Holistic Opioid Addiction Prevention: treating chronic pain

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Disclosures

The speaker has no conflicts of interest to disclose

Recognition

- Blake Novoa, DPT: Providence Medical Group
- Claire Horn, DPT: St Peter's Family Medicine
- Steven Stanos, DO: Swedish
- Diane Flynn, MD: Department of Defense
- Michael Nicholas, PhD: University of Syndey
- Ashley Reynolds, RN, DNP student

Objectives

- Identify individuals at risk for opioid use disorder
- Understand and define chronic pain
- Identify tools to prevent opioid use disorder in primary care
- Classify types of pain and associated treatments
- Understand the psychosocial approach to treating pain

Risk Factors for Opiate Use Disorder

- Male sex
- Opioid Use
- Poverty
- Mental Illness
- Family History
- History of physical/emotional abuse
- Age under 65
- Alcohol, tobacco, or other substance abuse history
- Antisocial behavior

J Addict Dis 2011;30:185-94.

Who is at risk for opioid abuse?

- 3-31% of non-cancer chronic pain pts have opioid dependence
  - DSM-IV definition of opioid dependence (vs abuse)
    - includes criteria for loss of control over use and negative health or social consequences
  - ICD-10 definition for opioid dependence
    - includes criteria for tolerance, withdrawal, and craving
  - DSM-V changed opioid use disorder

Voon, P., Karamouzian, M. & Kerr, T. Chronic pain and opioid misuse: a review of reviews. *Subst Abuse Treat Prev Policy* **12**, 36 (2017). https://doi.org/10.1186/s13011-017-0120-7

Author	Population	Number of studies	Rate calculated	Estimate
Minozzi et al. (2012)	Individuals receiving any opioid analgesic for acute or chronic pain from any physical condition	17	Median incidence of dependence	0.5% (Range: 0%–24%)
		17	Median prevalence of dependence	4.5% (Range: 0%–31%)
Morasco et al. (2011)	Chronic non-cancer pain patients, regardless of whether they were prescribed opioids	21	Overall prevalence of current substance use disorder	3–48%
		21	Lifetime prevalence of any substance use disorder	16%–74%
Vowles et al. (2015)	Adults with chronic non-cancer pain (≥3 months) using oral opioids	38	Rate of problematic use	<1%–81%
		29	Rate of misuse	21%–29% (95% CI: 13%–38%)
		1	Rate of abuse	8%
		12	Rate of addiction	8%–12% (95% CI: 3%–17%)
Noble et al. (2008)	Patients treated with opioids for chronic non-cancer pain for at least six months	7	Rate of addiction	0.05% (1 out of 2042 patients)
		2	Rate of abuse	0.43% (3 out of 685 patients)
Kalso et al. (2004)	Adult patients with chronic non-cancer pain in randomized controlled trials comparing opioids versus placebo	15	Rate of addiction	Estimates could not be calculated due to small sample sizes and short follow-up periods
Chou et al. (2015)	Adults with chronic pain prescribed long-term opioid therapy – in primary care	3	Prevalence of abuse	0.6%–8%
			Prevalence of dependence	3%–26%
	Adults with chronic pain prescribed long-term opioid therapy – in pain clinics	7	Prevalence of misuse	8%–16%
			Prevalence of addiction	2%–14%

Who is at risk for opioid abuse?

- In summary, data is inconclusive regarding
  - Age
  - Gender
  - Psychiatric comorbidity
- We should be aware of the risk of dependence and abuse for all patients
- Adverse Childhood Experiences*

*Stein, M. D., Conti, M. T., Kenney, S., Anderson, B. J., Flori, J. N., Risi, M. M., & Bailey, G. L. (2017). Adverse childhood experience effects on opioid use initiation, injection drug use, and overdose among persons with opioid use disorder. *Drug and alcohol dependence*, *179*, 325–329. https://doi.org/10.1016/j.drugalcdep.2017.07.007

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Adverse Childhood Experiences

Prior to your 18th birthday:

1. Did a parent or other adult in the household often or very often… Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?
2. Did a parent or other adult in the household often or very often… Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?
3. Did an adult or person at least 5 years older than you ever… Touch or fondle you or have you touch their body in a sexual way? or Attempt or actually have oral, anal, or vaginal intercourse with you?
4. Did you often or very often feel that … No one in your family loved you or thought you were important or special? or Your family didn't look out for each other, feel close to each other, or support each other?
5. Did you often or very often feel that … You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
6. Were your parents ever separated or divorced?
7. Was your mother or stepmother: Often or very often pushed, grabbed, slapped, or had something thrown at her? or Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
8. Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?
9. Was a household member depressed or mentally ill, or did a household member attempt suicide?
10. Did a household member go to prison?

The Adverse Childhood Experiences (ACE) Study. **Am J Prev Med. 1998 May;14(4):245-58**. doi: 10.1016/s0749-3797(98)00017-8

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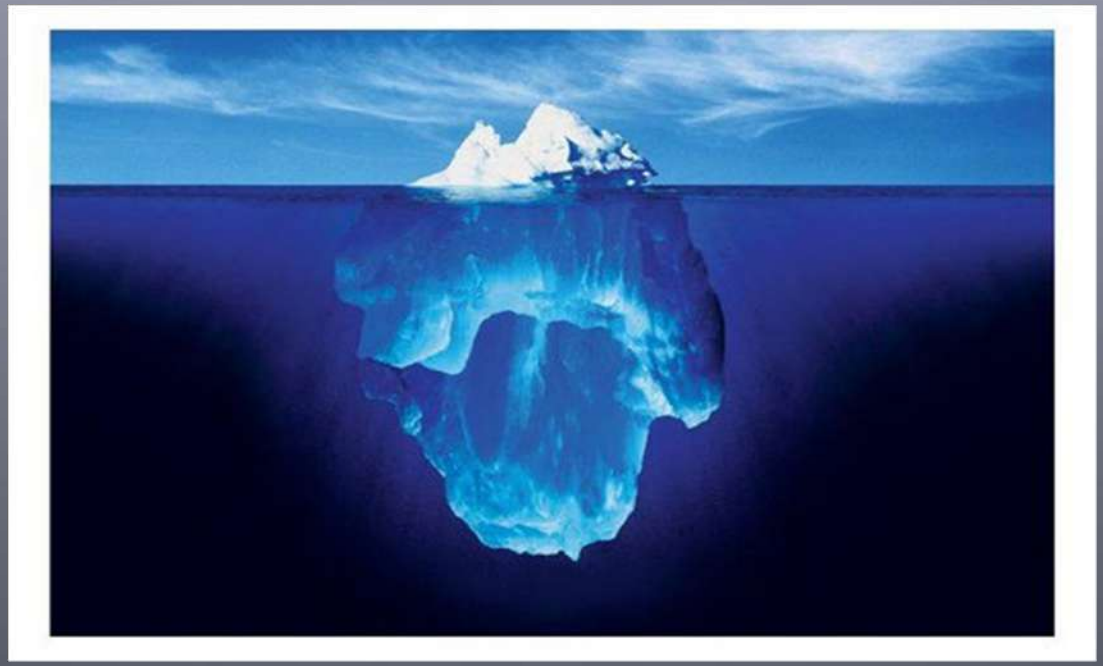
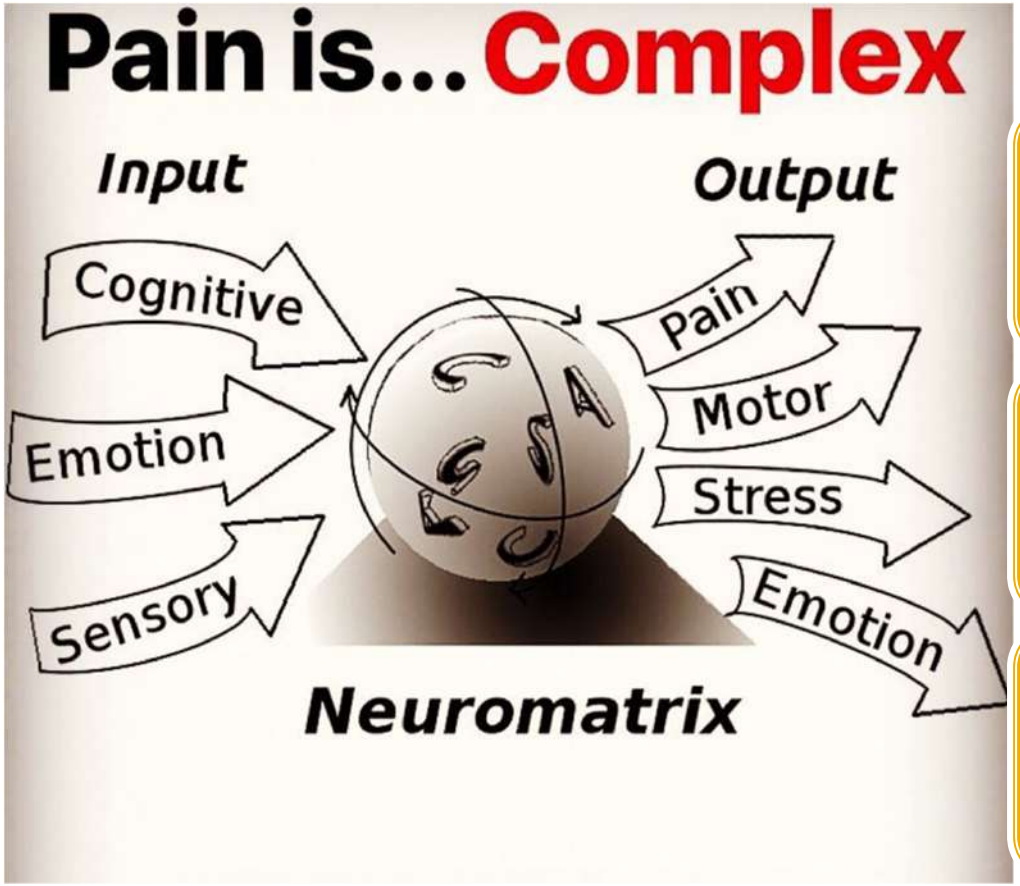
Introduction to chronic pain and opioids

"There is no medicine like hope. No incentive so great, and no tonic so powerful as expectation of something better tomorrow"
-Orison Swett Marsden



What is pain?



A multisystem output, activated by specific pain neuromatrix.

This **neuromatrix** is activated whenever the brain concludes it is in danger and action is required.

Neuromatrix theory**:** perception of painful **stimuli** does not result from the brain's passive registration of tissue trauma, but from its active generation of **subjective experiences** through a network of neurons (neuromatrix)

ButlerD, Moseley, L Explain Pain, 2003; Melzack, 1990

IASP definition (updated 2020)

"An unpleasant sensory and emotional experience associated with actual or POTENTIAL tissue damage, or described in terms of such damage"

- Pain is always a personal experience that is influenced to varying degrees by biological, psychological, and social factors.
- Pain and nociception are different phenomena. Pain cannot be inferred solely from activity in sensory neurons.
- Through their life experiences, individuals learn the concept of pain.
- A person's report of an experience as pain should be respected.
- Although pain usually serves an adaptive role, it may have adverse effects on function and social and psychological well-being.
- Verbal description is only one of several behaviors to express pain; inability to communicate does not negate the possibility that a human or a nonhuman animal experiences pain.

https://www.iasp-pain.org/publications/iasp-news/iasp-announces-revised-definition-of-pain/

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Vital Statistics
Chronic Pain in Adults USA

(1) Some days-A little pain 54,1 million = 23,9 %

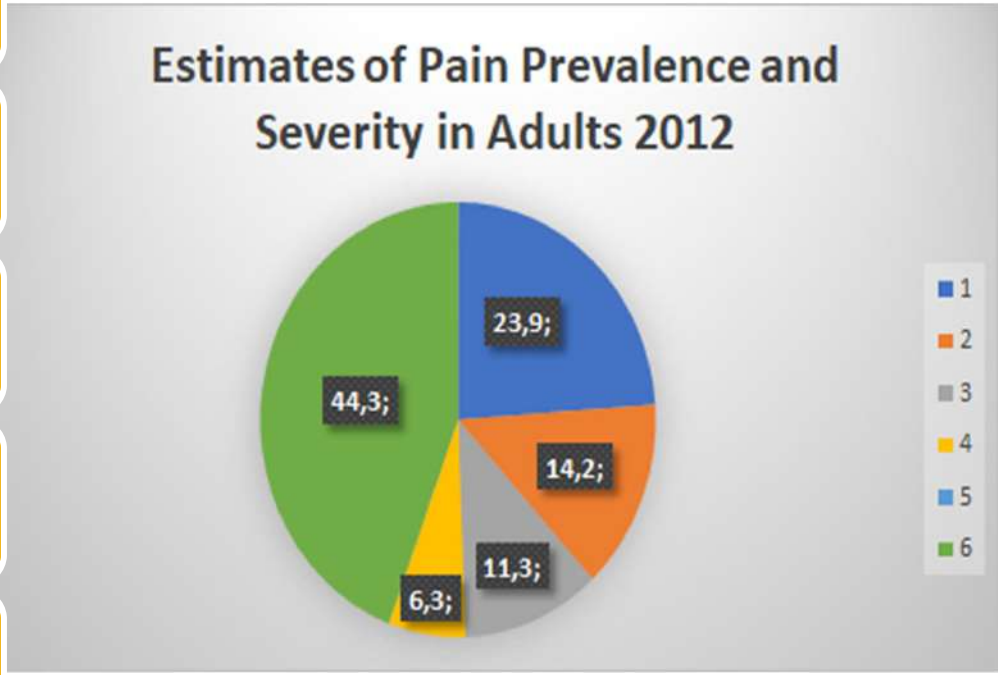
(2) Some days Between a little and a lot = 32,2 million 14,2%

(3) Most every day Between a little and a lot = 25,4 million 11,3%

(4) A lot of pain most or every day = 14,4 million 6,3%

(5) Some pain over the last 3 months = 126.1 million, 23,9%

(6) *Suffering* from chronic pain = 25.3 million, 44,3%



LouwA, 4neuroscience education approach to manual therapy. Journal of Manual and Manipulative Therapy. 2017;1:160-168.

Nahin, RL. Estimates of Pain Prevalence and Severity in Adults: United States, 2012. Journal of Pain, Vol (16): 8 2015: 769-780

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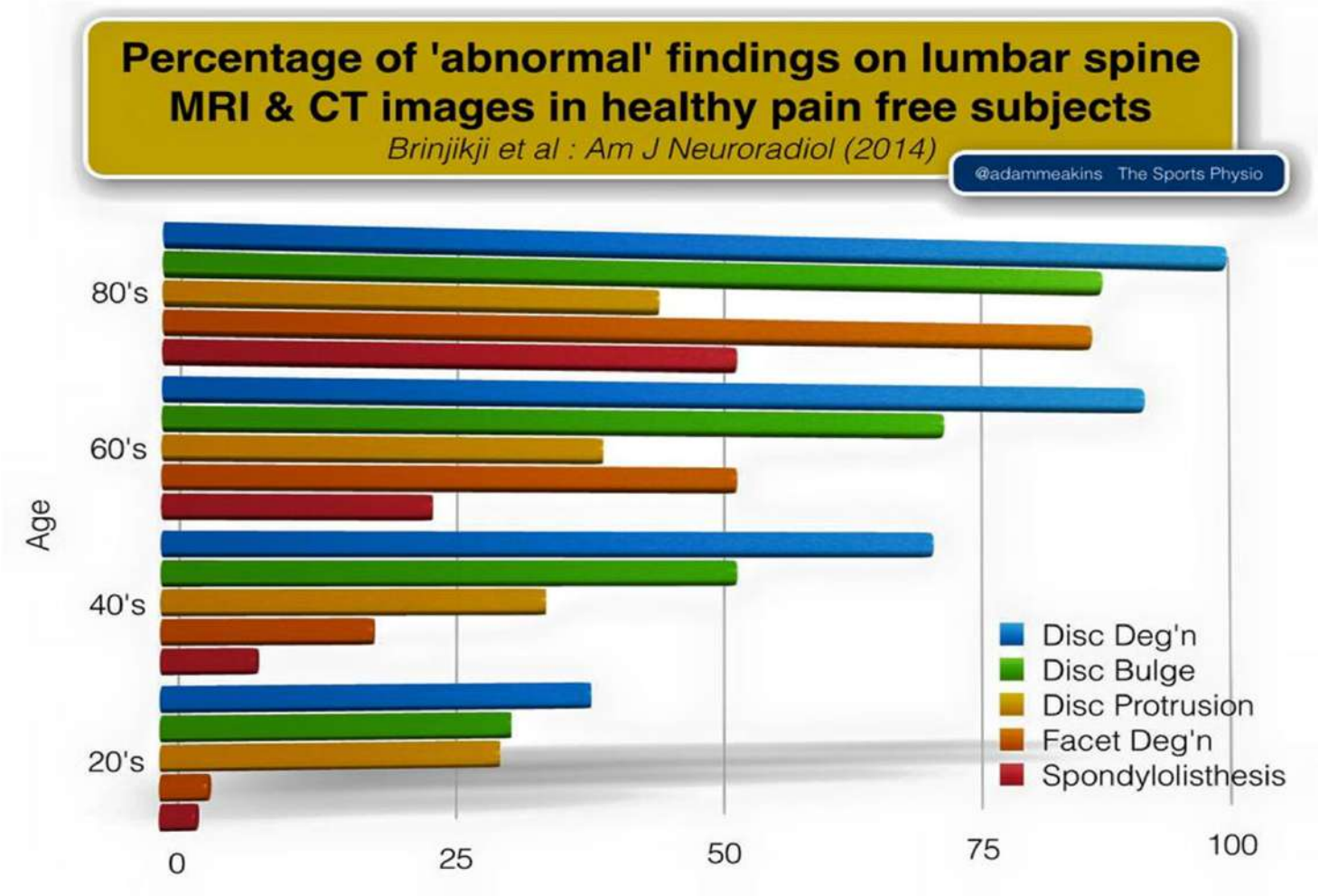
Understanding - Tissue damage does NOT always mean Pain



