

# OPIOIDS AND CHRONIC PAIN RESCUING YOUR PATIENTS FROM PILL ISLAND

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## A patient-centered approach to tapering opioids

Simply treating opioid addiction isn't enough. Instead, reposition your patient's singular circumstances and needs at the center of efforts to end use of these agents.

### **PRACTICE RECOMMENDATIONS**

**M**any American who are treated with prescription opioid analgesics would be better off with less opioid or none at all. To that end, published opioid prescrib-

Davis B, Archambault C, Davis K, et al. A Patient Centered Approach to Opioid Tapers. *J Fam Practice*. 2019 December;68(0):548-556

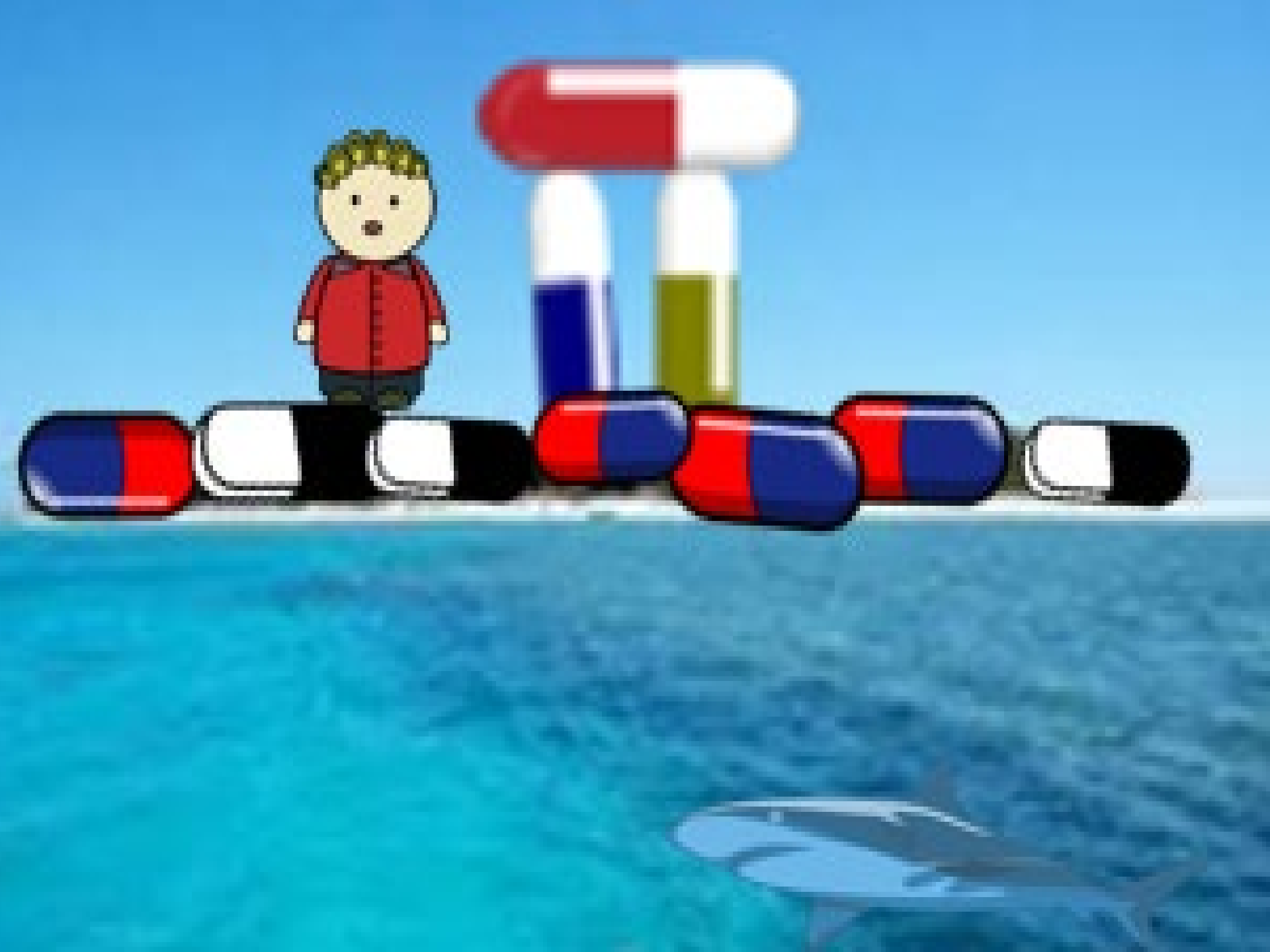
# FDA identifies harm reported from sudden discontinuation of opioid pain medicines and requires label changes to guide prescribers on gradual, individualized tapering

## *FDA Drug Safety Communication*

**[4-9-2019]** The U.S. Food and Drug Administration (FDA) has received reports of serious harm in patients who are physically dependent on opioid pain medicines suddenly having these medicines discontinued or the dose rapidly decreased. These include serious withdrawal symptoms, uncontrolled pain, psychological distress, and suicide.

