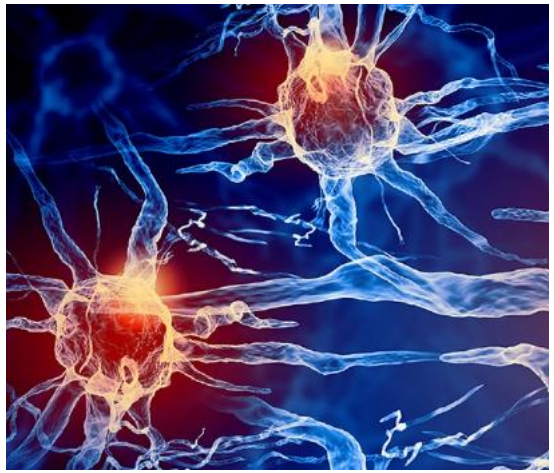

Practical Clinical Strategies for Treating Complex Pain

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Disclosure

Financial Relationship Disclosure

The planner and speaker for this session have no relevant financial relationships to disclose.

Disclaimer: The use of brand name medications is due to limited generic availability of buprenorphine treatment options and is primarily for clinical reasons. The use of brand names does not represent any conflicts of interest or promotion of one pharmacological agent over another. Off label use of medications will also be discussed in this presentation.

Learning Objectives:

1

1. Understand the risk stratification, safety considerations and monitoring of patients using opioid pharmacotherapy including buprenorphine.

2

2. Describe the treatment considerations for chronic pain management in the context of opioid conversion including cost considerations.

3

3. Evaluate pharmacotherapeutic and integrative health options in pain and OUD management.

Goals

EVALUATE CHRONIC PAIN

ASSESS PATIENT RISK

DIAGNOSE & TREAT

EDUCATE AND MONITOR

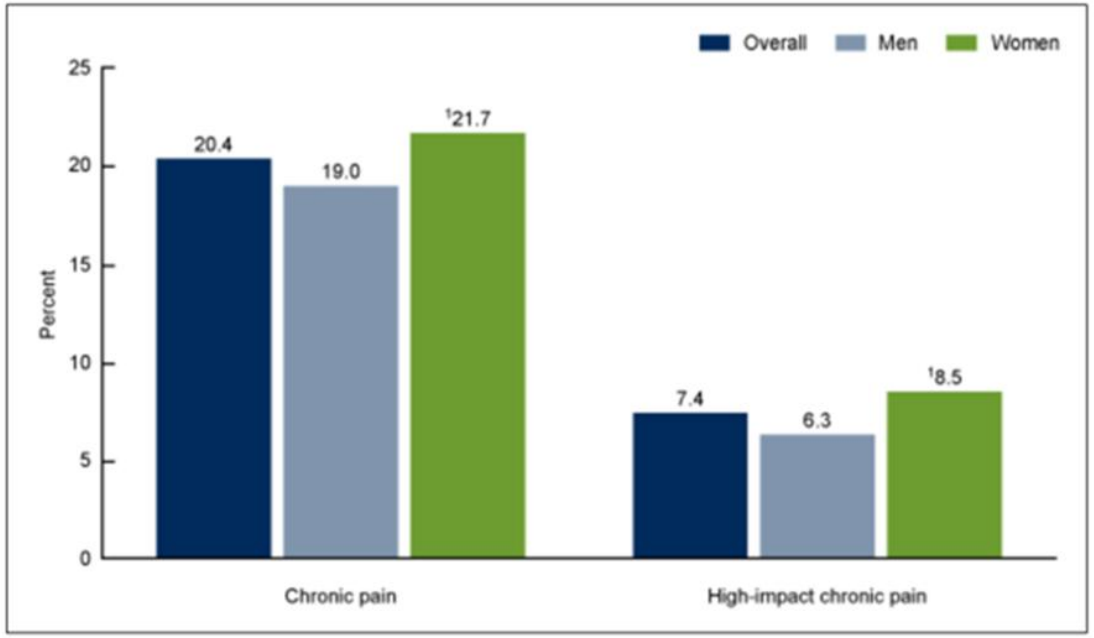
CASE EXAMPLES- WHAT WOULD YOU DO?

Buprenorphine and Naltrexone (LDN) as treatment options

Prevalence of Pain

- The prevalence of chronic pain is 20.4%, and the prevalence of high-impact chronic pain is 7.4%.
- Women were more likely to have chronic pain (21.7%) and high-impact chronic pain
- Men have a lower prevalence at 19.0% and 6.3%, respectively.