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The Opioid Crisis

Mortality related to commonly prescribed opioids has more than tripled between 2000 and 2015 (CDC, 2016a)

PCPs prescribe approximately 50% of dispensed opioids (Daubresse, 2013)

Despite being at the forefront, PCPs are ill equipped to treat CNCP (Cheatle & Barker, 2014)

Patients are unlikely to be successful in tapering opioids without alternative coping mechanisms for pain control (Berna et al., 2015)

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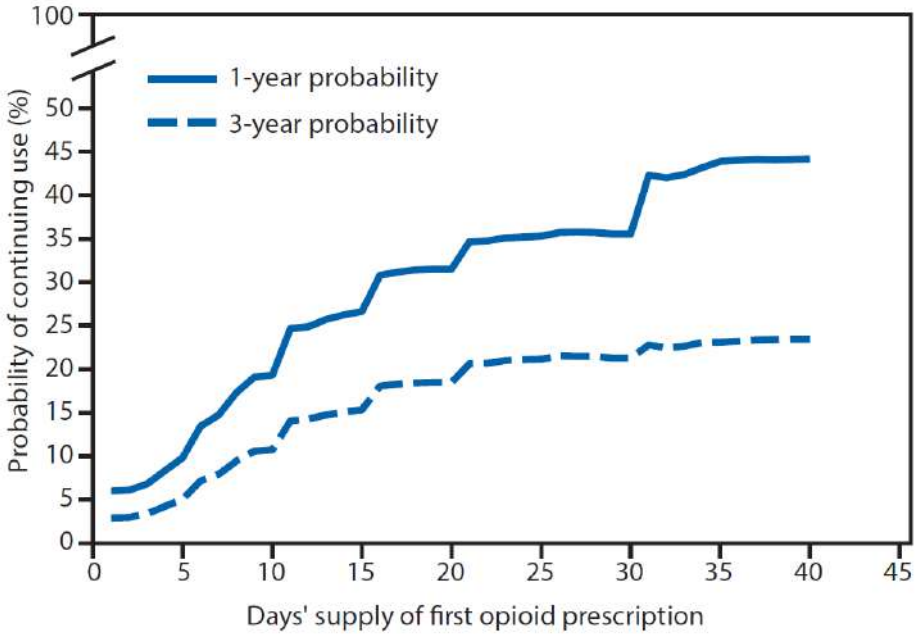
Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Weekly / Vol. 66 / No. 10
March 17, 2017

Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015

Anuj Shah[1]; Corey J. Hayes, PharmD[1,2]; Bradley C. Martin, PharmD, PhD[1]

FIGURE 1. One- and 3-year probabilities of continued opioid use among opioid-naïve patients, by number of days' supply* of the first opioid prescription — United States, 2006–2015



What is added by this report?

In a representative sample of opioid naïve, cancer-free adults who received a prescription for opioid pain relievers, the likelihood of chronic opioid use increased with each additional day of medication supplied starting with the third day, with the sharpest increases in chronic opioid use observed after the fifth and thirty-first day on therapy, a second prescription or refill, 700 morphine milligram equivalents cumulative dose, and an initial 10- or 30-day supply. The highest probability of continued opioid use at 1 and 3 years was observed among patients who started on a long-acting opioid followed by patients who started on tramadol.

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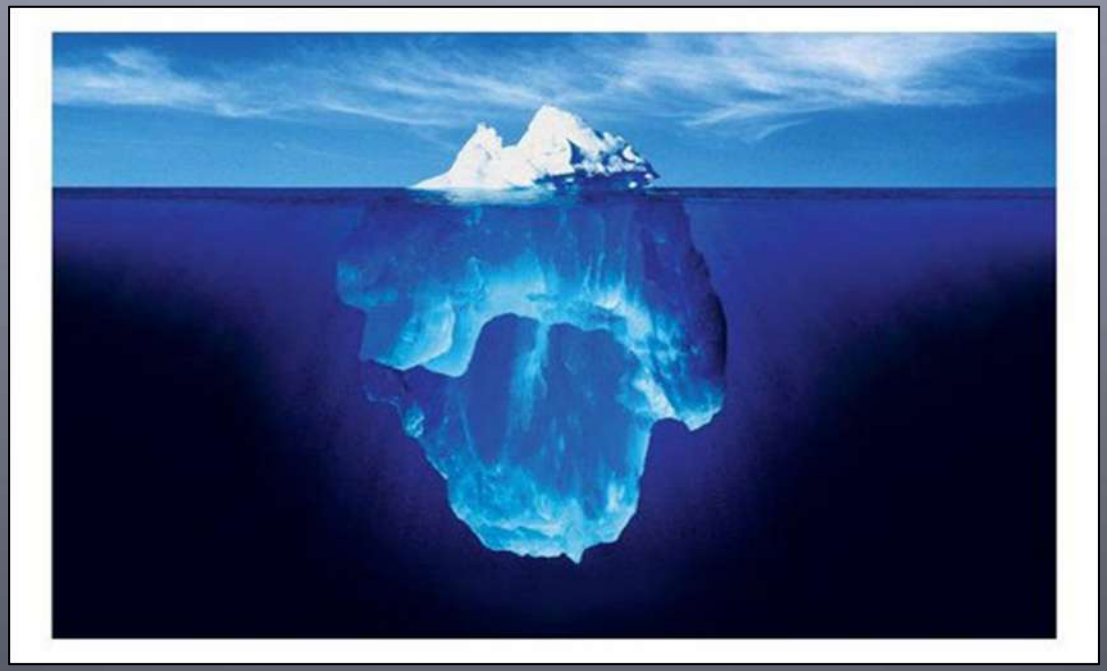
Prevention of Opioid Use Disorder

"It's so hard to forget pain, but it's even harder to remember sweetness. We have no scar to show for happiness. We learn so little from peace."
— **Chuck Palahniuk, Diary**



Prevention

Involve mental health including psychiatry

Screening

- High, medium, and low risk categories
- Monitoring
  - UDS
  - PMP
  - Pill counts
- Dose limitations

Low tolerance for MAT therapy

Tobacco use: nearly 1/3 of opioid users were smokers first

Smokers under age 14 are much more likely to use opioids

Volkow ND, Jones EB, Einstein EB, Wargo EM 2019; Vashishtha, D., Mittal, M.L. & Werb, D 2017; Rajabi A, Dehghani M, Shojaei A, Farjam M, Motevalian SA 2019

Assess the Risks

- PHQ-9
- GAD-7
- Opioid Risk Tool
- SOAPP-R
- SBIRT
- Pain Castrophizing Scale
- Pain Self-Efficacy Scale

Post Traumatic Stress Disorder (PTSD)

PTSD is diagnosed when there is a traumatic event, and persistent:

- Intrusion Symptoms
  - Flashbacks, nightmares
- Avoidance of thoughts, activities that trigger traumatic memories
- Negative changes in thoughts and mood
- Changes in arousal and reactivity
  - Hypervigilance, exaggerated startle response

Screening for PTSD

Screening tools

- PC- PTSD: Primary Care PTSD Screen
- PCL: PTSD Checklist
- PTSD Brief Screen
- Short Screening Scale for DSM IV PTSD

DoD/VA Guidelines (2020)

#RxSummit

Opioid Risk Tool (ORT)

Mark each box that applies		Female	Male
1.	**Family Hx of substance abuse**		
	Alcohol	☐ 1	☐ 3
	Illegal drugs	☐ 2	☐ 3
	Prescription drugs	☐ 4	☐ 4
2.	**Personal Hx of substance abuse**		
	Alcohol	☐ 3	☐ 3
	Illegal drugs	☐ 4	☐ 4
	Prescription drugs	☐ 5	☐ 5
3.	**Age between 16 & 45 yrs**	☐ 1	☐ 1
4.	**Hx of preadolescent sexual abuse**	☐ 3	☐ 0
5.	**Psychologic disease**		
	ADD, OCD, bipolar, schizophrenia	☐ 2	☐ 2
	Depression	☐ 1	☐ 1
	Scoring Totals:		

Administer

On initial visit

Prior to opioid therapy

Scoring *(risk)*

0-3: low

4-7: moderate

≥8: high

Webster LR, Webster RM. *Pain Med.* 2005;6:432-42.

Tools for Evaluating Addiction Risk

Tool	# of Items	Administered By	Comments
Patients considered for long-term opioid therapy			
ORT	5	Patient	Predicts aberrant or drug-related behaviors
SOAPP	24, 14, 5	Patient	Evaluates risk of long-term opioid therapy in those with chronic pain
DIRE	8	Clinician	Determines risk of long-term opioid use in those with chronic pain; evaluates regimen efficacy
Characterize misuse once opioid treatment begins			
PMQ	26	Patient	Evaluates risk of opioid misuse in those with chronic pain
COMM	17	Patient	Identifies aberrant behaviors; for those with chronic pain already on opioids
PDUQ	31	Clinician	Evaluates and predicts opioid misuse in those with chronic pain
Not specific to pain populations			
CAGE-AID	4	Clinician	Screens for substance dependence; modified CAGE questionnaire
RAFFT	5	Patient	Can be used for alcohol, marijuana, or other drug use
DAST	28	Patient	Screens for risky/illicit drug use in adults
SBIRT	Varies	Clinician	Designed to provide universal screening; secondary prevention to detect risky or hazardous substance use before the onset of problems; early intervention; and treatment

CAGE-AID = CAGE Adapted to Include Drugs; COMM = Current Opioid Misuse Measure; DAST = Drug Abuse Screening Test; DIRE = Diagnosis, Intractability, Risk, and Efficacy; ORT = Opioid Risk Tool; PDUQ = Prescription Drug Use Questionnaire; RAFFT = Relax, Alone, Friends, Family, Trouble; SBIRT = Screening, Brief Intervention, and Referral to Treatment; SOAPP = Screener and Opioid Assessment for Patients with Pain.

Discusson

- What screening tools do you use in your practice?

Defining Chronic Pain and Catastrophizing

Pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (IASP, 2012)

Psychological issues cause many people to report pain despite no tissue damage (IASP, 2012)

Pain lasting more than three months, during which time normal healing usually occurs, is considered to be chronic pain (Dowell, Haegerich & Chou, 2016; IASP, 1994)

Catastrophizing is "a cognitive process whereby a person exhibits an exaggerated notion of negativity, assuming the worst outcomes and interpreting even minor problems as major calamities" (Okifuji and Turk, 2012, p. 186)

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Opioid Efficacy in CNCP

There are limited long-term studies looking at >1 year for pain, function, or quality of life

- All extended-release opioids approved for chronic pain based on 12-week efficacy studies

There is no good evidence that opioids are helpful long-term for chronic low back pain

- No evidence of significant functional improvement (at best 20% of patients may show functional improvement), some evidence of worsening function despite dose titration

Low back pain and sciatica in over 16s: assessment and management. NICE guideline. Published: 30 November 2016.
Evidence Based Complement Alternat Med 2012;2012:953139.
The Cochrane database of systematic reviews 2010:Cd006605.
CMAJ 2006;174:1589-94.

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Opioid Efficacy in CNCP

Arthritis

- Short-term flares/exacerbations
- Unwilling to undergo hip arthroplasty

Migraines/Tension Headaches

- Increased frequency of migraines
- Harms > Benefits

Fibromyalgia

- No long-term studies
- Stronger opioids probably do more harm than good
- Tramadol shows some efficacy

Arthritis Care Res 2012 Apr;64(4):465-74. *Headache* 2016;56:1194-1200. *Headache* 2015;55:3-20. *Am Fam Physician* 2011 Feb 1;83(3):271-280. *Ann Rheum Dis* 2017;76:318–328.

PEG Tool (Pain, Enjoyment of Life, General Activity)

- Useful for tracking patient pain levels over time
- Three questions on a 1-10 scale with the average of the 3 individual scores making up the final score
  - What number bests describes your pain on average in the past week?
  - What number best describes how, during the past week, pain has interfered with your employment of life?
  - What number best describes how, during the past week, pain has interfered with your general activity?

J Gen Intern Med 2009, 24(6):733–8.

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Classification of pain

How to assess

Understanding Pain Definitions

- **Acute Pain** - present < 3 months
- **Chronic Pain - lasting beyond *normal* healing time**
- **Nociceptive Pain – muscle tendon, ligament, joints**
  - **Somatic pain**
    - Somatic and referred pain typically come from facet joints, nerves, discs
  - Usually affected by movement, postures or positions ie, mechanical in nature

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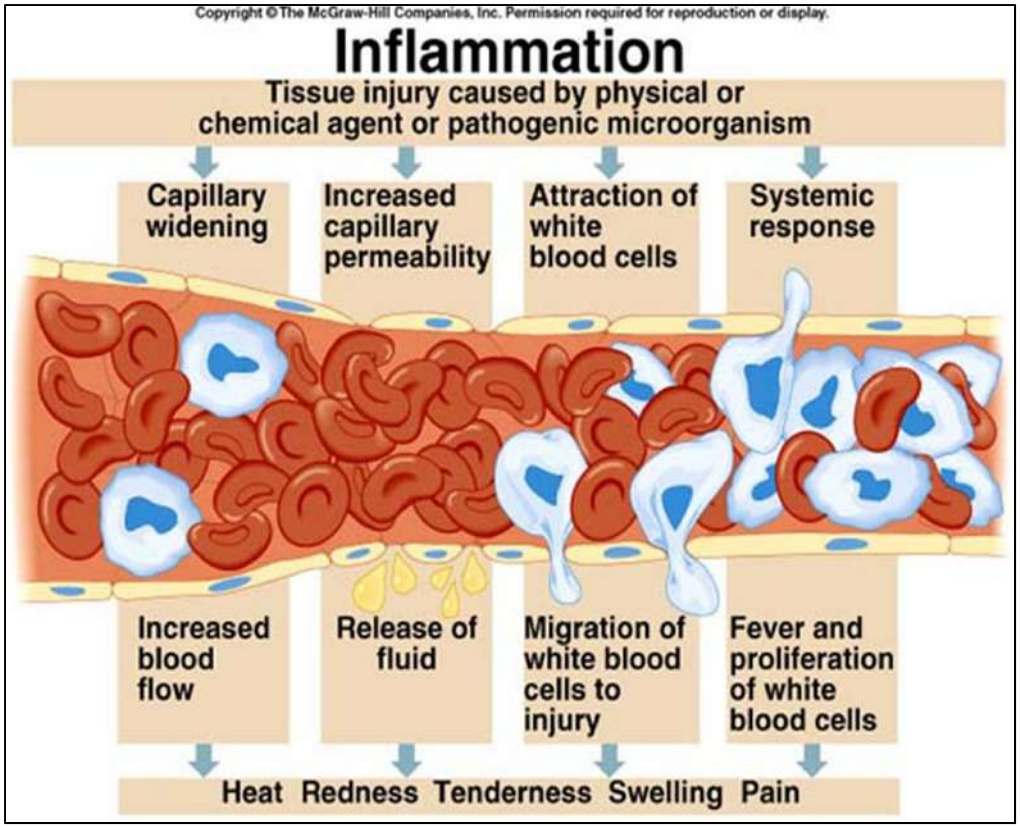
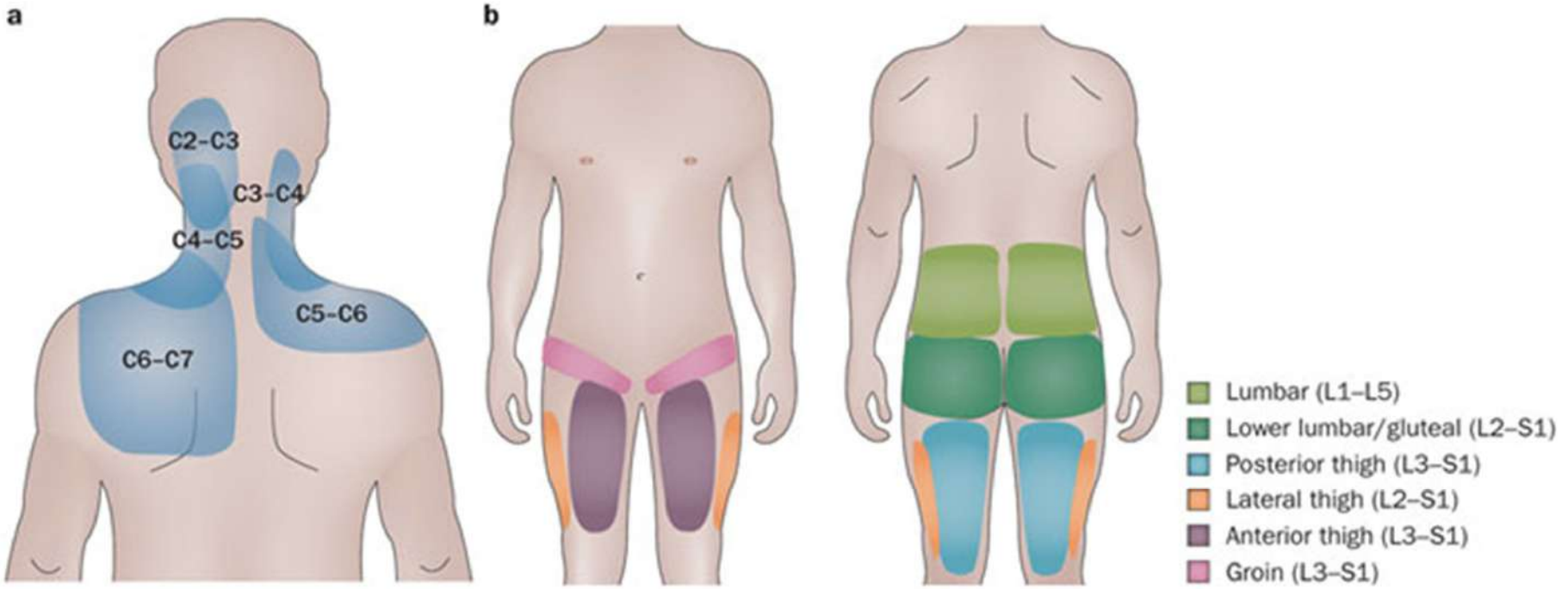
Understanding Tissue Healing

- Acute inflammation = 72 hours
- Regeneration = 6 to 8 weeks
- Remodelling = 6 - 12 months
- Is this truly the end of healing ?