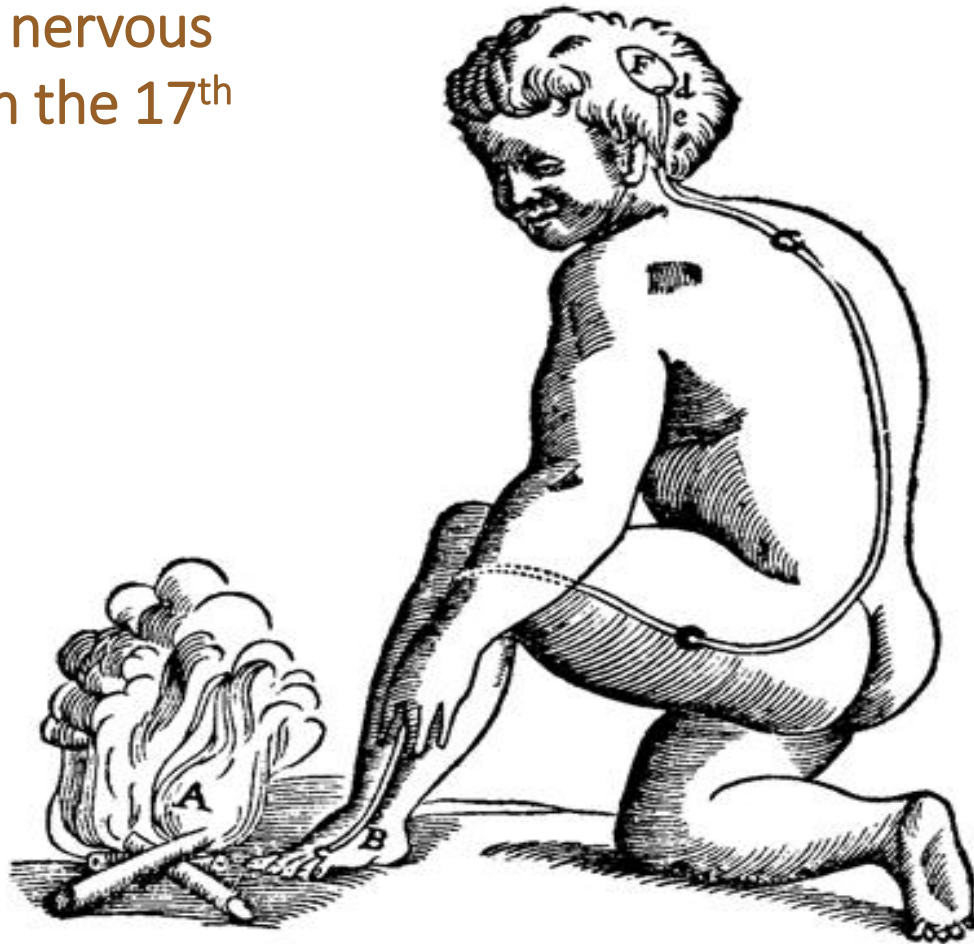
Rapid discontinuation can result in uncontrolled pain or withdrawal symptoms. In turn, these symptoms can lead patients to seek other sources of opioid pain medicines, which may be confused with drug-seeking for abuse. Patients may attempt to treat their pain or withdrawal symptoms with illicit opioids, such as heroin, and other substances.

<https://www.fda.gov/drugs/drug-safety-and-availability/fda-identifies-harm-reported-sudden-discontinuation-opioid-pain-medicines-and-requires-label-changes#:~:text=There%20are%20no%20standard%20opioid,every%202%20to%204%20weeks.>