Figure 1. Percentage of adults aged 18 and over with chronic pain and high-impact chronic pain in the past 3 months, overall and by sex: United States, 2019



https://www.cdc.gov/nchs/products/databriefs/db390.htm

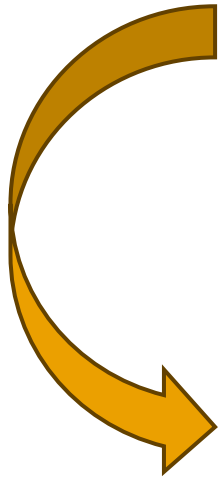
Pain—etymology & features

Six key features:

- 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/Education/Content.aspx

Complex Chronic Pain



Chronic Pain

Add Mental Health co-morbidity

Add Co-occurring Substance Use Disorder

Add Opioids

Add lack of Pt Education &/or Monitoring

=Chronic Pain with Addiction

CAUTION:

Opioids including buprenorphine in combination with benzodiazepines or other sedatives (ie, Z drugs) is high risk.

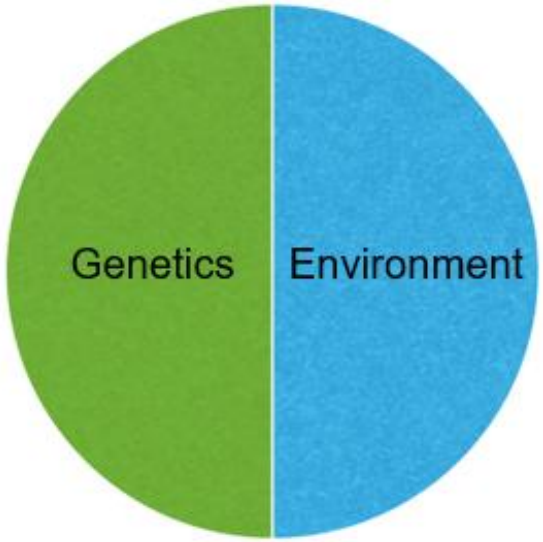
Nature vs. Nurture?

PCSS Providers Clinical Support System
Medications for Opioid Use Disorders

Individual Vulnerability to SUDs

- opioid receptors
- dopaminergic tone
- other transmitters
- intracellular signals

- psychiatric disorders
- novelty seeking
- harm avoidance
- impulsivity



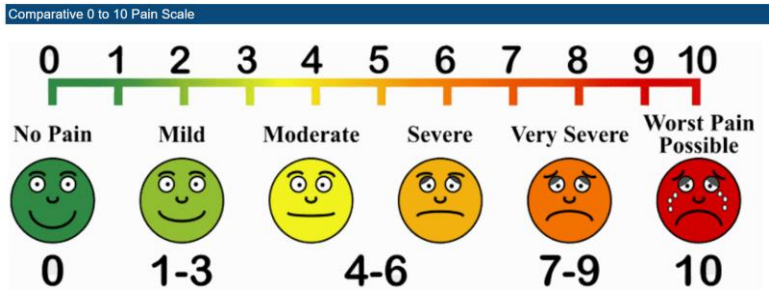
- parents
- siblings
- friends

- Adverse Childhood Experiences (ACEs)
- stressors
- lack of positive experiences

- illicit sources
- prescription
- family and friends

Anokhin et al., 2015
Milivojevic et al., 2012
Reed et al., 2014
Volkow et al., 2016
Goldman et.al. 2005

This?



Or this?

1. What number best describes your <u>pain on average</u> in the past week?

0	1	2	3	4	5	6	7	8	9	10
No Pain										Pain as bad as you can imagine

2. What number best describes how, during the past week, pain has interfered with your <u>enjoyment of life</u>?

0	1	2	3	4	5	6	7	8	9	10
	Does not interfere									Completely interferes

3. What number best describes how, during the past week, pain has interfered with your <u>general activity</u>?

0	1	2	3	4	5	6	7	8	9	10
	Does not interfere									Completely interferes

Krebs, E. and Initial Validation of the PEG, a Three-item Scale Assessing Pain Intensity E., Lorenz, K. A., Bair, M. J., Damush, T. M., Wu, J., Sutherland, J. M., Asch S, Kroenke, K. (2009). Development and Interference. Journal of General Internal Medicine, 24(6), 733–738.

Assess Patient Risk

SOAPP 8® *versus*

Opioid Risk Tool - Revised (ORT-R)

Screen for Depression & Anxiety (PHQ9/GAD7)

Screen for alcohol use disorder (AUDIT-C)

Family History & Social History

*Urine Drug Screen (UDS) monitoring is Standard practice in long-term opioid treatment.