Somatic and Referred Pain



Cervical and lumbar normal facet joint referral patterns

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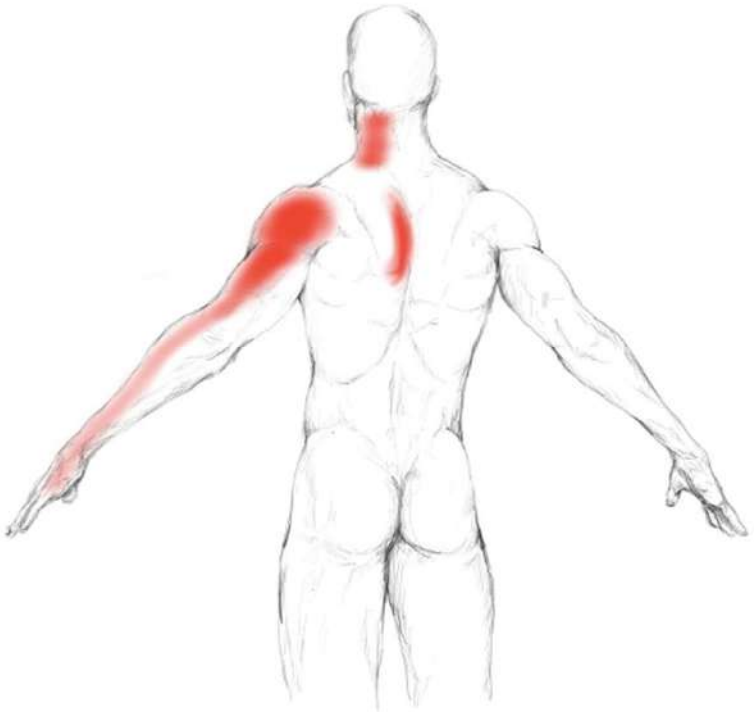
Somatic and Referred Pain

- Usually dull, achy and non-specific but can be very localized when acute
- Usually related to muscle, tendon, ligaments or joints
- Usually related to movements/postures or positions

"Pay attention to what you are feeling and when-this can help to better understand your pain!"



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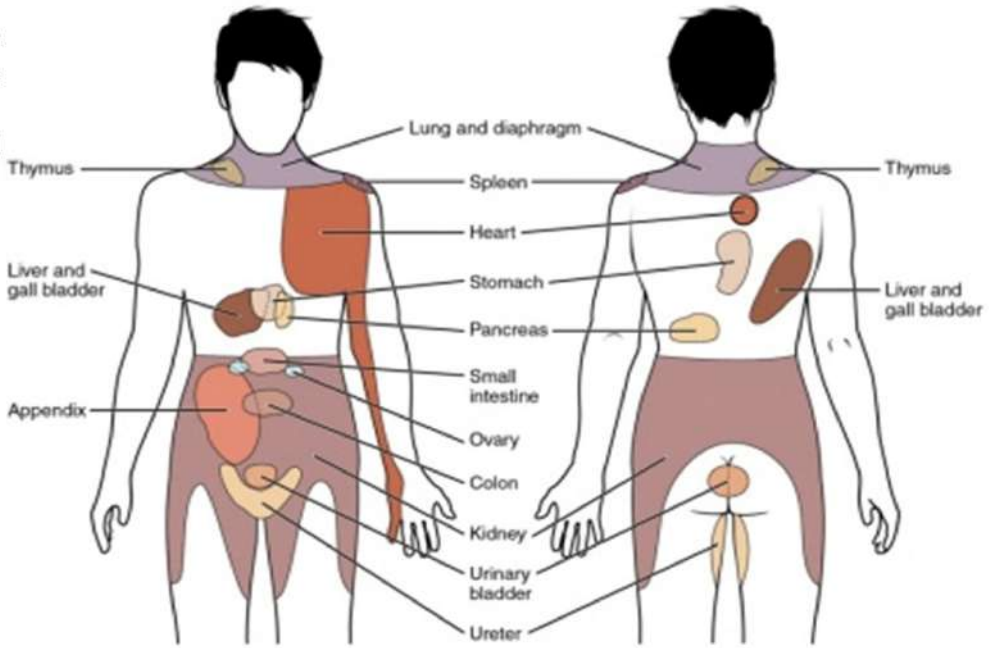
Understanding Pain Definitions

- **Autoimmune Pain**
  from a disease that
  attacks and degrades our ov
  tissues-especially joints/car
  (ex. Gout, RA, psoriasis, lup
  diabetes

- **Visceral Pain**
  referred from an organ

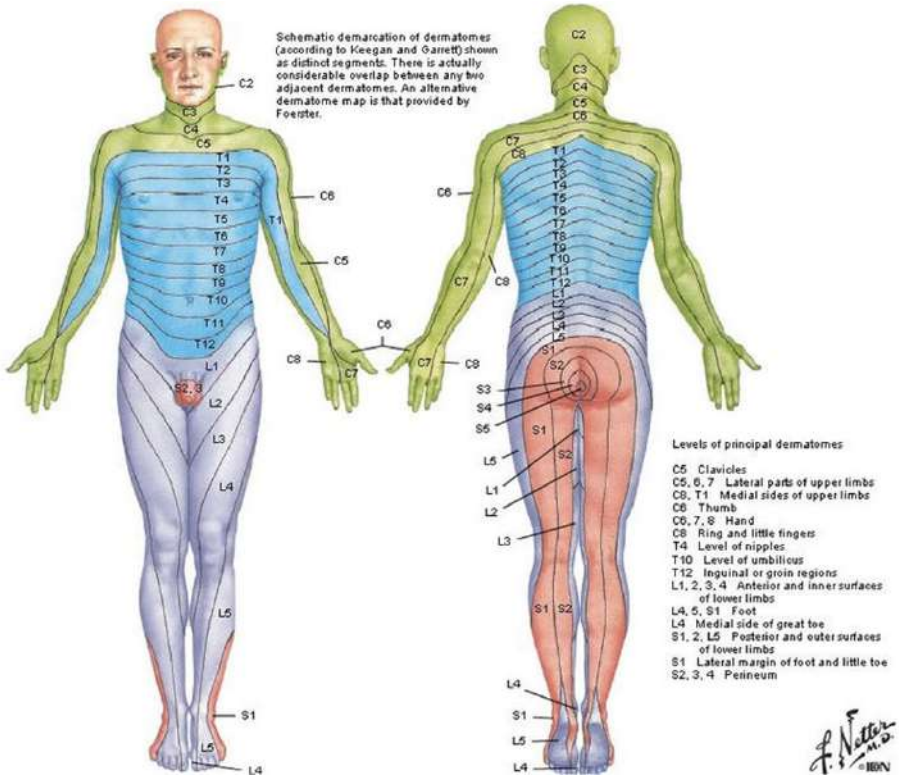
- **Cancer-Related Pain**
  A special case…



Understanding Pain Definitions

Radicular Pain, Radiculopathy, Neuropathy

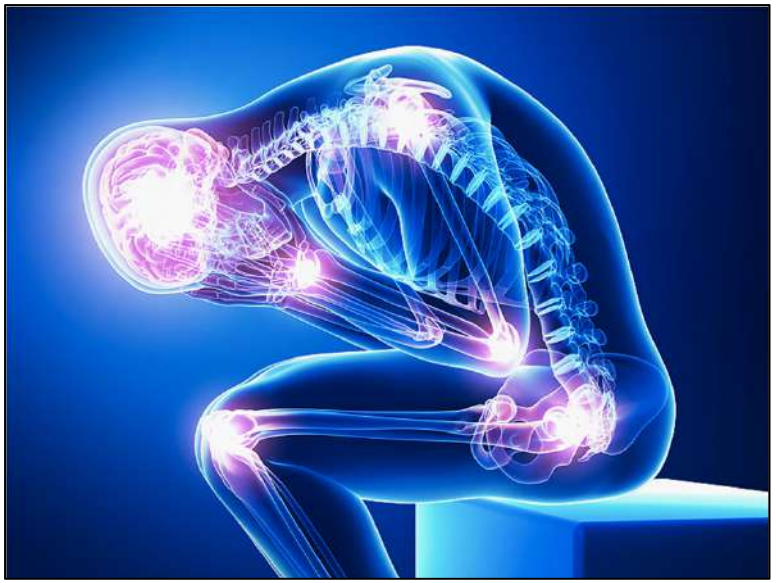
- Electric-like, shooting pain in a specific pattern
- May be present with numbness/tingling or weakness.
- A nerve can be involved even though there is no pain
- Usually related to stretch or compression of a nerve
- May be related to a degenerative condition involving a nerve
    - Ex: diabetic peripheral neuropathy



Understanding Pain Definitions

Centrally-Mediated Pain

- Occurs when pain has been present for extended periods "**CHRONIC PAIN**"
- Caused by increased sensitivity of nervous system **PROTECTIVE**
- Pain that doesn't follow normal pain behavior pattern **MALADAPTIVE**
- Vague, nonspecific pain
- Affected by environmental factors (temperature, stress/anxiety, etc.)
- Affected by **MANY** systems
- Consider the mechanisms involved in producing pain and therefore in addressing or treating pain



BRAIN - SPINAL CORD - PERIPHERAL NERVES

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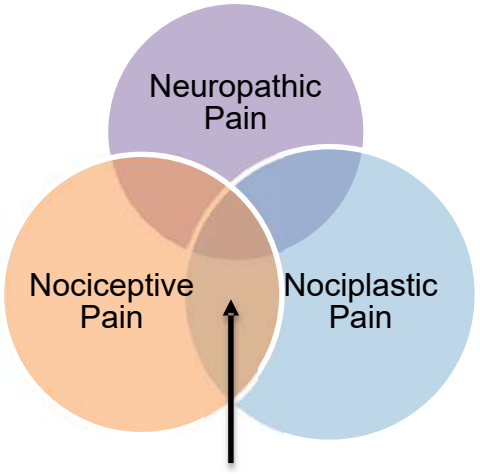
Pain Classification[1]

Predominantly **Neuropathic**

- Postherpetic neuralgia
- Painful diabetic peripheral neurop
- Lumbar or cervical radiculopathy
- Stenosis
- Tumor-related neuropathy
- Chemotherapy-induced neuropa
- Small fiber neuropathy
- Persistent postoperative pain
- Multiple sclerosis pain
- Post-stroke pain
- Pain associated with spinal cord injury

Predominantly **Nociceptive**

- Osteoarthritis
- Rheumatoid arthritis
- Tendonitis, bursitis
- Ankylosing spondylitis
- Gout
- Neck and back pain with structural pathology
- Tumor-related nociceptive pain
- Sickle-cell disease
- Inflammatory bowel disease



Mixed pain conditions are frequently associated with multiple pain pathophysiologies once pain becomes chronic

Predominantly **Nociplastic**[2]

- Fibromyalgia
- Irritable bowel syndrome
- Tension-type pain
- Interstitial cystitis/pelvic pain syndrome
- Tempo-mandibular join disorder
- Chronic fatigue syndrome
- Restless leg syndrome
- Neck and back pain without structural pathology

1. Adapted from Stanos S, et al. *Postgrad Med* 2016;128(5):502-515.
2. https://www.iasp-pain.org/PublicationsNews/NewsDetail.aspx?ItemNumber=6862

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Chronic Pain Presentations

Predominantly Neuropathic

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International Association for the Study of Pain. Available at https://www.iasppain.org/PublicationsNews/NewsDetail.aspx?ItemNumber=6862. Accessed March 13, 2020.

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"Chronic" pain and the BRAIN

Neurological Changes:

- Neurological "smudging"
- Increased nerve sensitivity=pain is no longer linked specifically to activity

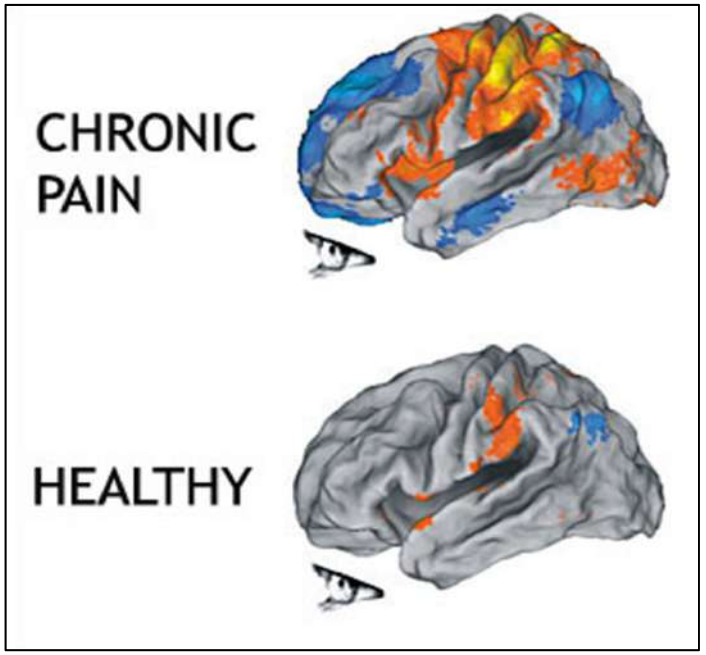
Physical Changes

- Reduced physical activity
- weakness, inflexibility, impaired tolerance for activity

Psychological/Emotional Changes:

- Depression, anxiety, FEAR, loss, grief, hopelessness

A biopsychosocial process



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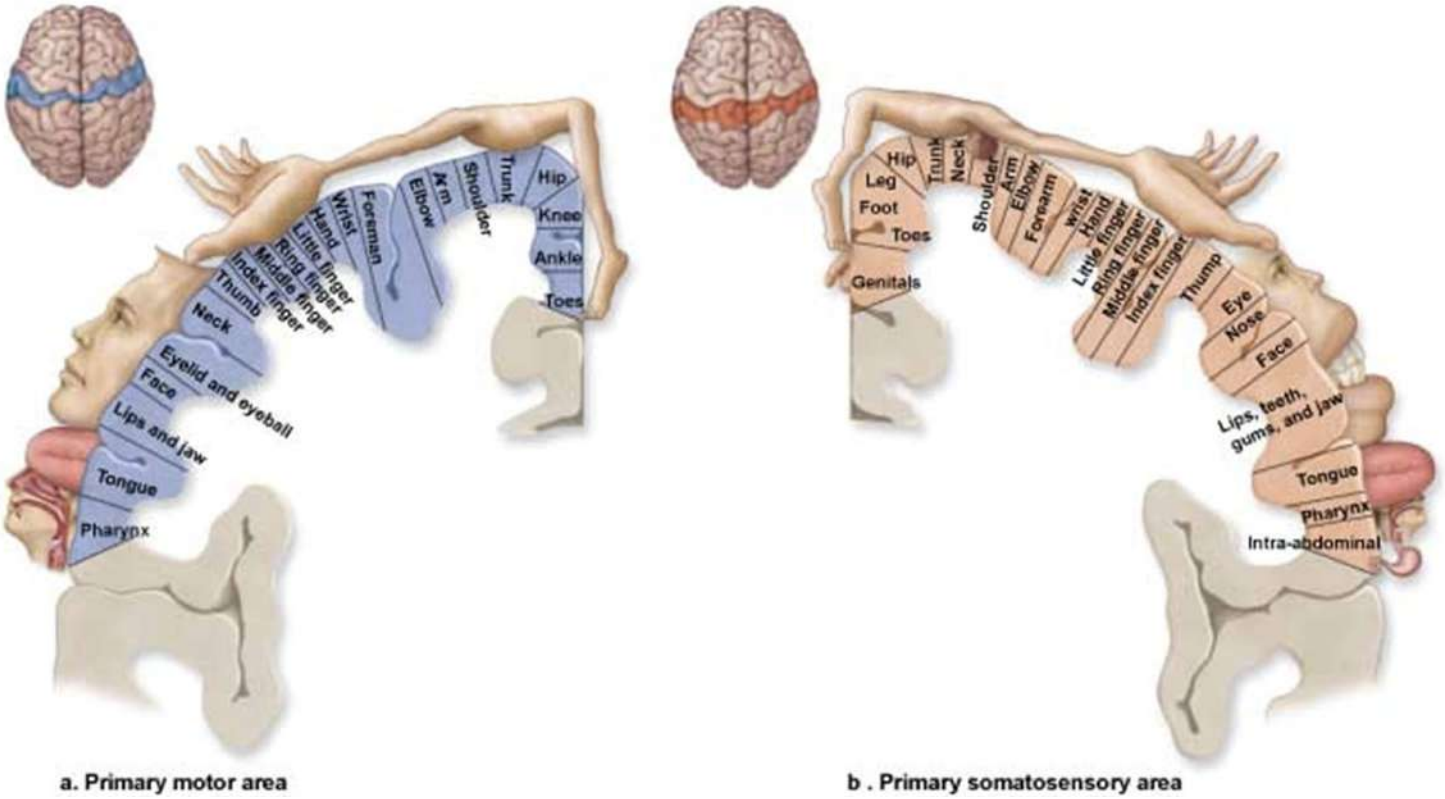
The Homunculus: Smudging OUR Mental Map



a. Primary motor area

b . Primary somatosensory area

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STRETCH

Key Point

- If you don't take care of yourself you cannot successfully take care of others

Don't underestimate the benefit of a good history and thorough physical exam

Physical Exam

- Diagnostic purposes
- Connect with patient
- Reassure patient
- Improve your differential diagnosis
- Set expectations

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Physical Exam Overview

Physical Exam

- Gait
- Motor strength
- Muscle stretch reflexes
- Dural tension testing
- Sacroiliac joint testing
- Myofascial assessment
- Sensory Testing

Pain Behavior

- Grimace
- Groan
- Guarding
- Overreaction
- Inconsistencies
- Give-way weakness
- Shaking
- Equipment
- Cane
- Ice-packs
- Heating pads
- Braces: collars

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Considerations

Somatome

- Field of somatic and autonomic innervation based on embryologic segmental originof somatic tissues

Three basic elements

- ***Dermatome***: cutaneous structures
- 2. ***Myotome*:** skeletal musculature
- 3. ***Sclerotome*:** bones, joints, and ligaments

Inman VT, Saunders J. *J Nerv Ment Dis*1944;99:660-67.