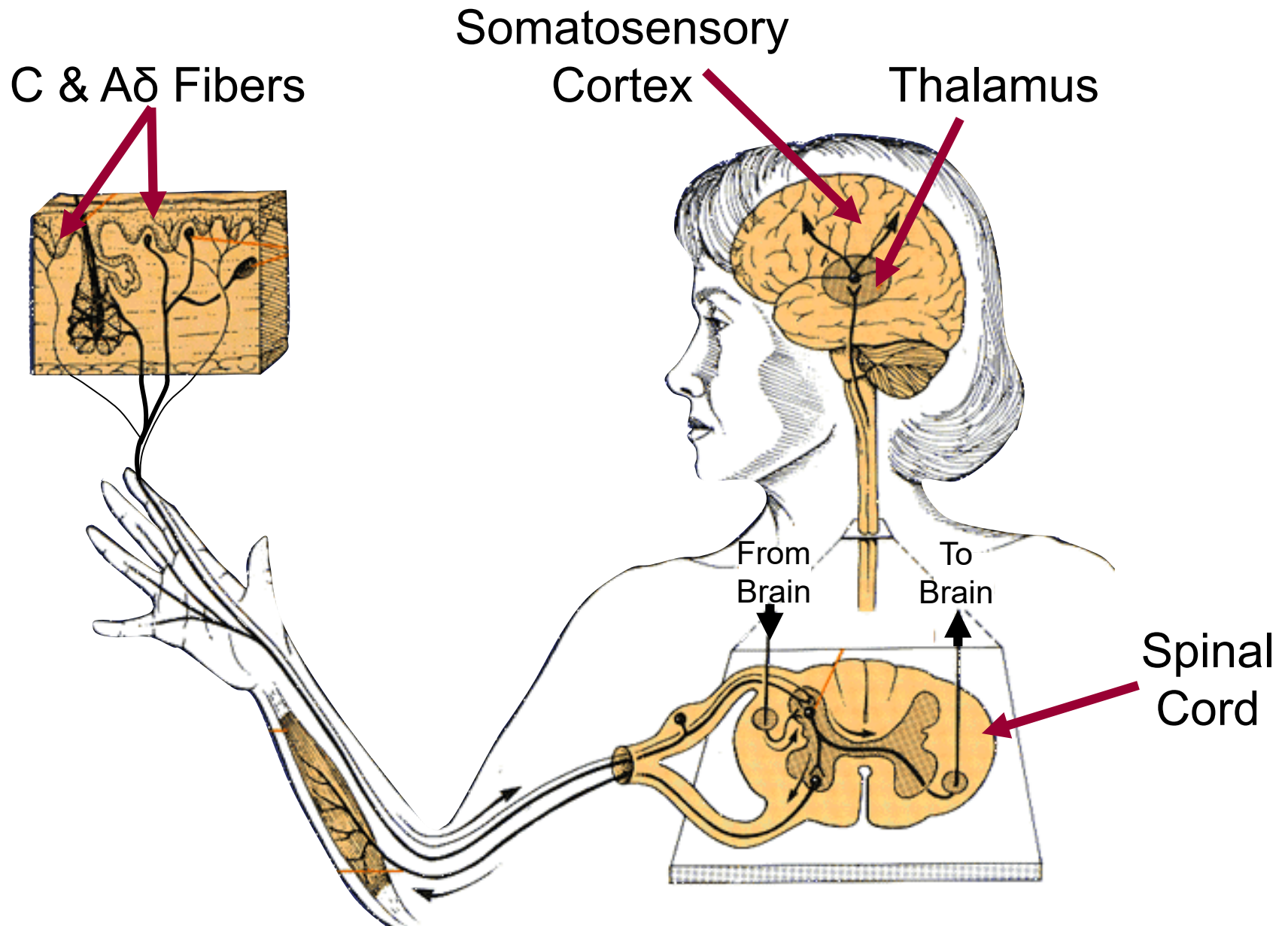
# Nociceptive Pain

René Descartes conceived  
the pain sensing nervous  
system this way in the 17<sup>th</sup>  
Century





# Nociceptive Pain



# Nociceptive Pain



**Transduction** (Nociceptors)



**Transmission** (Peripheral nerve)



**Modulation** (Spinal cord & Thalamus)



**Perception** (Somatosensory cortex)

# Nociceptive Pain

## Pain Stimulus

(trauma, inflammation, heat, etc.)



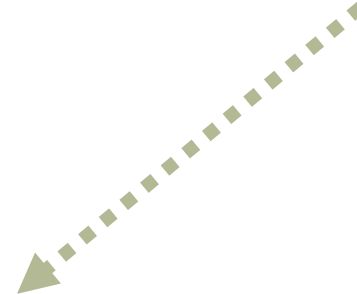
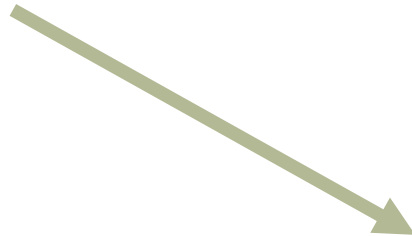
Sensory  
processing  
of pain stimulus



Emotional  
processing  
of pain stimulus



Emotional  
Distress and  
Unpleasantness



**PAIN** AND DISABILITY



## Examples

- Arthritis (degenerative or inflammatory)
- Radiation fibrosis from cancer
- Burns
- Back pain
- Fractures

Described as: **“sharp, dull, aching”**

# Neuropathic Pain



**Transduction** (Nociceptors)



**Transmission** (Peripheral nerve)



**Modulation** (Spinal cord & Thalamus)



**Perception** (Somatosensory cortex)

# Neuropathic pain from nerve injury

Physical injury to the nervous system, or modification of the nervous system by chemicals, inflammation...



*Altered Sensory  
processing*

# Neuropathic pain from nerve injury

Non-painful  
stimuli



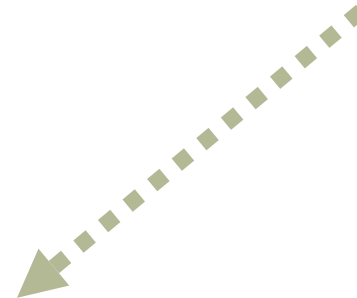
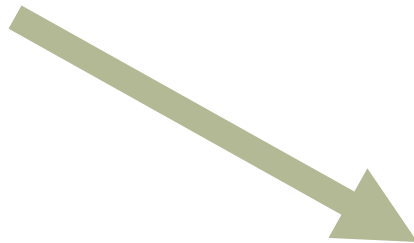
Altered Sensory  
processing



