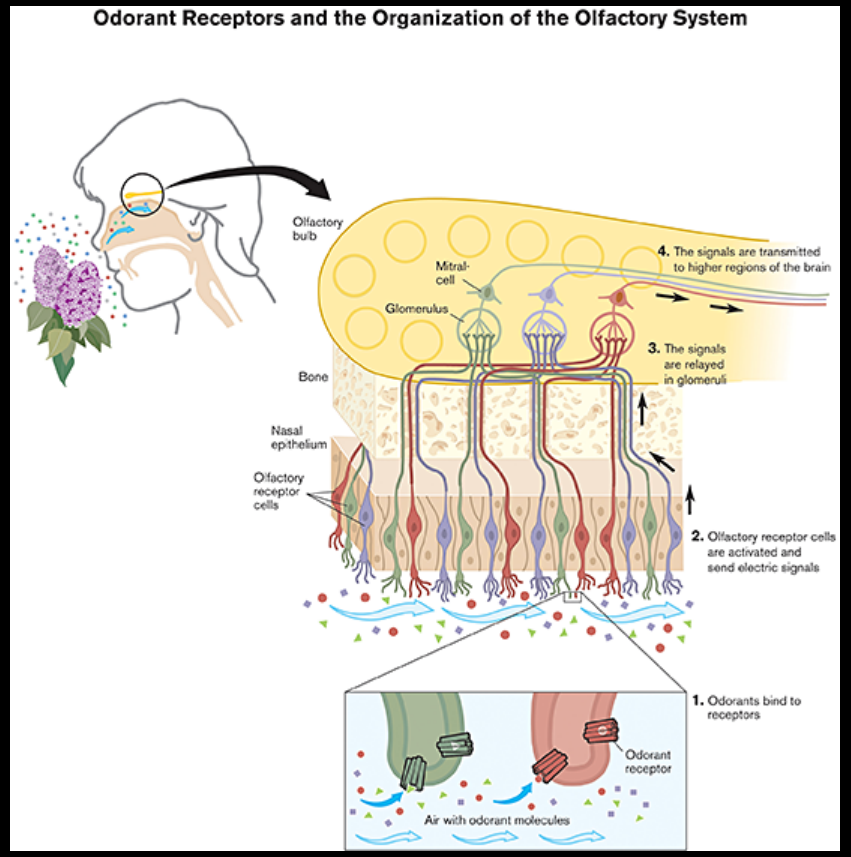
Aromatherapy

Aromatherapy - History

- History of fragrance is as old as aromatic plants and the humans who enjoyed their benefits
- French chemist Dr. Rene-Maurice Gattefosse first coined the term aromatherapy in 1928



Aromatherapy and the Brain



Axel, R., Buck, L. The vivid world of odours. *The Nobel Prize in Physiology or Medicine 2004. Web site. Last accessed 3/6/14.* 2004

Aromatherapy Research

- Clinical aromatherapy is a goal-directed intervention with an expected clinical outcome
- No studies that have demonstrated harm or adverse reaction of essential oils to a mother or fetus
- Most clinical studies are small; research literature is sparse and disparate
- However, recent clinical trials have evaluated the use of aromatherapy in specific women's health issues including menopausal symptoms, postoperative pain, and dysmenorrhea

Tillett, J The Uses of Aromatherapy in Women's Health; *J Perinat Neonat Nurs Vol. 24, No. 3, pp. 238–245*

Aromatherapy and Anxiety

Author	Study	Conclusions
Sayorwan, W. et al. 2012.	The effects of lavender oil inhalation on emotional states, autonomic nervous system, and brain electrical activity.	Results revealed that lavender oil caused significant decreases of blood pressure, heart rate, and skin temperature, which indicated a decrease of autonomic arousal
Yuk-Lan, et al. J of Alt and Comp Med. 2011.	A Systematic Review on the Anxiolytic Effects of Aromatherapy in People with Anxiety Symptoms	Results were based on 16 randomized controlled trials examining the anxiolytic effects of aromatherapy among people with anxiety symptoms. Most of the studies indicated positive effects to quell anxiety. No adverse events were reported