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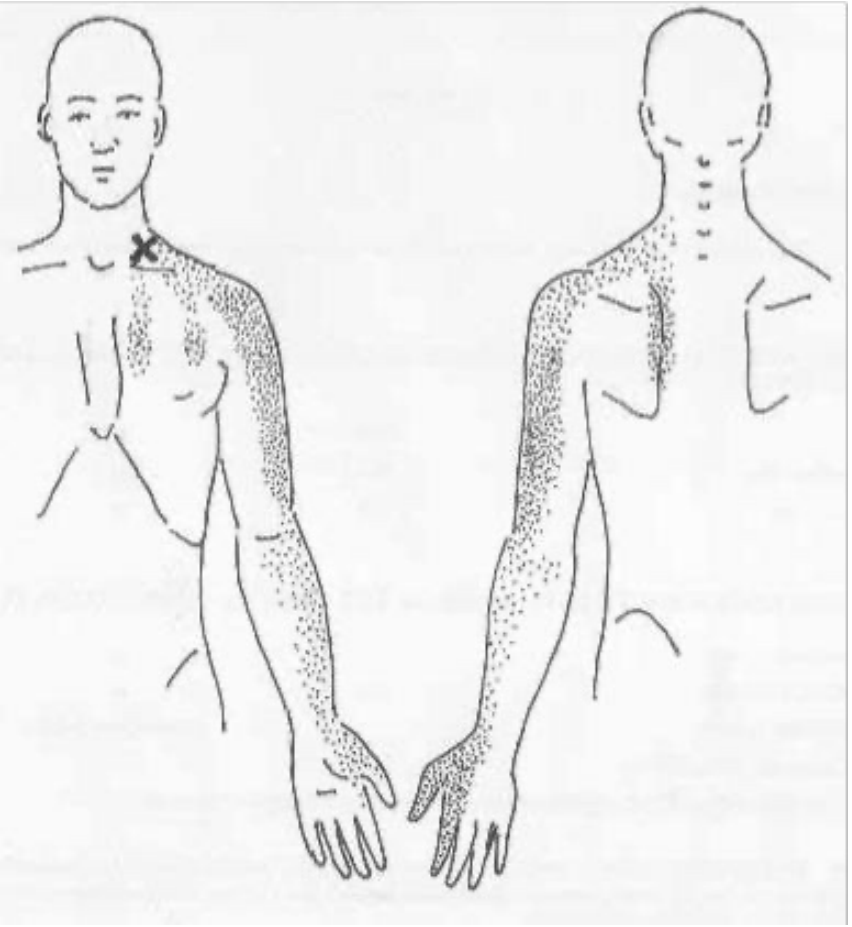
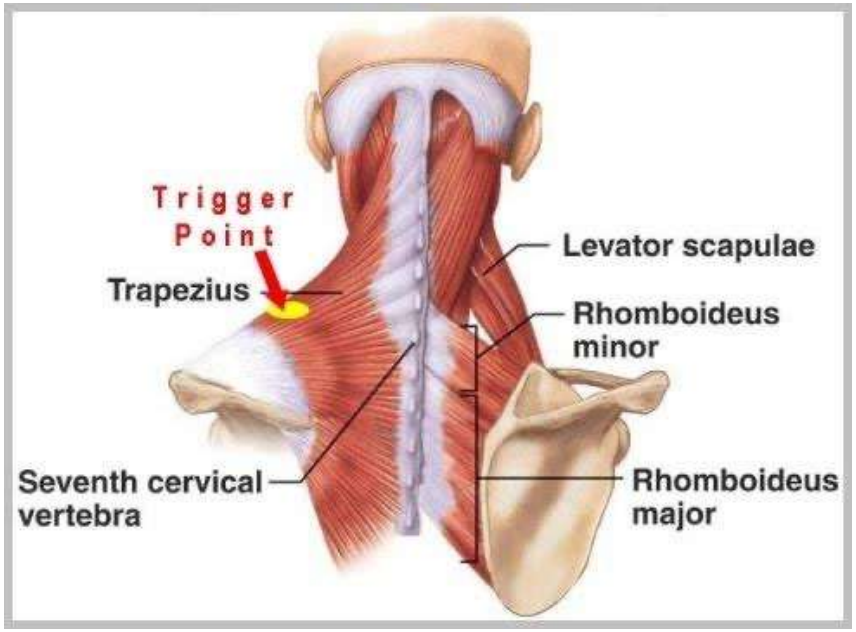
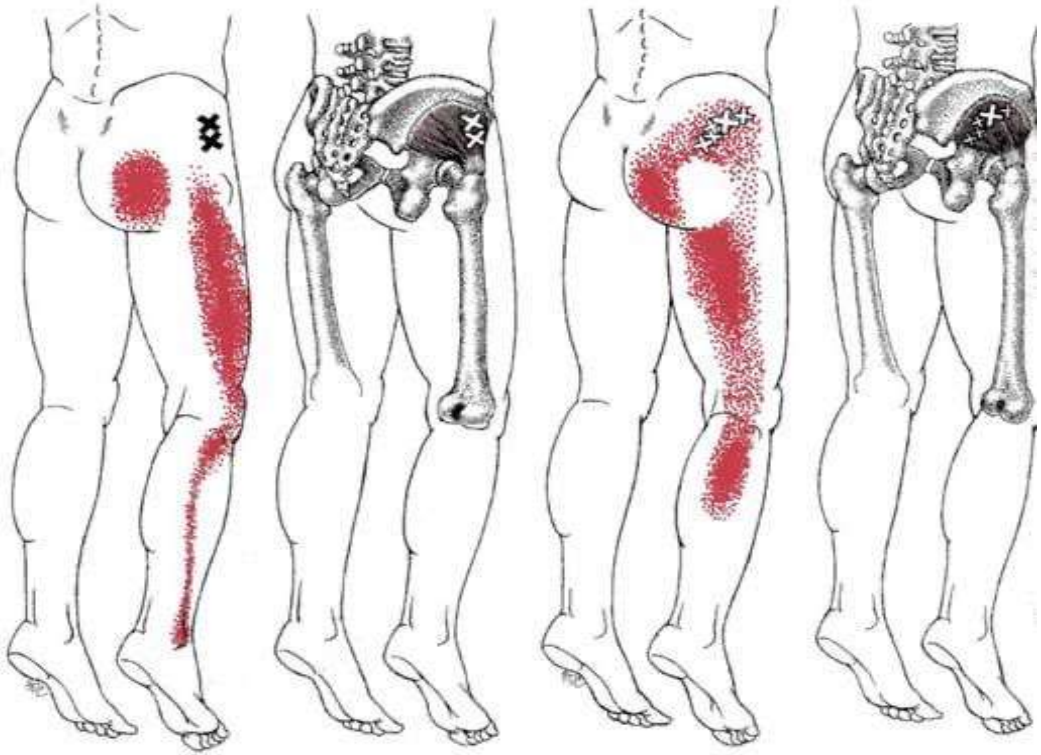
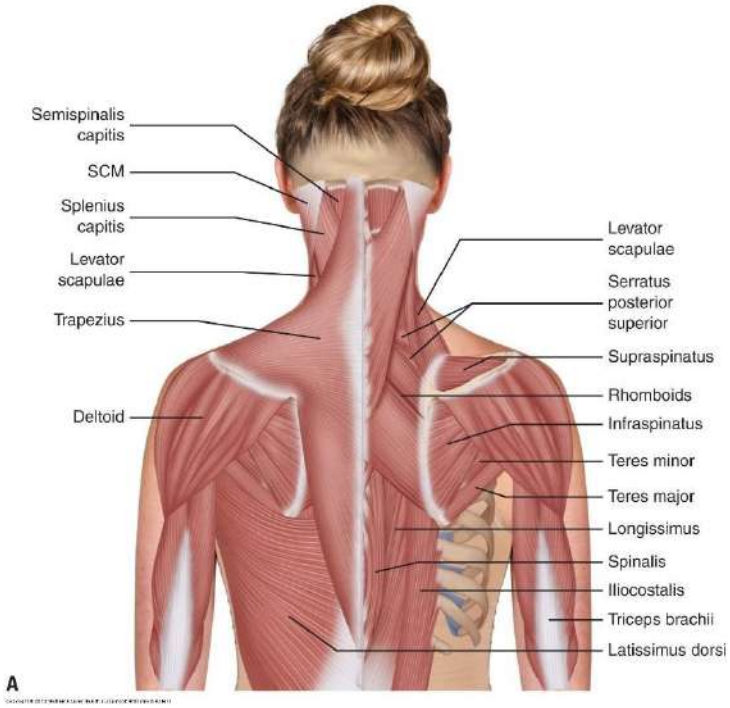
Cervical and Scapular Trigger Points





Myofacial Assessment





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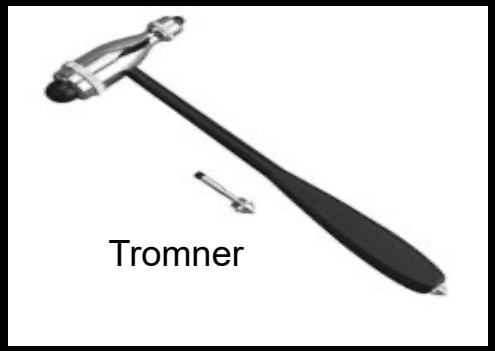
Muscle Stretch Reflexes: Lower

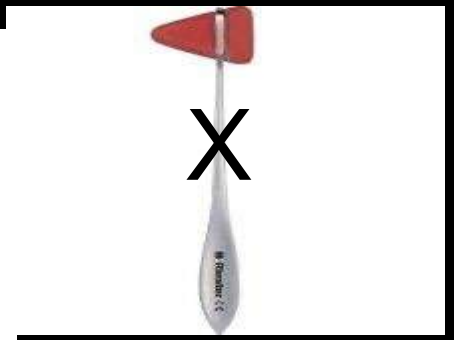
Muscle Stretch Reflexes: Upper

Reflexes: Bigger is Better



Tromner

Buck/



Queen Square

Motor Strength: Root Level

Lower Limb

- Hip Flexors L2-L3
- Knee Extension L3-L4
- Knee Flexion L5-S1
- Ankle Dorsiflex L4-L5
- Gr Toe Exten L5
- Plantar Flex S1S2
- Hip Extension L5-S1

- Upper Limb
- Elbow Flex C5-C6
- Wrist Extension C6-C7
- Elbow Extension C7-C8
- Finger Flexion C8-T1
- Hand Intrinsics T1

LBP: Radiculopathy Screen

Nerve	L4	L5	S1
Pain			
Numbness			
Motor weakness	Knee extension	Dorsiflexion of great toe and foot	Plantarflexion of great toe and foot
Screening exam	Squat and rise	Heel walking	Walking on toes
Reflexes	Patella	Medial Hamstring	Achilles

SWEDISH
Extraordinary care. Extraordinary caring.℠

Dagenais S, et al. Spine J. 2010;10:514-529; Duffy RL. Prim Care. 2010;37:729-741; Kinkade S. Am Fam Physician. 2007;75:1181-1188.

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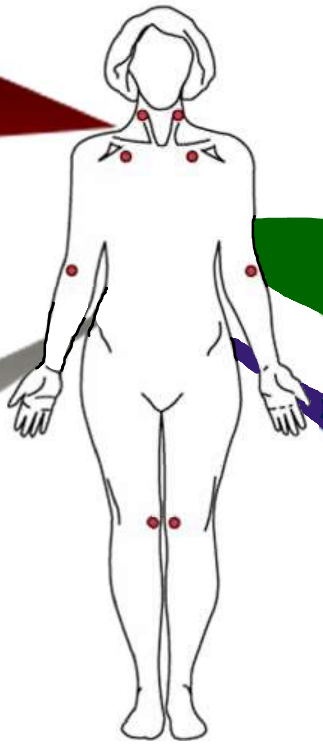
Be Aware:
Clinical Features of Fibromyalgia



WIDESPREAD PAIN

- Chronic, widespread pain is the defining feature of FM
- Patient descriptors of pain include: aching, exhausting, nagging, and hurting

SLEEP DISTURBANCES

- Characterized by nonrestorative sleep and increased awakenings
- Abnormalities in the continuity of sleep and sleep architecture
- Reduced slow-wave sleep
- Abnormal alpha wave intrusion in non-REM sleep

TENDERNESS

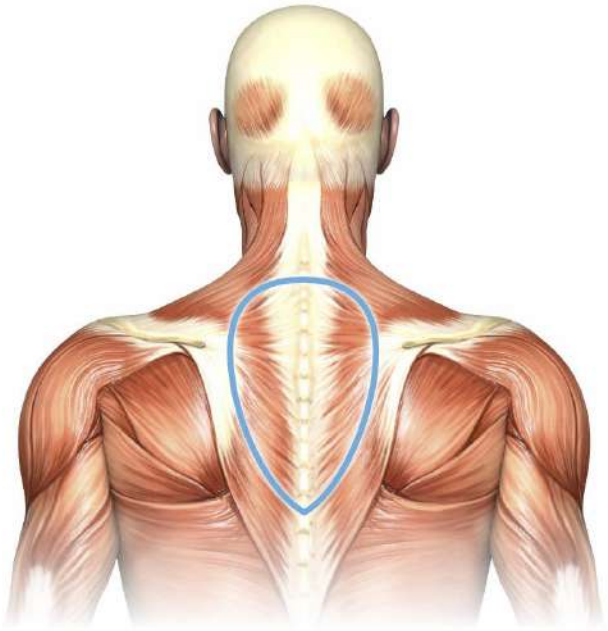
- Presence of tender points
- Most patients also have tenderness to pressure, heat, cold, electrical pain

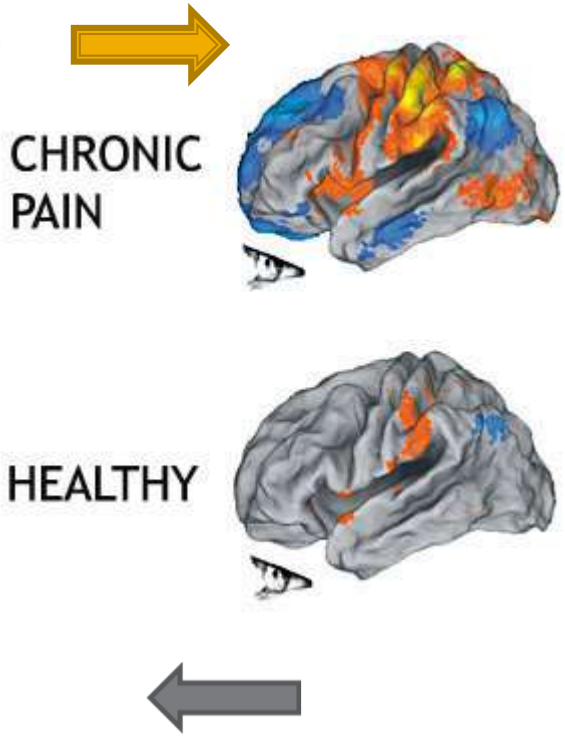
FATIGUE/STIFFNESS

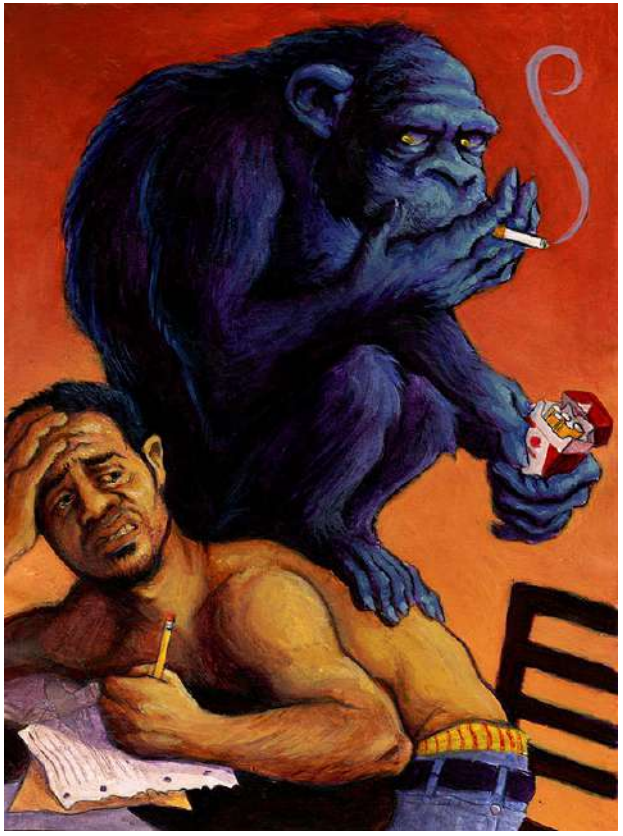
- Morning stiffness and fatigue are common characteristics of FM

Wolfe et al. *Arthritis Rheum*. 1995;38:19-28; Leavitt et al. *Arthritis Rheum*. 1986;29:775-781; Wolfe et al. *Arthritis Rheum*. 1990:33:160-172; Roizenblatt et al. *Arthritis Rheum*.2001;44:222-230; Harding. *Am J Med Sci*. 1998;315:367-376.

Central Sensitization







Discussion

What information in history and physical exam do you find most helpful?

How do you fit a good history and do a through physical exam into your schedule?

Treatment Options

SWEDISH
Extraordinary care. Extraordinary caring.