Emotional  
processing  
of pain stimulus

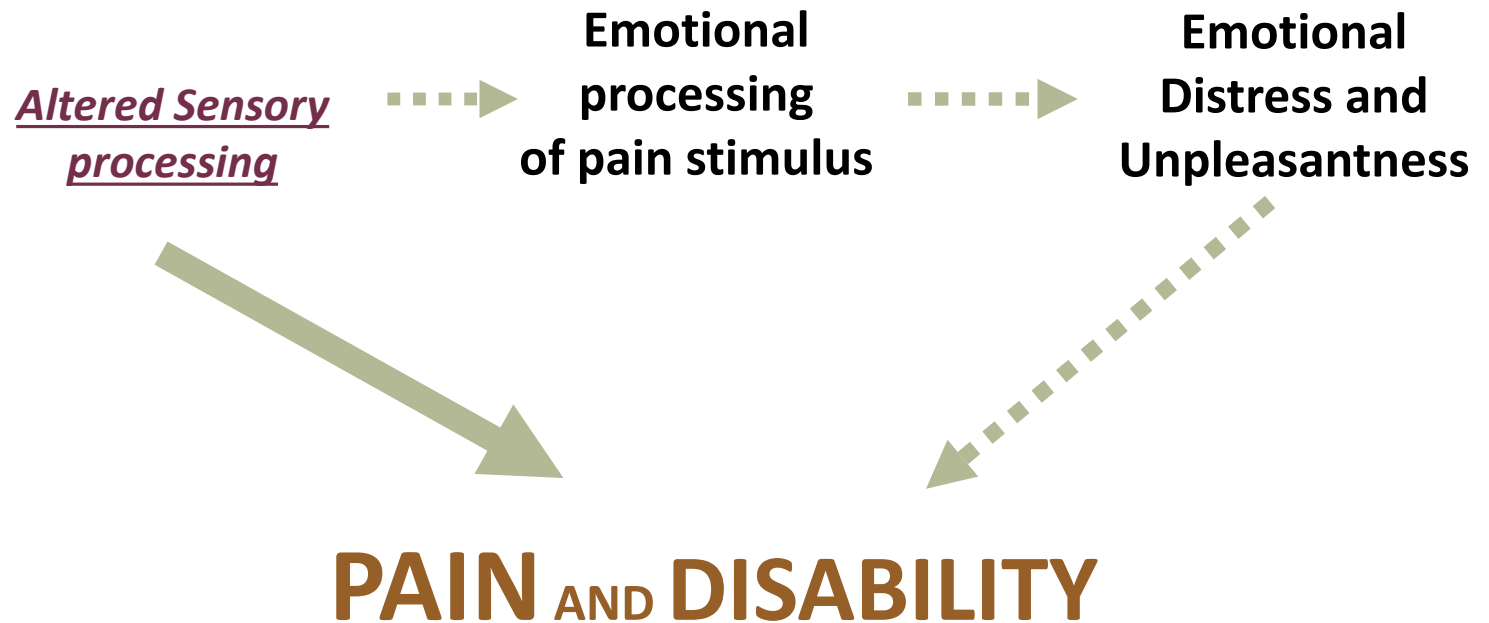


Emotional  
Distress and  
Unpleasantness



**PAIN AND DISABILITY**

# Neuropathic pain from nerve injury



### Examples

- Diabetic and other neuropathies
- Post herpetic neuralgia
- CRPS
- Phantom limb pain
- Spinal cord injury and post stroke pain
- Brachial plexus injury
- Opioid induced hyperalgesia

Described as:

**“burning, shooting, electrical” with heightened sensitivity to stimuli**



9 years ago:

International Association  
for the Study of Pain  
(IASP) updates their  
definition of pain

Many people report pain **in the absence of tissue damage** or any likely pathophysiological cause; **usually this happens for psychological reasons.**

# Neuropathic Pain From Experiences That Re-organize the Nervous System

No physical nerve injury

**TRAUMATIC EXPERIENCE /TOXIC STRESS**

(War, abuse, assault, neglect, environment)



**Altered  
Sensory processing  
of pain stimulus**

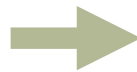
# Neuropathic Pain From Experiences That Re-organize the Nervous System

## “TRAUMA INDUCED HYPERALGESIA” (TIH)

Non-painful stimuli



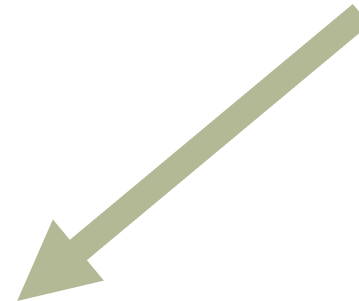
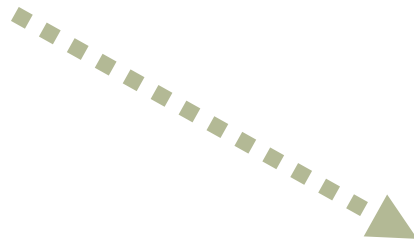
Altered Sensory processing



Emotional processing of pain stimulus



Emotional Distress and Unpleasantness



**PAIN AND DISABILITY**

# Neuropathic Pain From Experiences That Re-organize the Nervous System

## TRAUMA INDUCED SPONTANEOUS PAIN



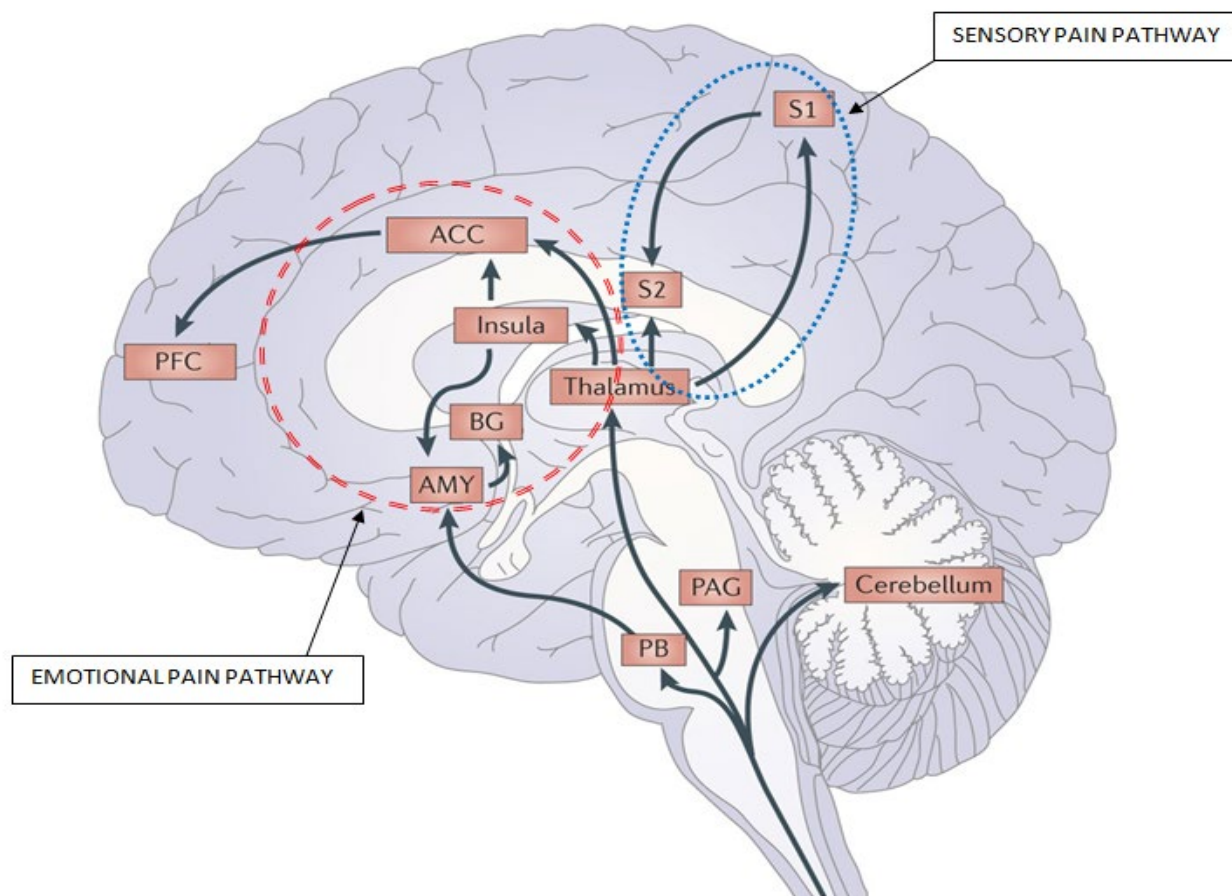
# Neuropathic Pain From Experiences That Re-organize the Nervous System