Opioid Risk Tool

This tool should be administered to patients upon an initial visit prior to beginning opioid therapy for pain management. A score of 3 or lower indicates low risk for future opioid abuse, a score of 4 to 7 indicates moderate risk for opioid abuse, and a score of 8 or higher indicates a high risk for opioid abuse.

Mark Each Box That Applies	Yes	No
Family history of substance abuse		
Alcohol	1	0
Illegal drugs	1	0
Rx drugs	1	0
Personal history of substance abuse		
Alcohol	1	0
Illegal drugs	1	0
Rx drugs	1	0
Age between 16-45 years	1	0
Psychological disease		
ADD, OCD, bipolar, schizophrenia	1	0
Depression	1	0
Scoring total		

DSM-V OUD

Severity level:

Mild: 2-3 symptoms

Moderate: 4-5 symptoms

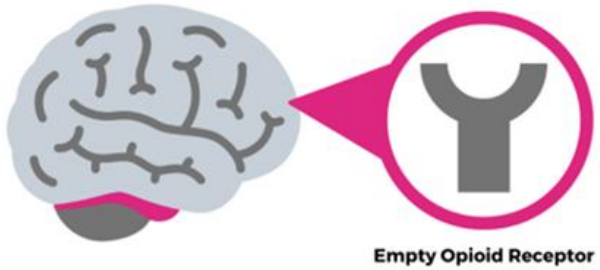
Severe: 6 or more symptoms

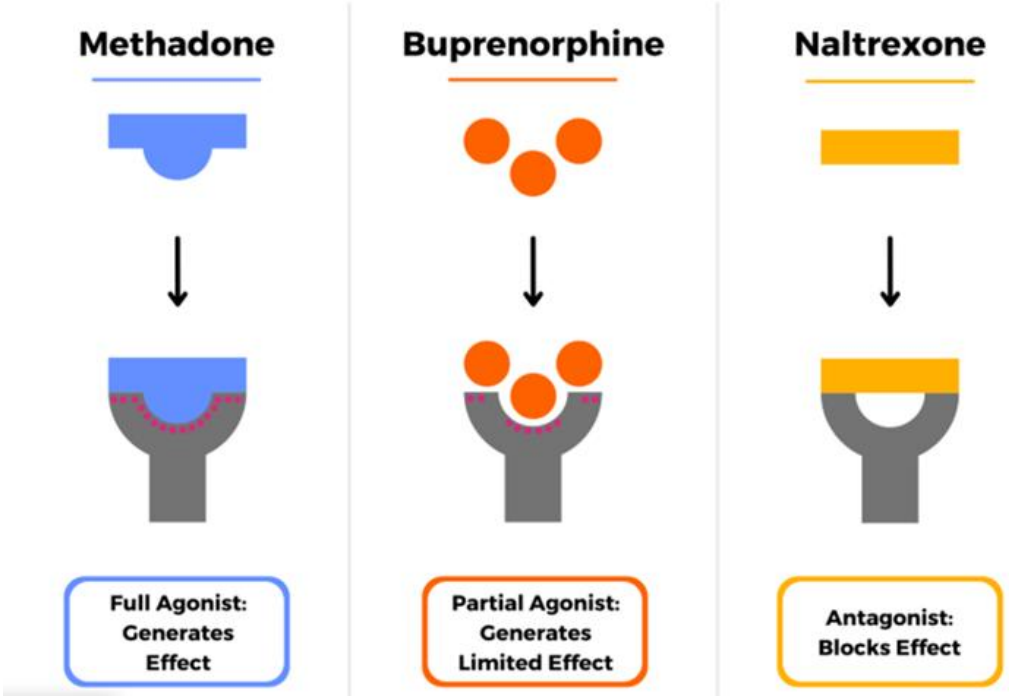
- Loss of Control
  - Larger amounts, longer time
  - Inability to cutback
  - More time spent, getting, using, recovering
  - Activities given up to use.
  - Craving
- Physiologic
  - Tolerance
  - Withdrawal
- Consequences
  - Hazardous use
  - Social or interpersonal problems related to use
  - Neglected major roles to use
  - Continued use after significant problems.

- A substance use disorder is defined as having 2 or more of these symptoms in the past year
- Tolerance and withdrawal alone don't necessarily imply a disorder.
- Severity is related by the number of symptoms.