Pain Management Definitions

- **High-impact chronic pain**: Pain associated with substantial restrictions of participation in work, social, and self-care activities for six months or more
- **Integrated care:** The systematic coordination of medical, psychological and social aspects of health care and includes primary care, mental health, and, when needed, specialist services.
- **Interdisciplinary care:** Care provided by a team of health professionals from diverse fields who coordinate their skills and resources to meet patient goals.
- **Multimodal pain treatment**: Addresses the full range of an individual patient¶s biopsychosocial challenges by providing a range of multiple and different types of therapies as needed.

National Pain Strategy, 2016

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We must consider the Risk Factors…

- Repetitive Motions
- Forceful exertions
- Awkward Positions
- Heavy Lifting
- *Sustained Positions/postures
- *General weakness
- *Deconditioning

Patient Education

Many RCTs, systematic review and meta-analysis: Clarke et al (2011); Louw et al (2011); Moseley & Butler (2015); Louw et al (2016)

Level 1 evidence- the strongest level of evidence suggests that a treatment is good and should be incorporated into practice

Data from >1000 patients show improvements in pain knowledge initially with improvements in pain and disability at 1 year (Lee et al, 2015)

Not only does pain improve but **flare-ups reduce in recurrence and severity**

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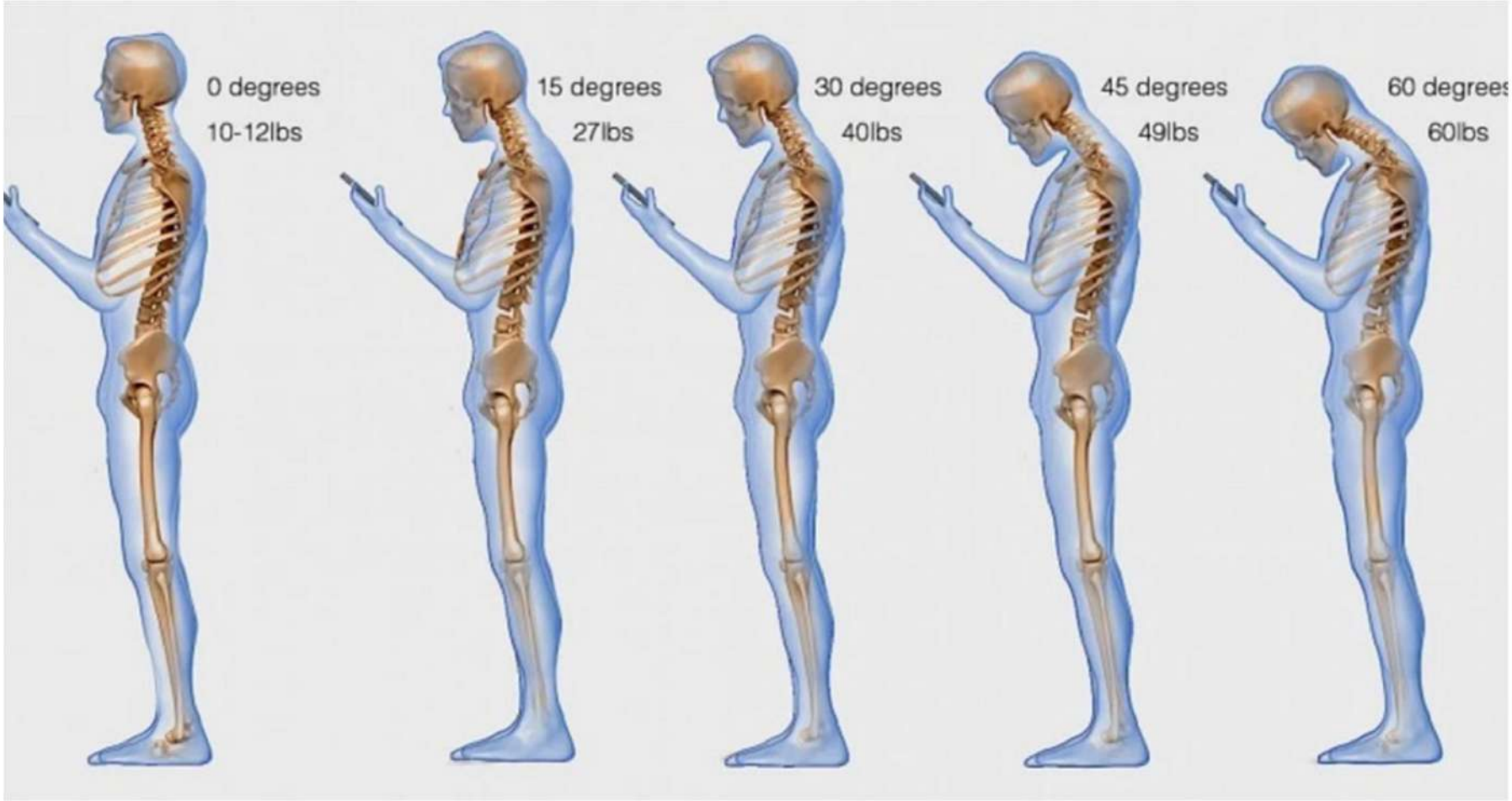
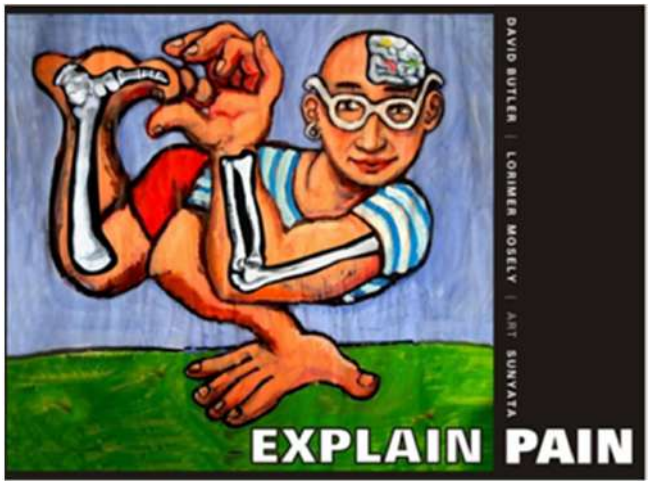
Life = Posture



What is pain neuroscience education?

- Explaining pain biology to decrease threat and meaning of Pain
- Conceptual change/cognitive restructuring regarding the meaning of pain



EP (Explain Pain)

TNE (Therapeutic Neuroscience Education)

PNE (Pain Neuroscience Education)

PE (Pain Education)

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Are the improvements in pain meaningful?

	EXPLAIN PAIN Moseley & Butler, 2015)	**NSAIDS**	**GABAPENTIN** (NEUROPATHIC PAIN)	**OPIOIDS** (200MG MORPHINE EQUIVALENTS)
EFFECT SIZE (how well Rx works)	0.7 (95%CI 0.4-1)	0.29 (95%CI 0.22-0.36 hip & knee OA (Verkleij 2011)		
NNT (TREAT)	4 (95%CI 2-6)	2.4 (95%CI 2-4.2) IBUPROFEN 600MG IN OA (Ong et al 2007)	6.3	
NNH (HARM)	0	✓	✓	✓
NNK (KILL)	0	✓	✓	32

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PAIN NEUROSCIENCE EDUCATION
Target concepts in plain words

1. Is very normal and very amazing – PROTECTIVE response to threat

2. Nerves are loaded with mechanical , thermal and chemical sensors- DANGER DETECTORS

3. The danger detection sensors have ADJUSTABLE SENSITIVITY – metaphors – response to threat

4. The danger transmission system has adjustable sensitivity – alarm system

5. Pain is JUST ONE of our protective systems – over protection

6. Complex problems sometimes need COMPLEX SOLUTIONS – patience , persistence, courage and coaching = INTERDISCIPLINARY approach

Explain Pain Supercharged . Lorimer GL and Butler DS. Feb 2017. ISBN 978-0-6480227-0-1. Noigroup Publications.

Modifiable YELLOW flags
What can we treat ?

- ✕Fear of movement / fear avoidance
- ✕Catastrophizing
- ✕Pain self efficacy

Emilio J. Puentedura PT, DPT, PhD & Timothy Flynn PT, PhD (2016): Combining manual therapy with pain neuroscience education in the treatment of chronic low back pain: A narrative review of the literature, Physiotherapy Theory and Practice, DOI: 10.1080/09593985.2016.1194663

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The emotive impact of words

THAT MIGHT HARM?

- ✕ It's all in your head.
- ✕ Pain means you did something wrong.
- ✕ It runs in the family.
- ✕ Your _____ is out of place.
- ✕ Your _____ doesn't move correctly.
- ✕ Flare up = harm
- ✕ Discontinue any exercise which caused you pain.
- ✕ Your MRI looks terrible.

THAT COULD HELP HEAL?

- ✕ Good pain/movement safe pain.
- ✕ All pain is REAL.
- ✕ Your test results are a normal part of aging.
- ✕ Motion is lotion!
- ✕ Know pain know gain!
- ✕ Pace it - don't race it !
- ✕ Knowledge is the great liberator!

Vranceanu, A et al. Journal of Hand Therapy. 2011. doi:10.1016/j.jht.2010.10.010

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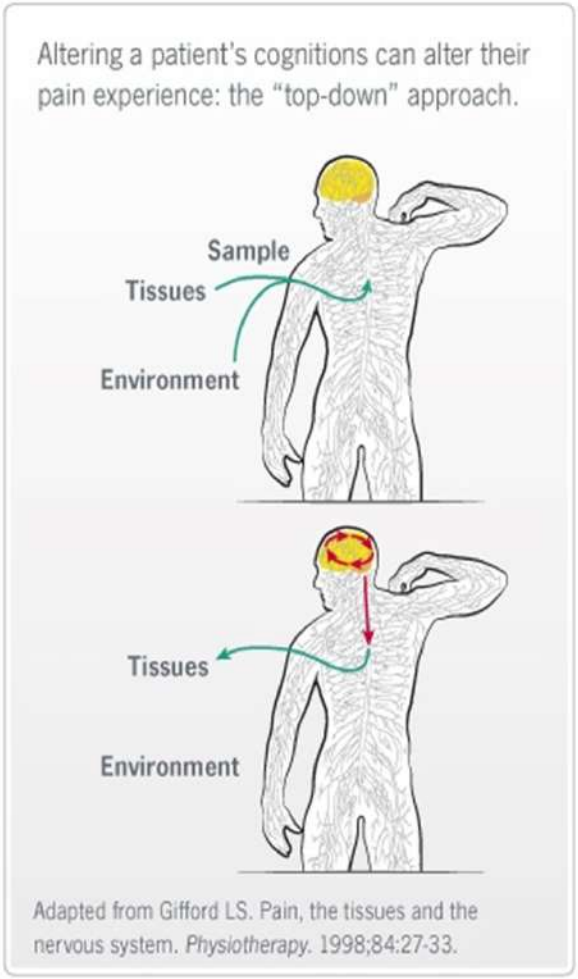
Interventions - brain to periphery

- ✕ Explain hurt vs. harm - Non-damaging nature of pain
- ✕ Activity Pyramid graded exposure to movement
- ✕ Pacing activities - Flare up managements
- ✕ Graded motor imagery (GMI) - imagining movements
- ✕ Breathing exercises, mirror therapy….

Behavioral Health

- ✕ Pain journal (control negative thoughts)
- ✕ Control to the patient
- ✕ Coping strategies
- ✕ Relaxation, mindfulness



Can't you give me a pill to fix it?

Non-Opioid Analgesics

- Acetaminophen (APAP)
  - More favorable safety profile than NSAIDS
  - Risk of LFT elevation- clinical significance?
- NSAIDS
  - More effective for pain relief than APAP
  - GI and Cardiovascular adverse effects
  - More drug interactions than APAP

Both proven to be **opioid sparing**

British Journal of Anaesthesia 2017;118(1):22–31.
Pediatric Anesthesia 2013; 23: 475–495.

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NSAID-Induced GI Ulcer

- COX-1 suppression → decreased maintenance of stomach mucosal barrier → increased risk of ulceration
- Ulcer rate is 25% with long-term NSAID users
  - >100,000 hospital admissions/year
  - 7000–10,000 deaths/year
- Risk factors associated with NSAID-related GI complications:
  - previous GI event (especially if complicated)
  - age (older than 65 years)
  - concomitant medications
    - Anticoagulants
    - Corticosteroids
    - other NSAIDs [including low-dose aspirin]
    - high-dose NSAIDs
  - chronic debilitating disorders - especially CV disease
  - *H. pylori* infection

Am J Gastroenterol 2009;104:728-38

Upper GI Bleed Risk

NSAID	Relative Risk (95% CI)	P Value
Coxibs	2.22 (1.64-4.23)	0.0014
Diclofenac	2.2 (1.06-4.54)	0.0051
Ibuprofen	3.63 (1.09-12.12)	0.0059
Naproxen	5.49 (2.74-10.99)	< 0.0001

- Prevention
  - Change NSAID
    - Use NSAID with lower GI risk
    - COX-2 Selective Inhibitor
      - Celecoxib
  - Use acid suppression therapies
    - PPI or High-dose H_2RA
  - Test/Treat *H pylori* infection
  - Counseling/Education

Eur J Clin Pharmacol 2014; 70:1159-1172.

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NSAID-Induced CV Disease

- COX-2 Inhibitors
  - Endothelial cells → COX-2 suppresses prostacyclin production → thrombosis
- Osteoarthritis is a risk factor for developing CV disease
  - 41% of this risk is attributed to NSAID use
- 42% relative risk increase in serious vascular events for people on COX-2 inhibitors
- Risk Factors:
  - Prior CV events
  - Comorbid conditions: Hypertension, Diabetes, CKD
  - Nicotine abuse

BMJ 2006 Jun 3;332(7553):1302-8.

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Renal Outcomes

- Reduced prostaglandin production → vasocontriction of afferent arterioles → reduced blood supply to nephron
- Triple Whammy
  - ACEi/ARB + NSAID + Diuretic
  - Increased risk of acute kidney injury
- Long-Term Care Facilities
  - 16.7% of patients on NSAIDs were on triple therapy

Pharmacoepidemiol Drug Saf. 2019;1–9.

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Adjuvant Therapies

- Skeletal muscle relaxants (SMR)
- Antiepileptics and alpha-2 agonists
- Antidepressants
- Topical agents
- Benzodiazepines and insomnia agents

Skeletal Muscle Relaxants

	MOA	Unique Adverse Effect
Baclofen	Inhibits spinal reflexes; structural analog to GABA	Withdrawal syndrome- hallucinations, psychosis, seizures
Carisoprodol (Soma)	Unknown, possibly sedative	Hypomania, Withdrawal, Idiosyncratic- weakness, visual or motor disturbances, confusion, euphoria, Abuse potential
Cyclobenzaprine (Flexeril)	Acts in brain stem and spinal cord; structurally related to amitriptyline	Anticholinergic SE Long t ½
Diazepam (Valium)	Neuronal inhibition through GABA receptors	Only benzodiazepine approved as a muscle relaxant

https://www.micromedexsolutions.com

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Skeletal Muscle Relaxants

	MOA	Unique Adverse Effect
Metaxalone (Skelaxin)	Unknown, possibly sedative	Relatively low risk of drowsiness or cognitive effects Paradoxical muscle cramps
Methocarbamol (Robaxin)	Unknown, possibly sedative	Urine discoloration- brown, black, green
Tizanidine (Zanaflex)	Inhibits motor neurons by stimulating alpha-2 receptors; structurally related to clonidine	Hypotension (20% ↓) Hepatotoxicity Hallucinations/Delusions Drug interactions Withdrawal HTN QT prolongation

https://www.micromedexsolutions.com

Skeletal Muscle Relaxants

	MOA	Unique Adverse Effect
Gabapentin (Neurontin)	Unknown, blocks voltage-dependent calcium channels at alpha-2-delta subunit, decreasing excitatory neurotransmitter release	Withdrawal seizures or symptoms if abrupt discontinuation Dizziness and sedation (dose-dependent)
Pregabalin (Lyrica)	Unknown, blocks voltage-dependent calcium channels at alpha-2-delta subunit, decreasing excitatory neurotransmitter release	Dizziness and sedation (dose-dependent) Scheduled V (Euphoria)

https://www.micromedexsolutions.com

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Tricyclic Antidepressants (TCA)

- Works through serotonin agonism, norepinephrine reuptake inhibition, and sodium channel blockade
- Uses:
  - Neuropathic pain (NNT 3.6)
  - More efficacy than opioids in low back pain
  - Others: IBS, migraine, cystitis, fibromyalgia
- Amitriptyline vs nortriptyline
- Consider adverse effect profiles and interactions
  - Antihistaminergic, anticholinergic, and adrenergic

Mayo Clin Proc 2010;85(3 suppl):S3-S14.

Serotonin Norepinephrine Reuptake Inhibitors (SNRI)

- Works by increasing serotonin and norepinephrine activity
- Uses:
  - Neuropathic Pain (NNT 6.4)
  - Fibromyalgia
- Side Effects:
  - Headache, nausea, minimal anticholinergic effects
- Duloxetine (Cymbalta)
  - Weak evidence in low back pain
- Venlafaxine (Effexor)
  - Dose related hypertension
- Milnacipran (Savella)
  - Moderate evidence for use in back pain
  - No evidence for use in nerve pain

Mayo Clin Proc 2010;85(3 suppl):S3-S14.