Pain described as:

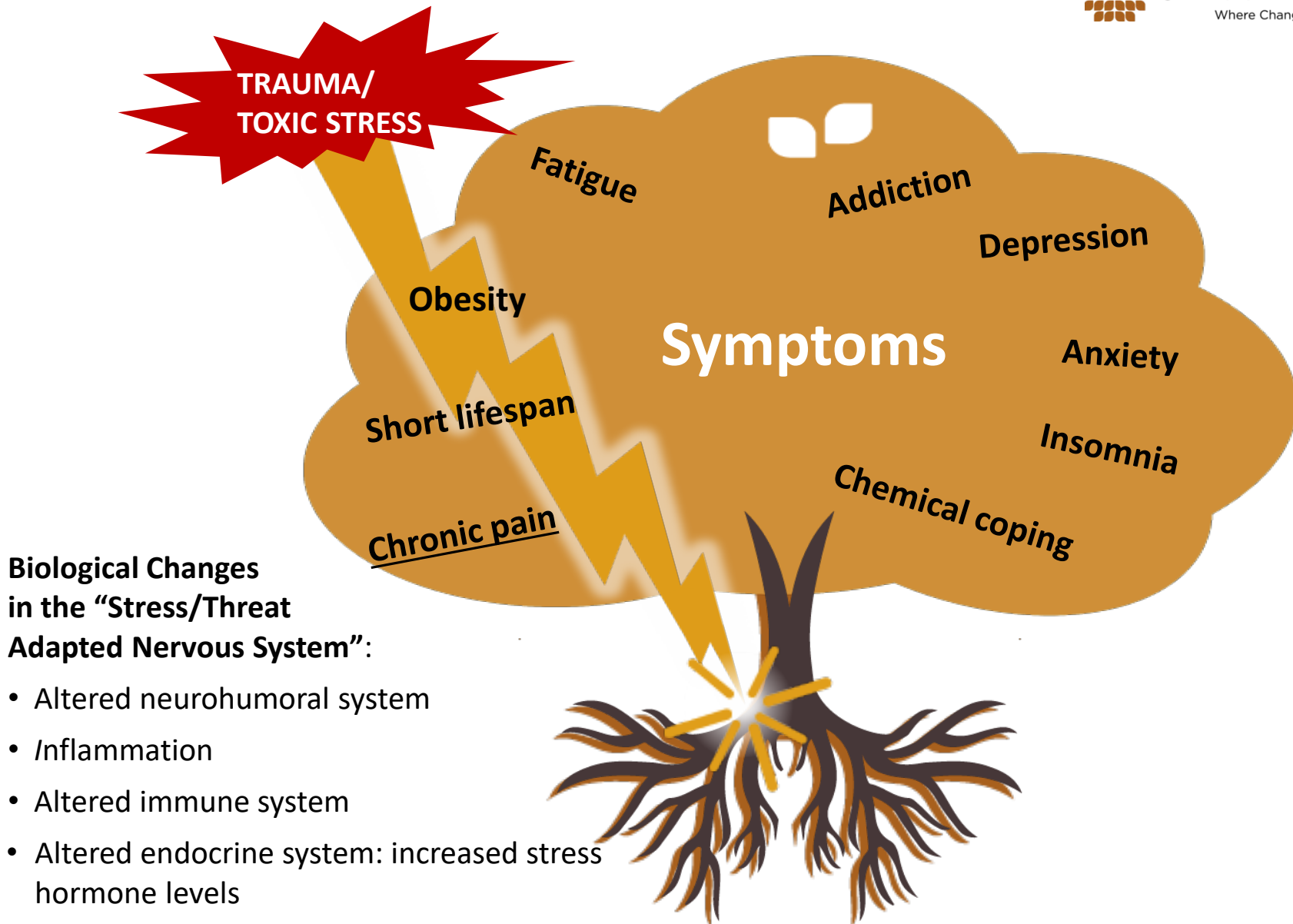
**“cruel, punishing, fearful, horrible”**

# Why do emotional responses/behaviors predominate in NPP resulting from experience?

The two pain pathways







# Neuropathic pain from experiences that re-organize to a Threat Adapted Nervous System

## Clinical Clues:

- “Nothing works for my pain” besides medications with psychotropic action (includes opioids, benzodiazepines, etc.)
- Diffuse pain with no clinical cause evident
- Multiple somatic complaints
- Disability is out of proportion to objective clinical pathology
- Pain behaviors seem out of proportion to the severity of the painful stimuli
- Emotionally charged behaviors in the office – crying, etc
- Patient describes pain using emotionally charged words: “I cry in pain”