Aromatherapy Studies: Clinical Uses

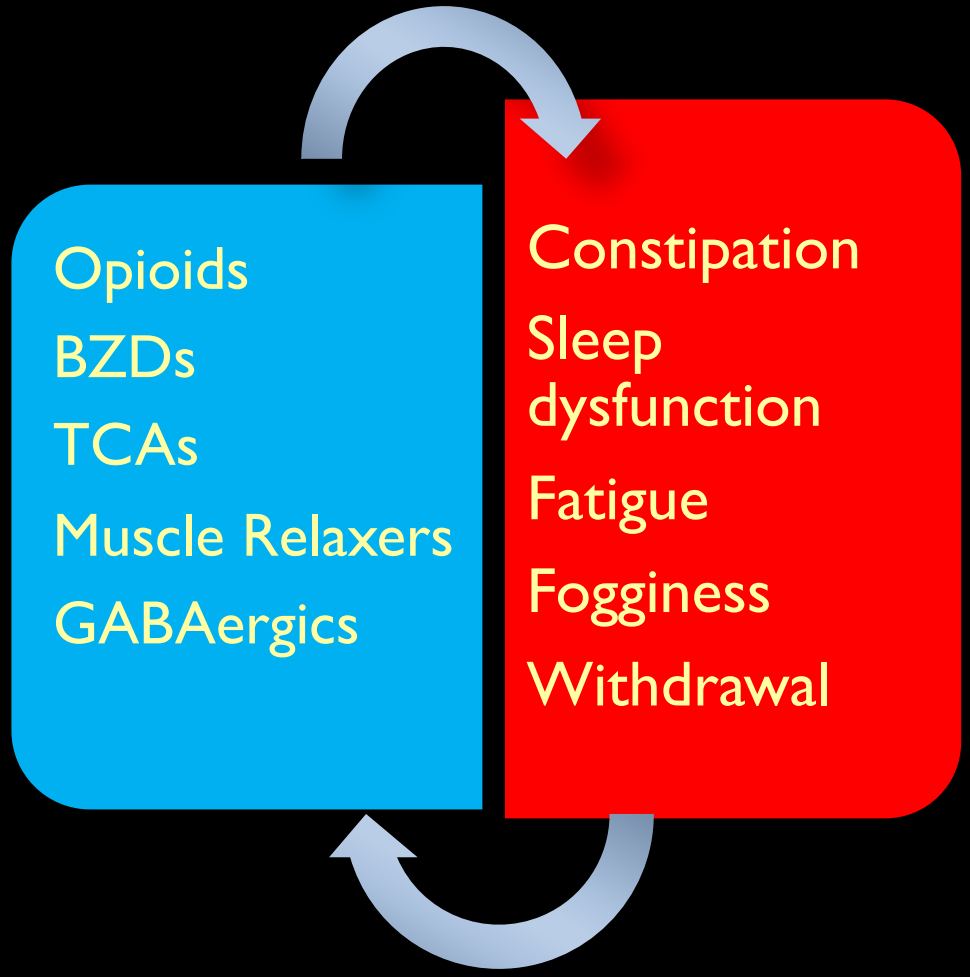
Author	Study	Conclusions
Johnson, et al. Complementary Therapies in Medicine. 2016	To examine the use and effectiveness of essential oil therapeutic interventions on pain, nausea, and anxiety. Oils used were lavender (49.5%), ginger (21.2%), sweet marjoram (12.3%), mandarin (9.4%) and combination (7.6%)	Essential oils generally resulted in significant clinical improvements based on their intended use, although each oil also showed ancillary benefits for other symptoms
Ou, M. et al. J. Obstet. Gynaecol. Res. 2012	Pain relief assessment by aromatic essential oil massage on outpatients with primary dysmenorrhea: a randomized, double-blind clinical trial. Essential oils blended with lavender (*Lavandula officinalis*), clary sage (*Salvia sclarea*) and marjoram (*Origanum majorana*) in a 2:1:1 ratio diluted in unscented cream at 3% concentration for the essential oil group	Only the ESO group showed a significant difference ($P < 0.001$) in with values from 2.4 on pre-intervention decreasing to 1.8 on post-intervention

Traditional Hormonal & Surgical Treatments of Dysmenorrhea and Pelvic Pain

Treatment	Endometriosis	Adenomyosis	Fibroids
NSAIDS	+	+	+
Hormonal Suppression of Menstruation	+	+	+
Progestin IUD	+	+ if heavy bleeding	+ if heavy bleeding and uterine size allows
GnRH Agonists	+	+ if heavy bleeding	+ if heavy bleeding and uterine size is large
Surgical Excision	+	-	+ myomectomy
Uterine Artery Embolization	-	-	+
Hysterectomy	+	+	+

Pharmacotherapy Overdone
Dangers of Polypharmacy in Pelvic Pain

Traditional Pharmacotherapy



Common Perpetuating Adverse Effects

Summary Points

- Complex overlapping pelvic pain disorders (COPPD) can be successfully treated with modalities that are beneficial in other forms of chronic pain
- Hormonal manipulations affect the CNS and pain processing, not just the reproductive tract organs
- Multiple integrative treatment modalities are evidence-based and may be recommended with much a lower cost and risk profile to your patients
- Many patients are already using integrative modalities on their own, a clinician who has deeper understanding of these modalities can assist in guiding a patient to the most effective and safest modalities