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Selective Serotonin Reuptake Inhibitors (SSRI)

- No proven efficacy for pain
- Consider due to high risk of comorbid depression

Benzodiazepines

	Half-Life (hours)	Active Metabolites
Alprazolam (Xanax)	11	No
Chlordiazepoxide (Librium)	24-48 (>100)	Yes
Clonazepam (Klonipin)	30-40	No
Diazepam (Valium)	24-48 (>100)	Yes
Lorazepam (Ativan)	12-14	No
Temazepam (Restoril)	~ 9	No

- Abuse Potential
- None are FDA approved for pain
- Mixed results in clinical trials

https://www.micromedexsolutions.com

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Topical Analgesics

- Lidocaine
  - Gel
  - Patches (4% OTC, 5% Rx)
- Diclofenac
  - Gel or Solution 1%
  - Patch 1.3%
- Ketoprofen 10% in PLO gel (compounded)
- Gabapentin 8% in PLO gel (compounded)
- Capsaicin 0.025%, 0.075%

Topical analgesics

PAIN COMPOUNDS

Topical Anti-Inflammatory

KETOPROFEN 10% or 20% QTY: _____ Refill: _____
In Lipoderm topical cream to help with inflammation 60g ($35)

KETOPROFEN 20%/ DMSO 10% QTY: _____ Refill: _____
In Lipoderm topical cream with DMSO 60g ($95)

Neuropathic Pain

BACLOFEN 2%/ AMITRIPTYLINE 2%/ GABAPENTIN 6%/ LIDOCAINE 5% QTY: _____ Refill: _____
In Lipoderm topical cream 60g ($85)

(GABAP ____% +/- AMITRIP ____% +/- KETOPROF____% +/- _____)

$40-$90 depending on dosing, ingredients (often ins pays for some or all ingred) QTY: _____ Refill: _____

Combination Anti-Inflammatory/ Neuropathic Pain

DICLOFENAC 5%/ BACLOFEN 2%/ BUPIVICAINE 1%/ GABAPENTIN 6% QTY: _____ Refill: _____
In Lipoderm topical cream 60g ($105)

MELOXCIAM 0.09%/ TOPIRMATE 2.5%/ PRILOCAINE 2% QTY: _____ Refill: _____
In Lipoderm topical cream 60g ($85)

GABAPENTIN 10%/LIDOCAINE 5% TOPICAL CREAM QTY: _____ Refill: _____
For more severe vulvar pain 30g ($45)

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Annals of Internal Medicine ORIGINAL RESEARCH

Compounded Topical Pain Creams to Treat Localized Chronic Pain

A Randomized Controlled Trial

Robert E. Brutcher, PharmD, PhD; Connie Kurihara, RN; Mark C. Bicket, MD; Parvaneh Moussavian-Yousefi, PharmD; David E. Reece, MD; Lisa M. Solomon, BS; Scott R. Griffith, MD; David E. Jamison, MD; and Steven P. Cohen, MD

- Military treatment facility
- 399 veterans with localized pain (neuropathic, nociceptive, and mixed)
- 4 treatment arms with each type of pain compared to placebo
  - Compounds included some combination of ketamine, gabapentin, clonidine, lidocaine, ketoprofen, baclofen, cyclobenzaprince, and diclofenac.
- Outcome: numerically improved pain scores that was not statistically significant
- Conclusion: "Compounded pain creams were not better than placebo creams, and their higher costs compared with approved compounds should curtail routine use."

Study criticism: pain ratings were at the discretion of the providers

Ann Intern Med. 2019;170:309-318.

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Goals of Opioid Therapy

- Goal of opioid therapy for chronic pain is to minimize pain, yet maximize function
  - 100% free is not an appropriate goal
- Potential Goals:
  - Reduce missed work days
  - Improved self-care
  - Increased level of activity
  - Decreased use of health care system
- Poor pain management:
  - Under Medicating: greatly inadequate pain relief where patient is unable to move or function and remains very stressed/depressed/angry
  - Over Medicating: when opioid therapy prevents patients from engaging in activities because they are too sedated/lethargic/checked-out

AMDG. Interagency Guideline on Prescribing Opioids for Pain. 3rd Ed. June 2015.

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Risks of Opioid Therapy

- Lethargy, sedation, decreased cognition, nausea/vomiting
- Constipation
- Allergic Reactions
- Respiratory suppression
- Hormone dysregulation
- Dependence/addiction risks

Establish Expectations

- Duration of therapy
  - Time limited trial
- Next steps in therapy
- Definition of failed therapy
- Goals of therapy
  - Amount of relief
  - Functional status
- Pain agreement

Function is the primary goal, NOT pain relief

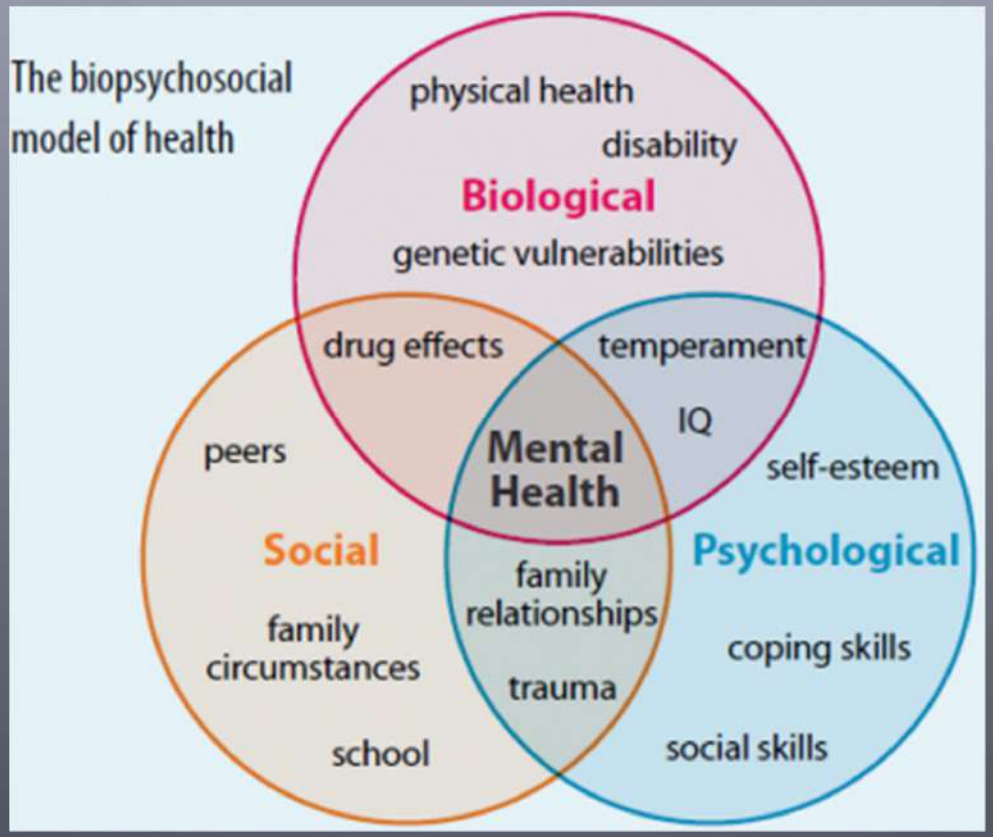
30% reduction in pain relief considered success

AMDG. Interagency Guideline on Prescribing Opioids for Pain. 3rd Ed. June 2015.

Discussion

What has worked best in your clinical setting?

A Biopsychosocial Approach



Does educating patients about pain work?

Many RCTs, systematic review and meta-analysis: Clarke et al (2011); Louw et al (2011); Moseley & Butler (2015); Louw et al (2016)

Level 1 evidence- the strongest level of evidence suggests that a treatment is good and should be incorporated into practice

Data from >1000 patients show improvements in pain knowledge initially with improvements in pain and disability at 1 year (Lee et al, 2015)

Not only does pain improve but **flare-ups reduce in recurrence and severity**

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Are the improvements in pain meaningful?

	EXPLAIN PAIN Moseley & Butler, 2015)	**NSAIDS**	**GABAPENTIN** (NEUROPATHIC PAIN)	**OPIOIDS** (200MG MORPHINE EQUIVALENTS)
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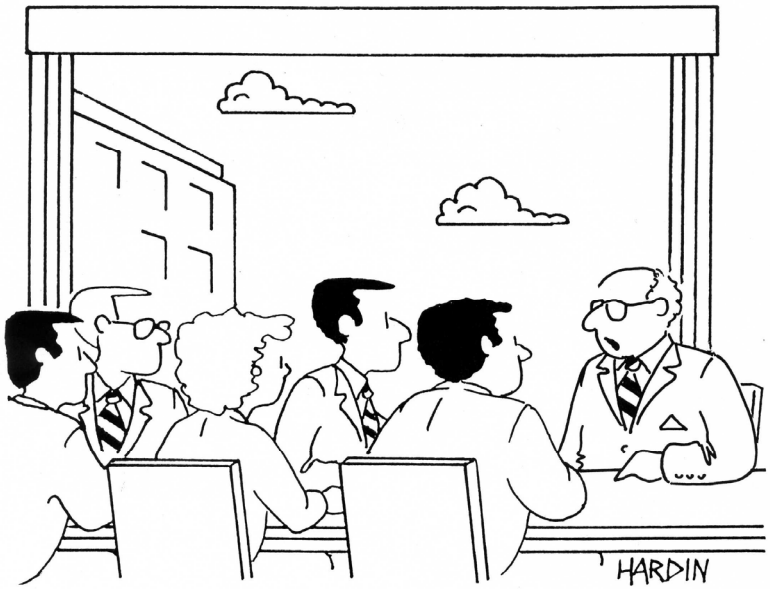
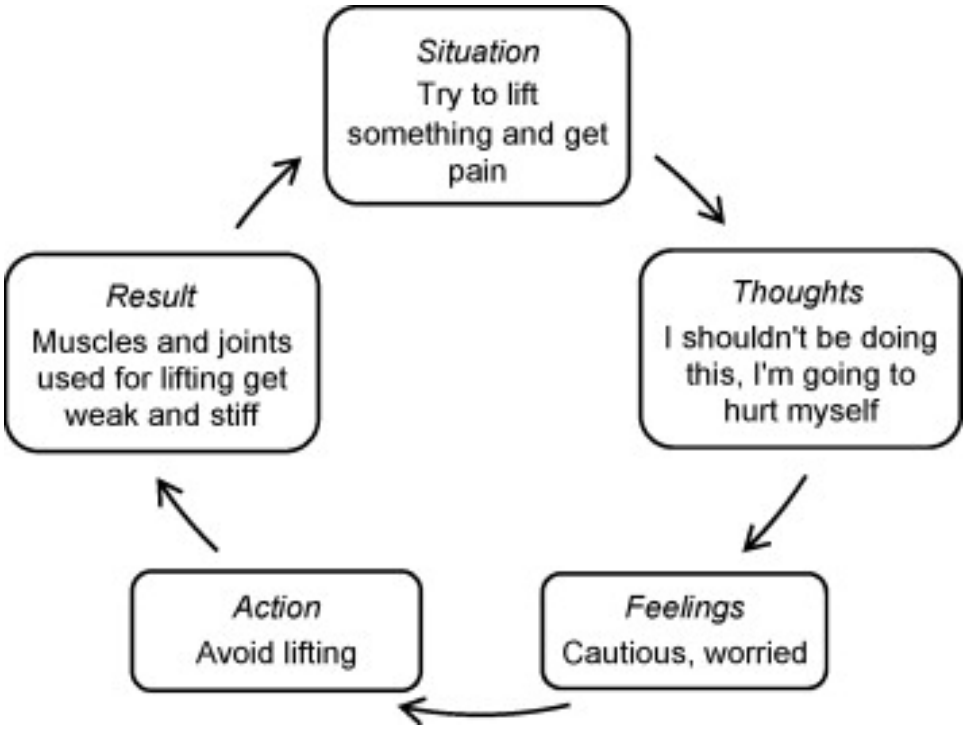
NNH (HARM)	0	✓	✓	✓
NNK (KILL)	0	✓	✓	32

Fear Avoidance

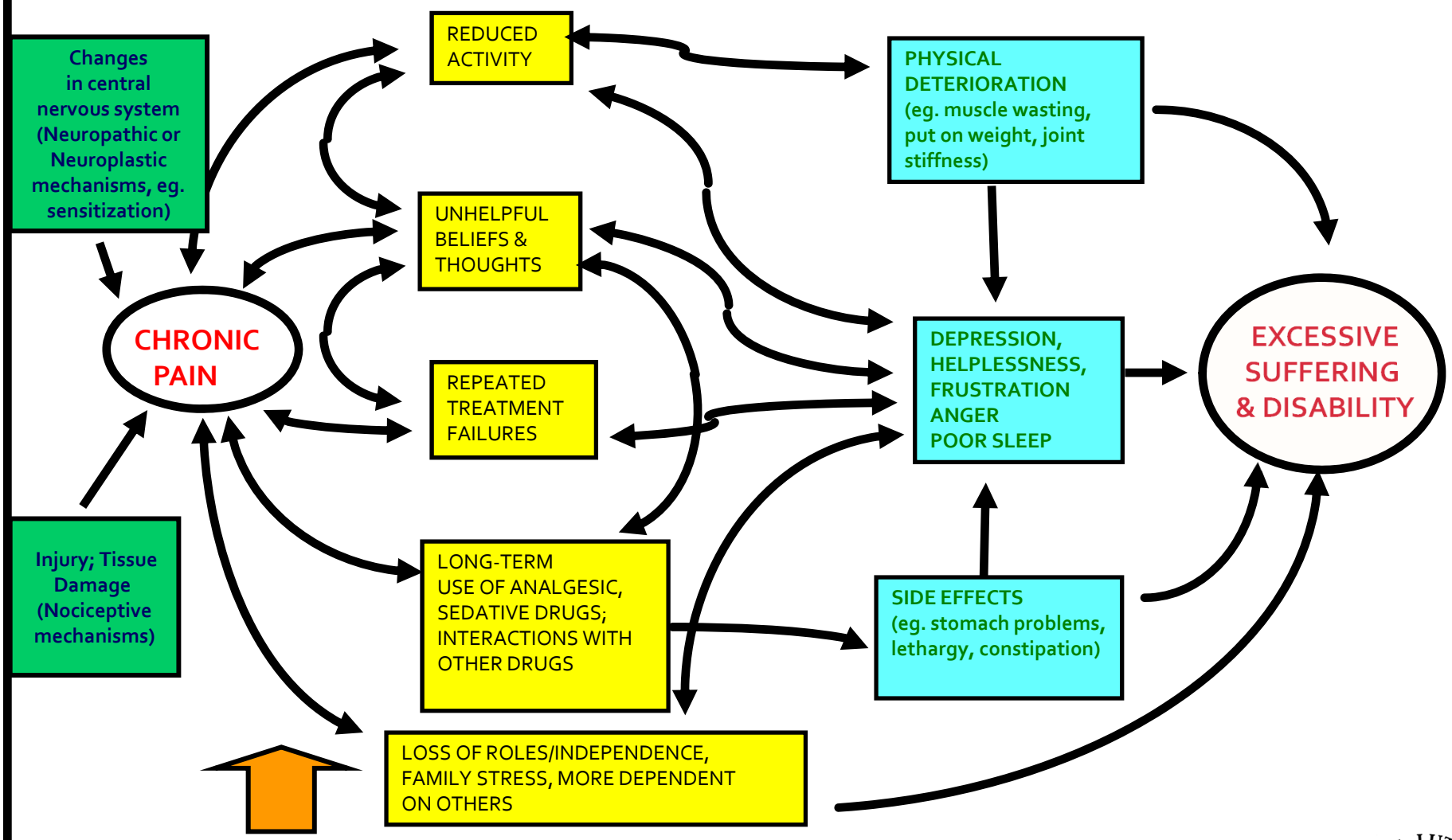


"We've considered every potential risk except the risks of avoiding all risks."



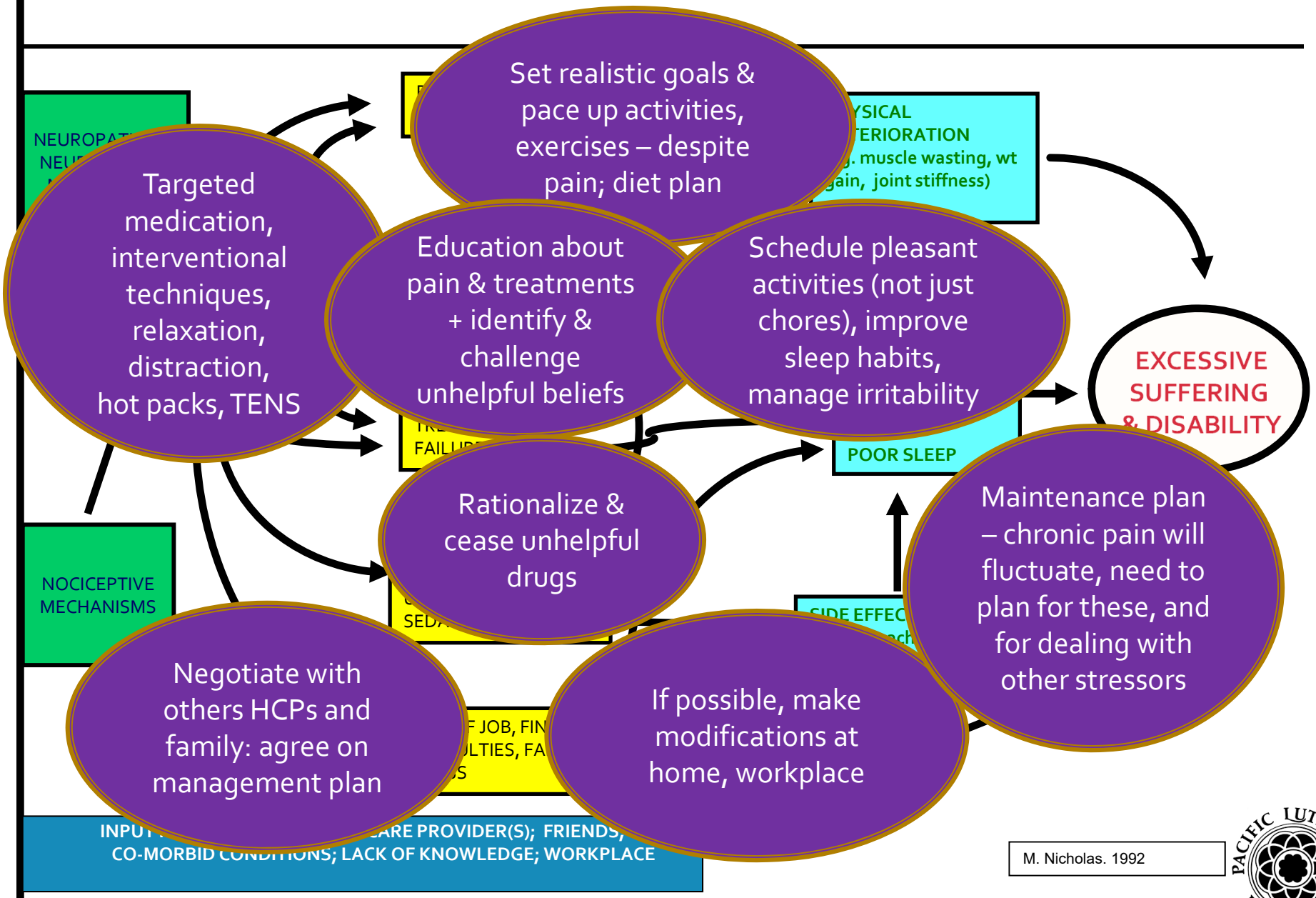
Explaining the Interacting Contributors and Effects

A biopsychosocial perspective



M. Nicholas 1992

Would it to help if we targeted as many of these contributors as possible?