"I get so irritated with people who don't believe fibromyalgia is real. For me, and I think for many others, it's really a cyclone of anxiety, depression, PTSD, trauma, and panic disorder, all of which sends **the nervous system into overdrive, and then you have nerve pain as a result,**"

# Experimental evidence: psychological trauma leads to altered sensory processing

- Deep pain (pressure) thresholds were found to be lower in the back AND the hand in subjects with LBP who had a history of psychological trauma; lower only in the back in subjects w/o psychological trauma, “...suggests trauma induced abnormalities in central pain processing...”<sup>1</sup>

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- Higher pain ratings to hand immersion in cold water in psychological trauma exposed women compared to non-trauma exposed controls. <sup>2</sup>

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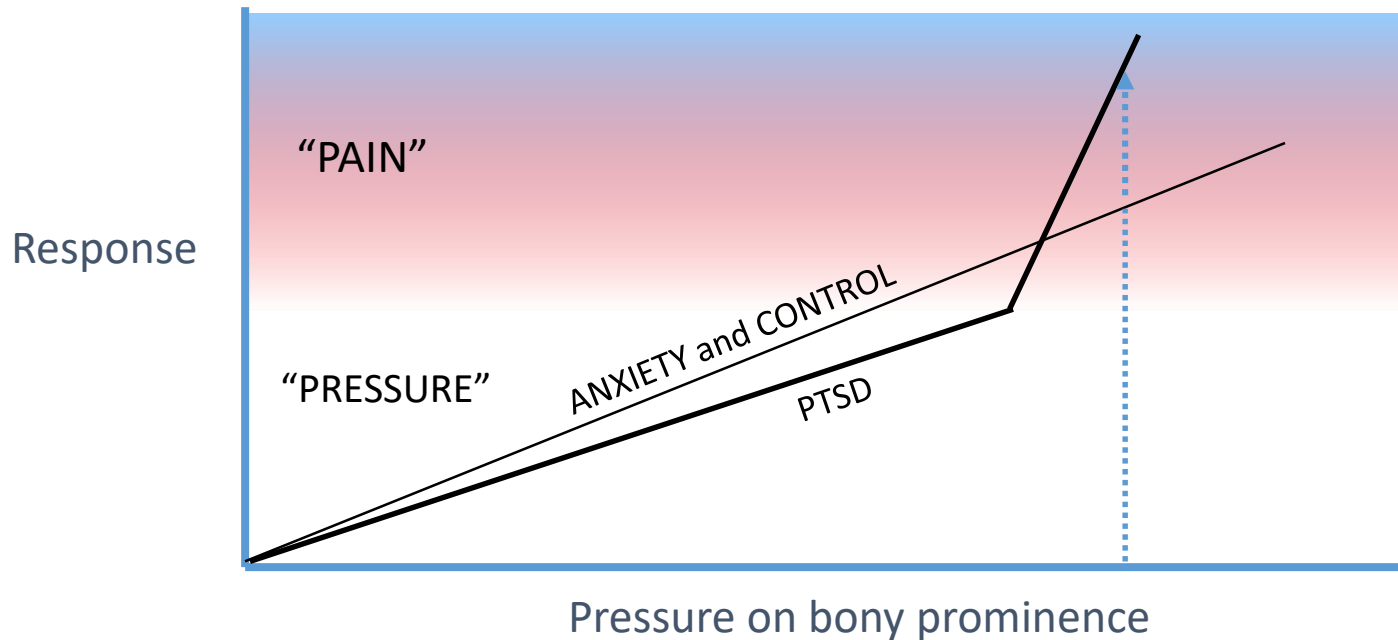
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- Lower ischemic pain threshold in women with psychological trauma history compared to women without trauma history. <sup>3</sup>

1. Tesarz J. Distinct quantitative sensory testing profiles in nonspecific chronic low back pain subjects with and without psychological trauma. Pain 2015; 156: 577-86
2. Gomez-Perez L. Association of trauma, post traumatic stress disorder, and experimental pain response in healthy young women. Clin J Pain 2013; 29: 425-34
3. Creech S. Written emotional disclosure of trauma and trauma history alter pain sensitivity. J Pain 2011; 12: 801-10



# Experimental evidence: psychological trauma, and not anxiety, leads to altered sensory processing

Study comparing veterans with anxiety to those with PTSD



Defrin R, et al. Quantitative testing of pain perception in subjects with PTSD—implications for the mechanism of the coexistence between PTSD and chronic pain. *Pain* 2008 138: 450–459

# Experimental evidence: psychological trauma causes chronic pain

## *Temporality and Association*

### **Adult trauma:** Prevalence of Psychological Abuse in a Chronic Pain Treatment Sample (Lake)

- 50% reported at least one type of abuse experience (i.e., physical, emotional, or sexual) in the past 12 months

# Experimental evidence: psychological trauma causes chronic pain

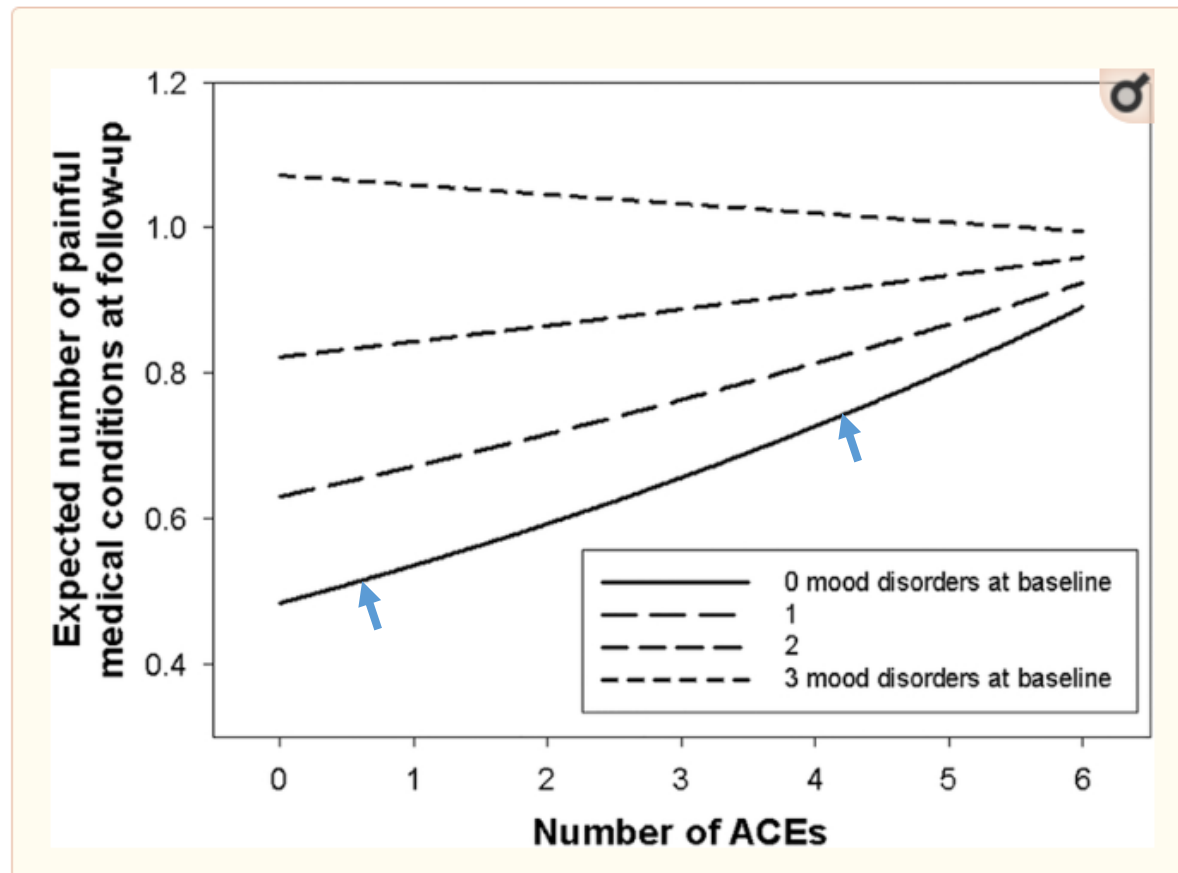
## *Temporality and Association*

**Developmental trauma and pain:** A 2005 Systematic review of the literature

- *Adults who reported being abused or neglected in childhood* reported more pain symptoms and related conditions than those not abused or neglected in childhood
- *Adults patients with chronic pain* were more likely to report having been abused or neglected in childhood than controls chronically ill patients with no chronic pain
- *Adult patients with chronic pain* were more likely to report having been abused or neglected in childhood than *nonpatients* with chronic pain identified from the community
- *Adult non-patients with chronic pain* were more likely to report having been abused or neglected than individuals from the community not reporting pain.

# Experimental evidence: psychological trauma causes chronic pain

*Dose- Response* between trauma and pain



Sachs-Erickson N et al. When Emotional Pain Becomes Physical: Adverse Childhood Experiences, Pain, and the Role of Mood and Anxiety Disorders. *Clinical Journal of Psychology* 2017; 73(10): 1403-1428

# Experimental evidence: psychological trauma causes chronic pain

*Reversibility* - trauma treatment decreases pain

- 2016: EMDR and reprocessing vs care as usual (PT, meds) for chronic back pain in 40 people with a history of psychological trauma:
  - No improvement in the care as usual group
  - 50% of the treatment group reported clinically significant pain decrease that sustained at 6 month follow up.
- 2019: There are now also six randomized controlled clinical trials available that demonstrate the efficacy of EMDR in the treatment of different pain conditions.

Grehardt A et al. Eye Movement Desensitization and reprocessing vs. treatment-as-usual for non-specific chronic back pain patients with psychological trauma : a randomized controlled pilot study. *Front. Psychiatry* 2016; 7:201

Tesarz J, et al. EMDR Therapy's Efficacy in the Treatment of Pain. *Journal of EMDR Practice and Research* 2019; 13(4)

## Pain from traumatic experiences that change the nervous system to make it more sensitive to pain

### What the patients describe

- Chronic abdominal pain
- Headache
- Chronic back pain
- Multiple joint pain
- Hurt all over
- Fatigue
- Neurological abnormalities

### Medical diagnoses under which these patient may be "misfiled"

- Chronic back pain
- Headaches
- Chronic abdominal pain
- Fibromyalgia
- Dysautonomia
- Joint hypermobility syndrome
- Chronic Lyme Disease
- Functional movement disorders
- Dystonia
- Small Fiber Neuropathy
- Multiple sclerosis
- Lupus
- Rheumatoid arthritis
- Mold exposure
- Toxic exposure (metals pesticides)



**Nociplastic Pain:** “Pain that arises from altered nociception despite no clear evidence of actual or threatened tissue damage causing the activation of peripheral nociceptors or evidence for disease or lesion of the somatosensory system causing the pain.”