M. Nicholas. 1992

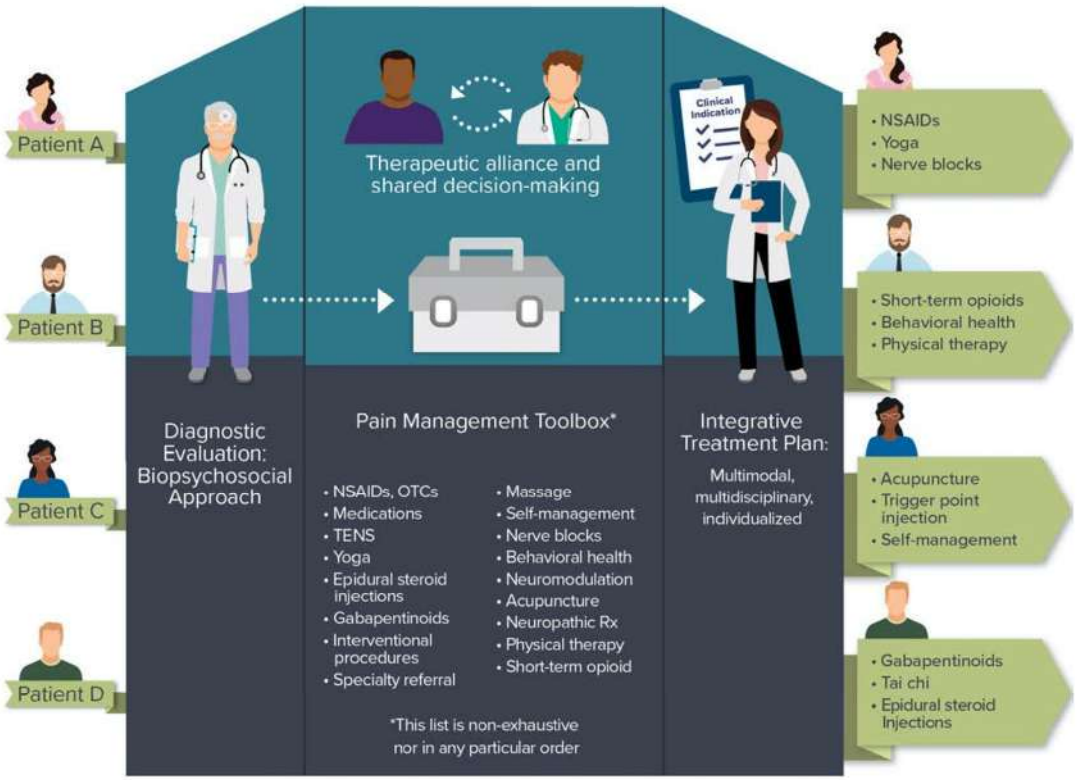
Common effects of mental health comorbidities

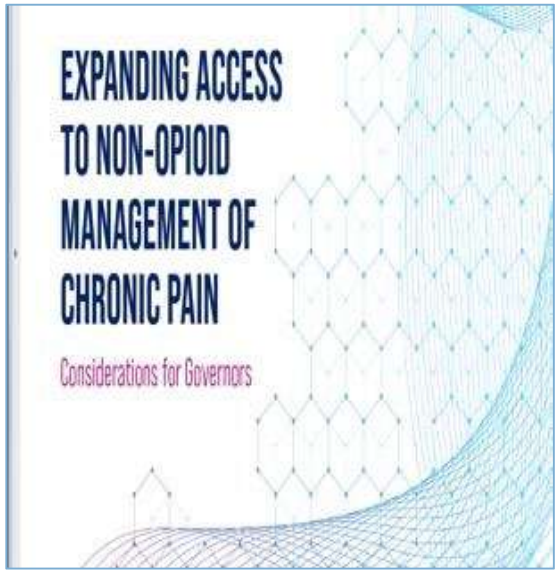
- Higher pain intensity and functional impairment.
- Higher healthcare costs through increased utilization.
- Increased negative thoughts about pain.
- More chronic and treatment-resistant symptoms.
- Poorer treatment adherence and perceived benefits.
- Increased risk of self-directed violence, including suicide.

Depression

- Depression or depressive mood is present in up to 75% of patients with chronic pain
- People with more severe depression feel more intense pain.
- Chronic pain can worsen depression symptoms.
- Like depression, chronic pain can cause problems with sleep and daily activities, reducing quality of life.
- Chronic pain and is a risk factor for suicide in people who are depressed.

Pain: Biopsychosocial Approach





NGA

https://www.hhs.gov/ash/advisory-committees/pain/reports/2018-12-draft-report-on-updates-gaps-inconsistencies-recommendations/index.html

HHS: Interagency Task Force

National Governors Association

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Pain Management Definitions

- **High-impact chronic pain**: Pain associated with substantial restrictions of participation in work, social, and self-care activities for six months or more
- **Integrated care:** The systematic coordination of medical, psychological and social aspects of health care and includes primary care, mental health, and, when needed, specialist services.
- **Interdisciplinary care:** Care provided by a team of health professionals from diverse fields who coordinate their skills and resources to meet patient goals.
- **Multimodal pain treatment**: Addresses the full range of an individual patient¶s biopsychosocial challenges by providing a range of multiple and different types of therapies as needed.

National Pain Strategy, 2016

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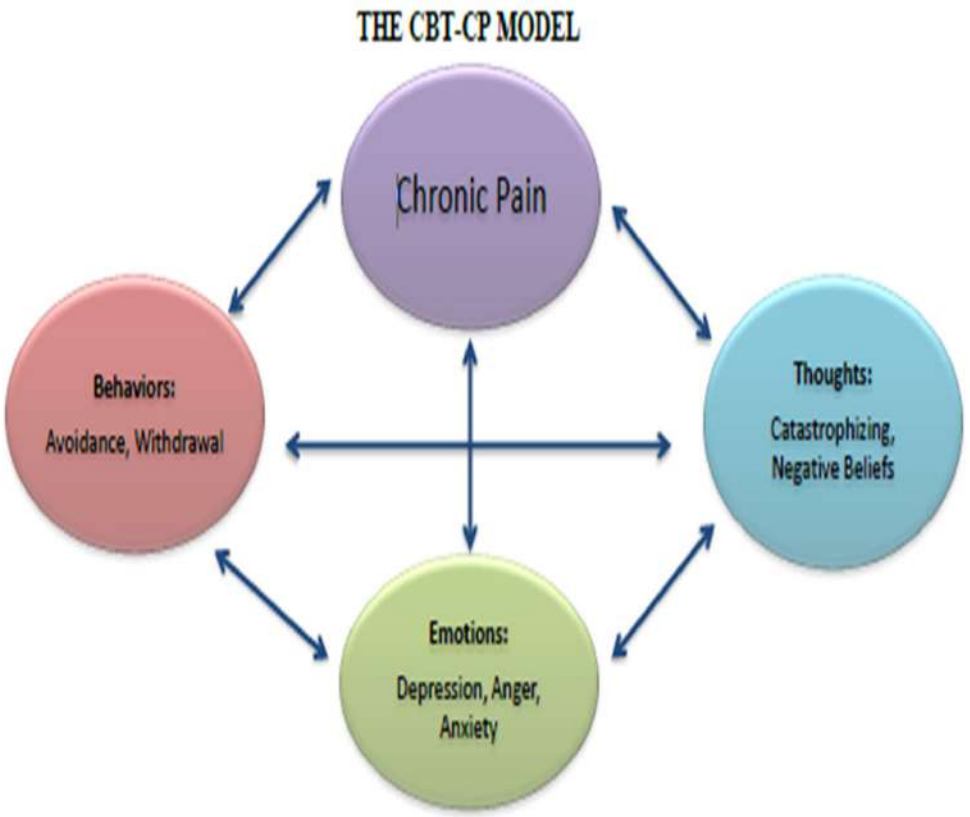
Cognitive Behavioral Therapy (CBT)

CBT Model

- Unhelpful thoughts and behaviors cause and maintain distress and impairment
- Changing thoughts and behaviors can change emotional and physical pain



Beck and Beck (1995); Murphy et al. (2014)

Acceptance and Commitment Therapy

What is Acceptance and Commitment Therapy for chronic pain (ACT-CP) ?

- **A**ccept: Private experiences and stay present.
  - Thoughts and feelings are accepted instead of eliminated or changed—particularly the unwanted ones (e.g., pain, anxiety, guilt).
- **C**hoose and **C**ommit: To living with personal values.
  - Help patients choose direction by focusing on what really matters to them.
- **T**ake Action: In areas that matter
  - Commit to action toward chosen values.

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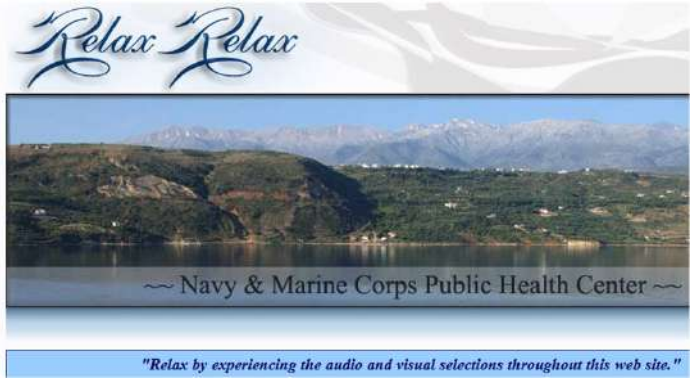
How is ACT-CP practiced?

- Mindfulness practice and present-moment attention
- Values clarification
- Behavioral commitment
- Experiential exercises and metaphors

VA/DoD Mobile Apps: Relaxation/CBT

- Breathe2Relax
  - Mobile App for guided diaphragmatic breathing exercise
  - https://telehealth.org/apps/behavioral/breathe2relax-mobile-app

- Relax Relax
  - Web resource for guided meditation audio files for download or streaming
  - https://www.med.navy.mil/sites/nmcphc/health-promotion/psychological-emotional-wellbeing/relax-relax/pages/index.html



VA/DoD Mobile Apps: Mindfulness/ACT

- Mindfulness Coach
  - Stress reduction, emotional balance, self-awareness, coping with depression/ anxiety/chronic pain
  - https://mobile.va.gov/app/mindfulness-coach
- ACT Coach
  - ACT exercises, tools, information, and tracking logs
  - https://mobile.va.gov/app/act-coach

Patient-Centered Considerations

- **"Pain"**
- Threat to the biological integrity of an individual

- **"Suffering"**
- A threat to that person that is affecting who they are
- Anxiety, depression
- Distress, hopelessness
- Change in function

FishbainD. et al. *Pain Medicine* 2015:6:1057-72.

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Discussion

Is it more important to treat pain or suffering?

What do you need to take into consideration?

Relaxation

Learning to relax is a powerful and effective self-care treatment for chronic pain.

Relaxation:

- Is a unique mental state of passive attention
- Turns down the "inner dialogue" and decreases sympathetic nervous system arousal
- Can include a mental focus on the breath, a phrase, imagery, or purposeful movement

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Relaxation

- **There are many relaxation techniques.**
- **Ask patients to choose those they find most helpful.**

- Diaphragmatic Breathing
- Body Scan
- Progressive Muscle Relaxation
- Guided Imagery / Visualization
- Meditation / Mindfulness
- Qigong / Tai Chi
- Yoga
- Autogenic Training
- Biofeedback

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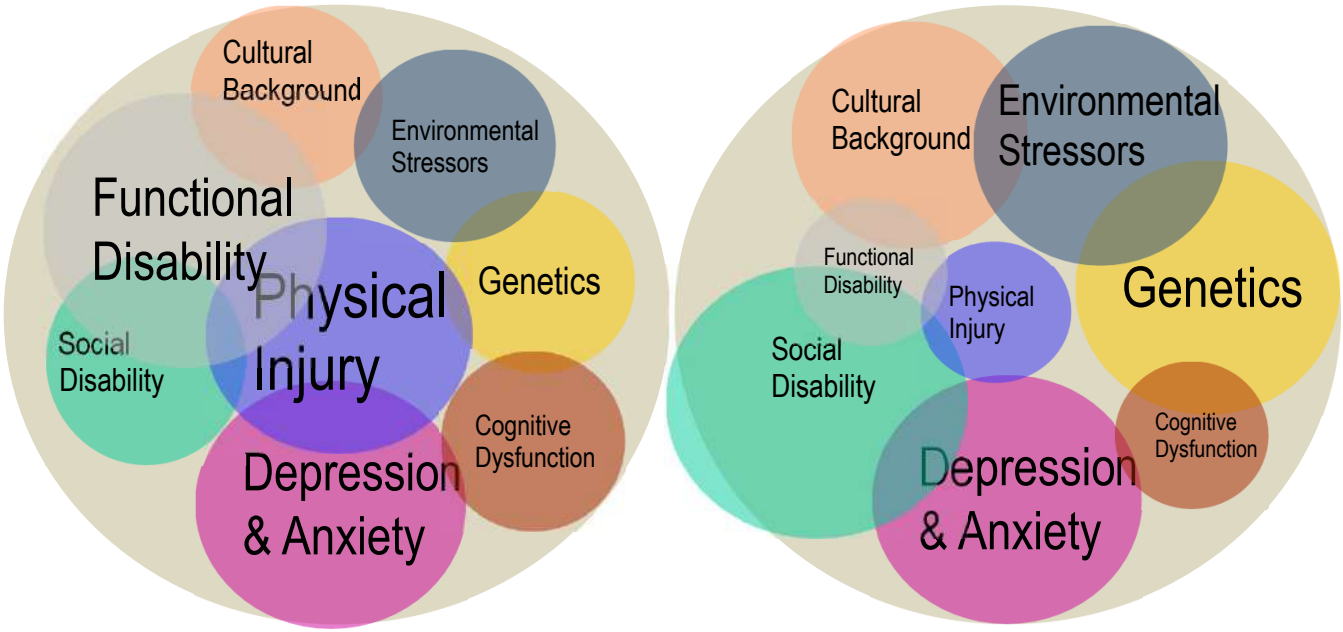
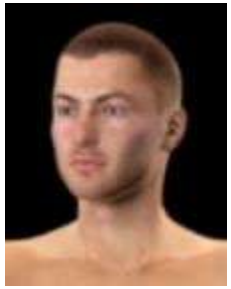
Chronic Pain: Bio-Psycho-Social Model

Jane

Pain 8/10
MED: 0





Bryan

Pain 8/10
MED: 60

GatchelRJ. Am Psychol. 2004;59:795-805.

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Patient-Centered Care: Risk Assessment

U.S. Department of Health and Human Services. Pain Management Best Practices Inter-Agency Task Force Report: Updates, Gaps, Inconsistencies, and Recommendations. Published May 9, 2019. Available at https://www.hhs.gov/sites/default/files/pmtf-final-report-2019-05-23.pdf. Accessed March 13, 2020.

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Discussion

How can you integrate the biopsychosocial model into your practice?