International Association for the Study of Pain. 2017

<https://www.iasp-pain.org/Education/Content.aspx?ItemNumber=1698#Nociplasticpain>

# A typical primary care 'Chronic Pain Patient' 1:

Please respond to each item by marking one box per row.

In the past 7 days...

		Had no pain	Mild	Moderate	Severe	Very Severe
PAINQU6	How intense was your pain at its worst?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 5
PAINQU8	How intense was your average pain?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 5

		No pain	Mild	Moderate	Severe	Very Severe
PAINQU21	What is your level of pain right now?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 5

# A typical primary care 'Chronic Pain Patient'

## 2:

GAD-7 Screening Questions

	During the last 2 weeks, how often have you been bothered by the following problems?	not at all	several days	more than half the days	nearly every day
1	Feeling nervous, anxious, or on edge	0	1	2	3
2	Not being able to stop or control worrying	0	1	2	3
3	Worrying too much about different things	0	1	2	3
4	Trouble relaxing	0	1	2	3
5	Being so restless that it is hard to sit still	0	1	2	3
6	Becoming easily annoyed or irritable	0	1	2	3
7	Feeling afraid as if something awful might happen	0	1	2	3

Total Score: 21 = Add columns: \_\_\_\_\_ + \_\_\_\_\_ + 21

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

# A typical primary care 'Chronic Pain Patient'

## 3:

**Adverse Childhood Experience (ACE) Questionnaire**  
Finding your ACE Score is like 10/24/04

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household 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?  
☒ Yes ☐ No If yes enter 1 1
2. Did a parent or other adult in the household often ...  
Push, grab, slap, or throw something at you?  
or  
Ever hit you so hard that you had marks or were injured?  
☒ Yes ☐ No If yes enter 1 1
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  
Try to or actually have oral, anal, or vaginal sex with you?  
☒ Yes ☐ No If yes enter 1 1
4. Did you 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?  
☐ Yes ☒ No If yes enter 1 1 my mom's side of family
5. Did you 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?  
☒ Yes ☐ No If yes enter 1 1 my mom
6. Were your parents ever separated or divorced?  
☒ Yes ☐ No If yes enter 1 1
7. Was your mother or stepmother:  
Often pushed, grabbed, slapped, or had something thrown at her?  
or  
Sometimes or 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?  
☒ Yes ☐ No If yes enter 1 1
8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?  
☒ Yes ☐ No If yes enter 1 1 mom
9. Was a household member depressed or mentally ill or did a household member attempt suicide?  
☒ Yes ☐ No If yes enter 1 1 me
10. Did a household member go to prison?  
☐ Yes ☒ No If yes enter 1 0 Khr 3-21-05

Now add up your "Yes" answers: This is your ACE Score: 9

# Emotional Pain

- Social rejection
- Grief
- Isolation

# Social interactions mediate pain perception

- Socially isolated people have a lower pain threshold
- Degree of social support at diagnosis of RA predicts pain intensity at 3 year follow up
- Pain scores correlate positively with perceived social support in people with chronic musculoskeletal pain

Eisenberg N. Pain 2006;126:132-8

Evers A. Beh Res Ther. 2003;41:1295-1310

Hsu. Clin J Pain 2014;30:713-23

# Emotional Pain

- How about Anxiety and Depression??

# Emotional Pain

## Depression

Meta-analysis compared pain perception of depressed and control participants.

32 experimental pain studies examined.

Overall pain threshold was higher in depression but strong heterogeneity was evident.

No differences in pain tolerance were found.



# What is Pain 2019 ?

An experience produced  
by any combination of:

- *Nociception*
- *Neuropathic from physical nerve damage or disease*
- *Neuropathic from a Threat Adapted Nervous System: Nociplastic pain*
- *Grief, Rejection, Isolation*

# What is Pain 2019 ?

An experience produced  
by any combination of  
the 4 processes,  
**interpreted through the  
lens of the individual's  
life experience and  
emotional state:**

- *Culture, Beliefs, Values, Assumptions*
- *Anxiety, depression*

# What is Pain 2019 ?

An experience produced  
by any combination of  
the 4 processes, felt and  
interpreted through the  
lens of the individual's  
life experience and  
emotional state, and  
**modified by the  
important relationships  
in the individuals life**

- *Family*
- *Work*

# Why do we taper opioid?

- Patient has OUD – consider MAT
- Patient is diverting opioid – public health mandate
- Patient is not benefitting
- Patient has intolerable side effects
- Patient will not engage in self care
- Patient is high risk for overdose due to mental health condition(s)
- Patient is using opioid as a psychotropic

“Addiction occurs in only a small percentage of people who are exposed to prescription opioids, even among those with preexisting vulnerabilities.”



Nora Volkow, Director of the National Institute on Drug Abuse

Volkow ND, McClellan AT. Opioid abuse in chronic pain—misconceptions and mitigation strategies. *N Engl J Med*. 2016;374:1253-1263.

## Evidence that opioid is used as a psychotropic for many of our people on chronic opioid therapy

**51%** of the opioid pain killer prescriptions written in the United States go to the **16%** of the American population with mental health diagnoses of Anxiety or Depression

An American with Depression or Anxiety is **4 x more likely** to be prescribed an opioid pain killer than an American without these diagnoses

### Who are these people on pill island?

- People prescribed opioid, suffering a chronic painful physical illness who want to stop
  - Not enough benefit
  - Side effects
  - Other reasons
  
- **People using opioid as a psychotropic, often with trauma induced hyperalgesia using opioids to treat anxiety, depression, and trauma related neuropathic pain**
  - **Taper opioid only if the root issue is addressed**
  - **May not want to change treatment plan, but they will deteriorate with time if they do not**

# THANK YOU!

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