Pilot Program Review
Chronic Pain Patient Education Program

3 weeks
2 hours/week

PT
BH
PharmD

Options for Successful Treatment

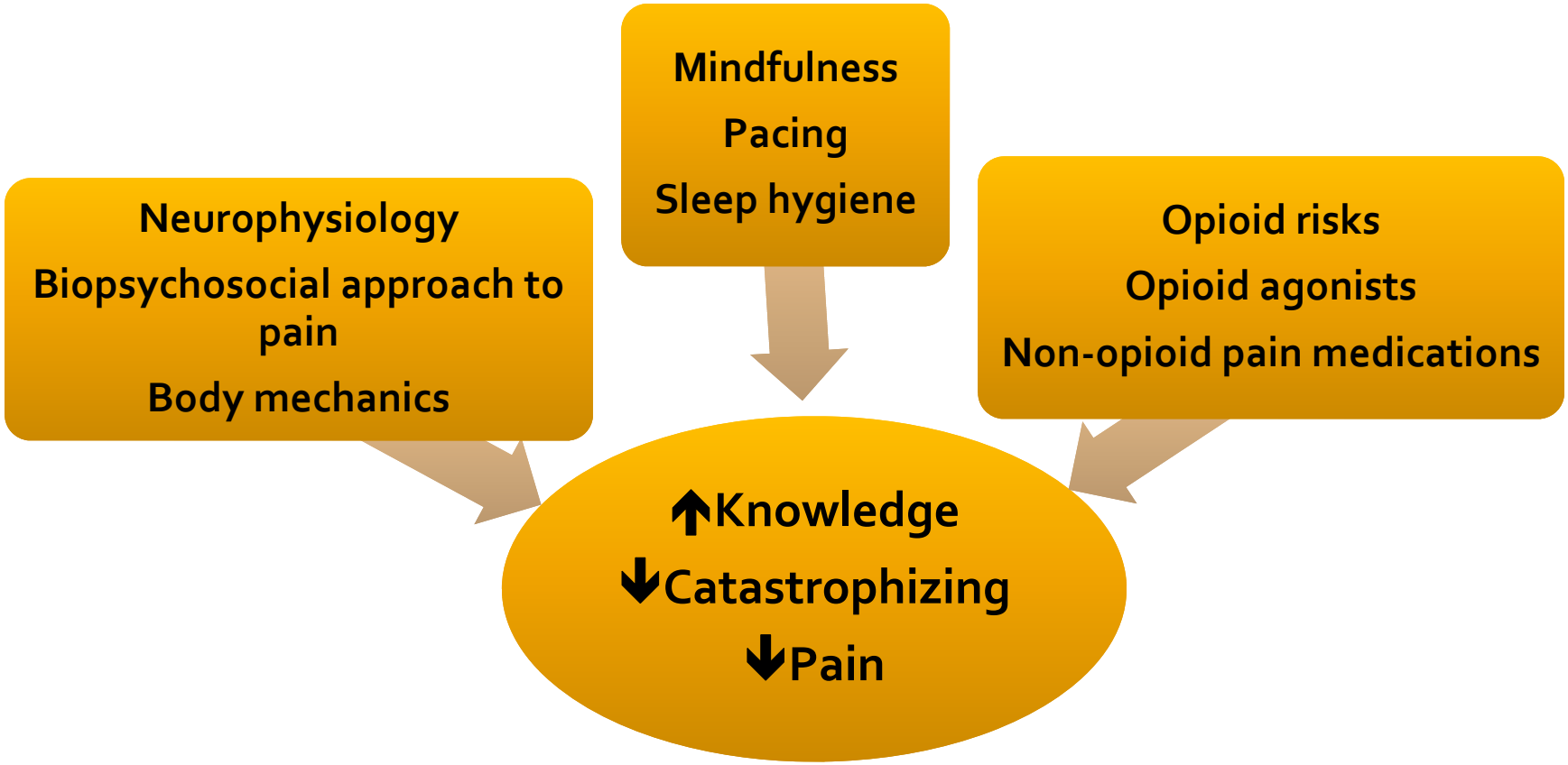
To be effective in minimizing harms associated with opioids, demand for prescription opioids can be decreased through education (National Academies of Sciences Engineering and Medicine, 2017)

Multiple studies indicate that patients benefit from multidisciplinary pain management to improve control of CNCP (Dowell et al., 2016; Goesling et al., 2015; Kamper et al., 2015; Lee, Crawford & Swann, 2014; Martin et al., 2014; McCormick et al., 2015; Murphy et al., (n.d.); Okifuji & Turk, 2012, 2015, 2016; Patel, Hacker, Murks & Ryan 2016; Sletten, Kurklinsky, Chinburapa & Ghazi, 2015; Stanos et al., 2016)

Neurophysiology, including pain mechanisms, gate theory, acute versus chronic pain, sleep disorders, depression, hurt and harm, biomechanics, healing and disuse, effects of exercise and inactivity, use and abuse of drugs, role of surgery for pain, dealing with doctors and maintenance of pain. Loeser (2012)

Kroenke et al. (2009) found individuals experienced less depression and a reduction in pain when implementing a pain self-management program grounded in social cognitive theory to teach patients about triggers and flares of chronic pain, coping with fear and emotions, physical activity strategies, muscle relaxation, deep breathing, distraction, sleep hygiene and interactions with clinicians and employers.

Interdisciplinary Chronic Pain Program Model

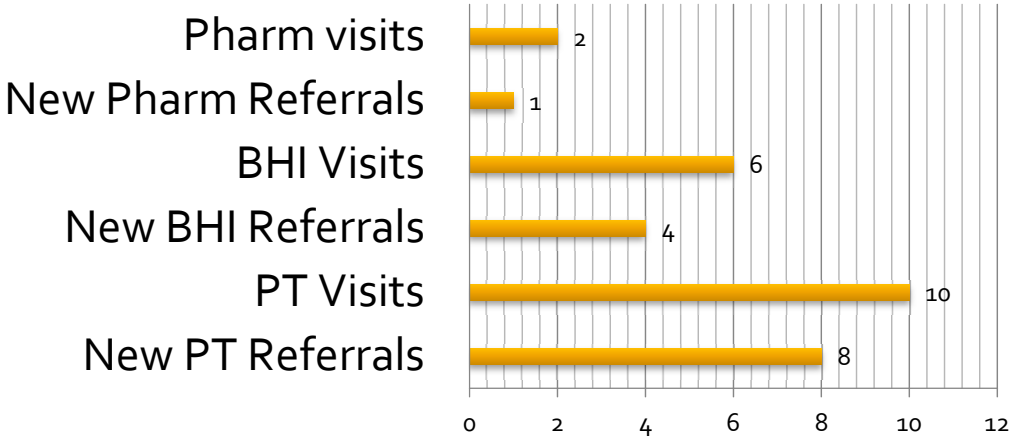


Data Collection

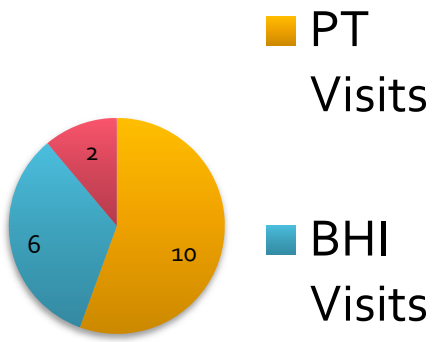
- Opioid Risk Tool: assess patients risk for opioid abuse
- PCS: assess patients physical and emotional stress related to their condition
- PEG Pain Scale: assess pain intensity and interference in patients
- Program evaluation: assess perceived efficacy of program and recommend improvements

Utilization of Integrated Services

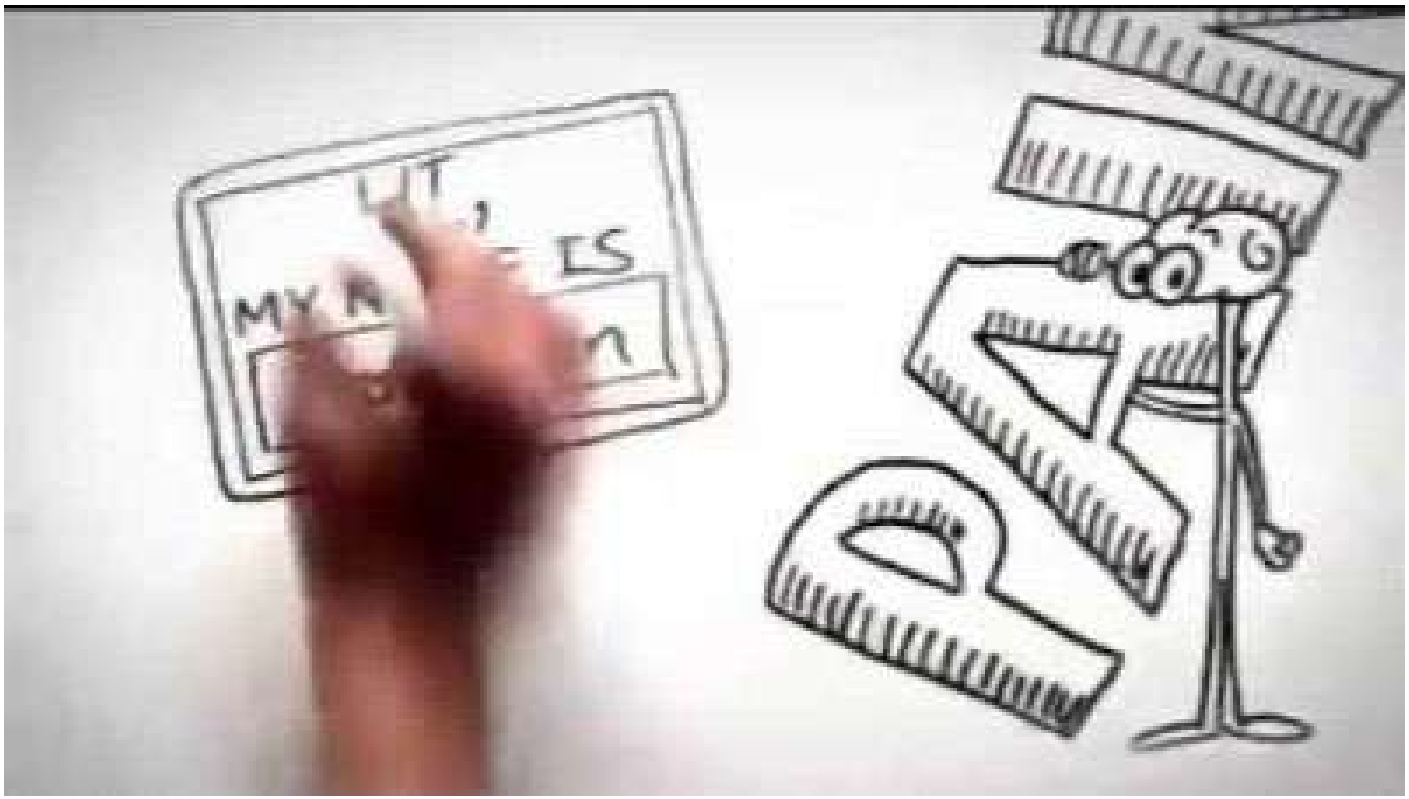
PATIENTS NEW TO IS: REFERRALS AND VISITS



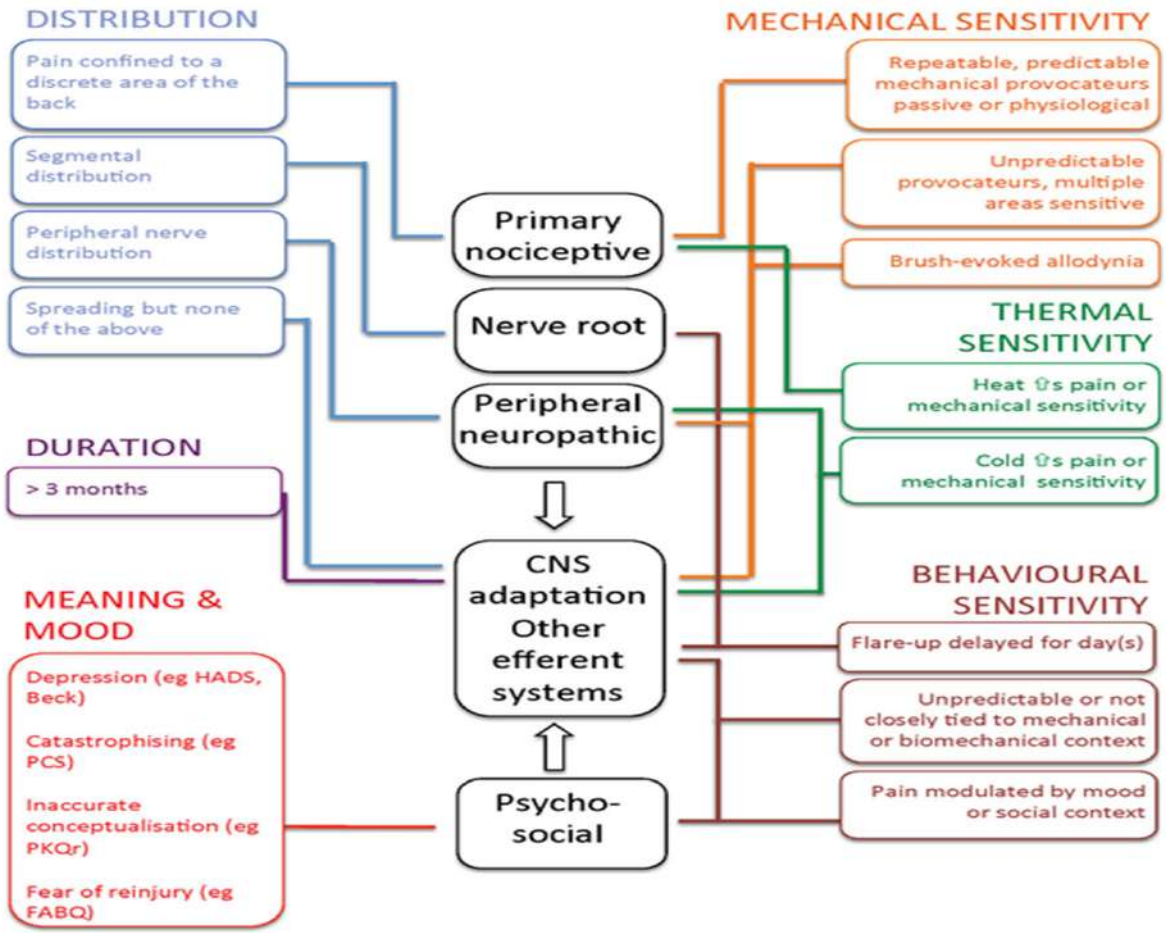
18 TOTAL VISITS GENERATED



Understanding pain in less than 5 mins youtube



Handy dandy pictorial
Thanks to Body in Mind



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Patient and Clinician education resources

1. Teaching people about Pain video: Adriaan Louw Medbridge https://www.youtube.com/watch?v=LO1hg2ya3Js
2. Understanding Pain in less than 5 minutes, and what to do about it! https://www.youtube.com/watch?v=C_3phB93rvI
3. TEDxAdelaide - Lorimer Moseley - Why Things Hurt. https://www.youtube.com/watch?v=gwd-wLdIHjs
4. Pain and the brain | Julia Gover | TEDxNorthwich. https://www.youtube.com/watch?v=zR-1M95Kthw
5. Explaining Brain Smudging. David Butler. NOIgroup.com. https://za.pinterest.com/pin/547469517005759 76/
6. https://relief.news/2020/04/06/relief-to-provide-**body-in-mind**-content-as-a-free-resource/

References

- Agency Medical Directors' Group (AMDG). (2015, June). Interagency Guideline on Prescribing Opioids for Pain (3rd edition). *Washington State Agency Medical Directors Group.* Retrieved from http://www.agencymeddirectors.wa.gov/Files/2015AMDGOpioidGuideline.pdf
- Berna, C., Kulich, R. J., & Rathmell, J. P. (2015). Tapering long-term opioid therapy in chronic noncancer pain: Evidence and recommendations for everyday practice. *Mayo Clinic Proceedings, 90*(6), 828-842. doi: 10.1016/j.mayocp.2015.04.003
- Comprehensive Addiction and Recovery Act. (2016, July 16). *Comprehensive Addiction and Recovery Act: Policy Priorities.* Retrieved from http://www.cadca.org/comprehensive-addiction-and-recovery-act-cara
- Dowell, D., Haegerich, T., & Chou, R. (2016, March 18). CDC Guideline for Prescribing Opioids for Chronic Pain – United States. MMWR Recommendations and Reports, 65(1), 1–49. DOI: http://dx/doi.org/10.15585/mmwr.rr6501e1
- (2021). Improving Chronic Pain Management in Primary Care. Providence St. Peter Hospital Flynn, D. (2021). Improving Chronic Pain Management in Primary Care. Providence St. Peter Hospital Continuing Education. Olympia, WA.
- Frank, J., Levy, C., Matlock, D., Calcaterra, S., Mueller, S., Koester, S. & Binswanger, I. (2015). Patients' Perspectives on Tapering of Chronic Opioid Therapy: A Qualitative Study. *Pain Medicine* 2015; 17 (10): 1838-1847. doi: 10.1093/pm/pnw078
- Geller, J. S., Kulla, J., & Shoemaker, A. (2015). Group Medical Visits Using an Empowerment-based Model as Treatment for Women With Chronic Pain in an Underserved Community. *Global Advances in Health and Medicine*, *4*(6), 27–60. http://doi.org/10.7453/gahmj.2015.057
- Horn, C. (2021). Improving Chronic Pain Management in Primary Care. Providence St. Peter Hospital Continuing Education. Olympia, WA.
- Lamb, S. E., Hansen, Z., Lall, R., Castelnuovo, E., Withers, E. J., Nichols, V., . . . Underwood, M. R. (2010). Group cognitive behavioural treatment for low-back pain in primary care: a randomised controlled trial and cost-effectiveness analysis. *The Lancet, 375*(9718), 916-923. doi:10.1016/s0140-6736(09)62164-4

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References

- Lancaster, TL. (2021). Improving Chronic Pain Management in Primary Care. Providence St. Peter Hospital Continuing Education. Olympia, WA.
- Martín, J., Torre, F., Aguirre, U., González, N., Padierna, A., Matellanes, B., Quintana, J. M. (2014). Evaluation of the Interdisciplinary PSYMEPHY Treatment on Patients with Fibromyalgia: A Randomized Control Trial. *Pain Med*, 15 (4): 682-691. doi: 10.1111/pme.12375
- Nicholas, M. (2021). Improving Chronic Pain Management in Primary Care. Providence St. Peter Hospital Continuing Education. Olympia, WA.
- Office of the Press Secretary. (2016, February 2). Fact Sheet: President Obama Proposes $1.1 Billion in New Funding to Address the Prescription Opioid Abuse and Heroin Use Epidemic. The White House Archives. Retrieved from https://obamawhitehouse. archives.gov/the-press-office/2016/02/02/president-obama-proposes-11-billion-new-funding-address-prescription
- Robinson, J. P., Dansie, E. J., Wilson, H. D., Rapp, S., & Turk, D. C. (2015). Attitudes and Beliefs of Working and Work-Disabled People with Chronic Pain Prescribed Long-Term Opioids. *Pain Medicine,16*(7), 1311-1324. doi:10.1111/pme.12770
- Stanos, S. (2021). Improving Chronic Pain Management in Primary Care. Providence St. Peter Hospital Continuing Education. Olympia, WA.
- United States Department of Veterans Affairs/Department of Defense (VA/DoD), The Opioid Therapy for Chronic Pain Work Group. (2017, February). US Department of Veterans Affairs/Department of Defense Clinical Practice Guidelines for Opioid Therapy for Chronic Pain, version 3.0. *United States Department of Veterans Affairs/Department of Defense Clinical Practice Guideline*. Retrieved from https://www.healthquality.va.gov/guidelines/Pain/cot/VADoDOTCPG022717.pdf

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