2-3 = mild
4-5 = moderate
6+ = severe

Mechanism





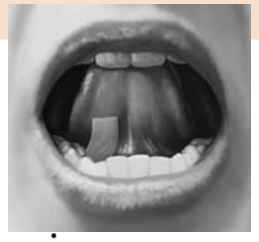
Hydrocodone
Oxycodone
Codeine
Morphine
Methadone

Naltrexone

Full opioid agonist → **Opioid antagonist**

FDA approved Buprenorphine* for Pain

Transdermal buprenorphine	Buccal Buprenorphine films	Buprenorphine/naloxone sublingual tabs/films
Butrans patch® - generic buprenorphine patch	Belbuca® - no generic equivalent	*Buprenorphine/naloxone –is also used off label for pain management
Dosed every 7 days (patch rotation)	Dosed q12hrs	Dosed 2/0.5mg TID/QID for pain
Initial dose: 5mcg Titration: 7.5 10, 15, 20mcg transdermal patch	MAX: 900mcg film	MAX: 8/2 mg TID (less common)
QTc prolongation, rash, N/V, lower the seizure threshold, respiratory depression, Adhesive allergy	QTc prolongation, N/V, Can lower seizure threshold, respiratory depression	Elevated LFTs, nausea, headaches, lowers seizure threshold,
$305-$810 *Requires Prior Auth	$314-$922 *Requires Prior Auth	$119-$289 *Monotherapy bupe requires Prior Auth, must designate ICD10 F.11.20 (OUD or opioid dependency)



Injectable buprenorphine and injectable naltrexone are not considered off label pain management.

Low Dose Naltrexone (LDN)

- Off label use for treating Fibromyalgia, Neuropathies, Complex Regional Pain.
- Naltrexone and its active metabolite 6-β-naltrexol are competitive antagonists at – μ-opioid and κ-opioid receptors – lesser extent at δ-opioid receptors.
- A sub-therapeutic dose of naltrexone as compared to the higher doses used in opioid use disorder and alcohol use disorder (oral naltrexone 50mg po qday, injectable/IM naltrexone at 380mg q4wks).
- Typical LDN dosages range around 1mg-6mg (typically 4mg daily).
- At low dosages, naltrexone exhibits a paradoxical effect which includes analgesia and anti-inflammatory actions.

Clinical Case 1: Chronic Pain Syndrome

Chief Complaint

- “My pain is out of control since I hit 50.”
- **History of Present Illness:** 52 year old female with Bipolar Disorder, neuropathy, anxiety, IBS-D, depression, history of stimulant use disorder (in remission) presents to clinic reporting she has been dealing with chronic pain for years. Currently taking ibuprofen and gabapentin which helps her feet but “nothing else.” She wakes up every morning hurting with diffuse joint, shoulder and knee pain. Reports muscle pains, chronic feet neuropathy, and neck pain at times.
- States she has been on gabapentin for years for neuropathy of the feet (not otherwise specified)
- Reports: cracking sensation of neck when doing PT for her shoulders
- X rays of knees and shoulders reveal mild/early degenerative disease.
- She was never told she has fibromyalgia, but reports intolerances to multiple SSRIs.
- Currently following with a psychiatrist, but not in therapy.

Clinical Case 1 Continued.

- **PMHx:**, Bipolar Disorder, chronic joint pains, anxiety, Depression prior SA (medication overdose), IBS-D, stimulant use disorder (in partial remission), cannabis use
- **Medications:** Ibuprofen PRN, lamotrigine 150mg daily, gabapentin 300mg BID, hydroxyzine 25mg TID PRN
- **SHx:** divorced, on disability, in remission from stimulant use disorder after using 8 balls 3 days per week for 6 years (stopped cold turkey), now in NA with sponsor, intermittent cannabis use (a joint once/week)
- **FHx**: Father with AUD (sober), son – SUD
- **Physical Exam:** Vitals: HR 75, BP 125/74

  General: affect appropriate, coherent thought pattern, loquacious, oral exam: edentulism

  MSK: normal ROM, TTP of shoulder and knees, no crepitus, normal ROM

  Neuro: No focal deficits, 5/5 strength

ORT-Revised score?

ORT-R=5

- PEG: 7/ 9 / 8 - PHQ9: 13 - GAD7: 17
- Is willing to try Low Dose Naltrexone and a titration Rx is ordered, Rheumatologic work-up & LFTs ordered. UDS reveals: +THC

LDN Rx

- Requires ordering through a Compound Pharmacy (many offer affordable delivery options) – it is not covered by insurance/third party payers.
- Some patients tolerate taking it bedtime (due to fatigue), while others tolerate it better during the day because nightly dosing can cause vivid dreams.
- Monitoring LFTs periodically. Always have baseline LFTs before initiating LDN.
- Side effects include: fatigue, insomnia (or somnolence), N/V, constipation, reduced appetite.
- Typical dose titration and instructions should be provided to the patient:

-Start 1mg (1mL) daily for 3 to 7 days

-Increase to 2mg (2mL) daily for 3-7 days

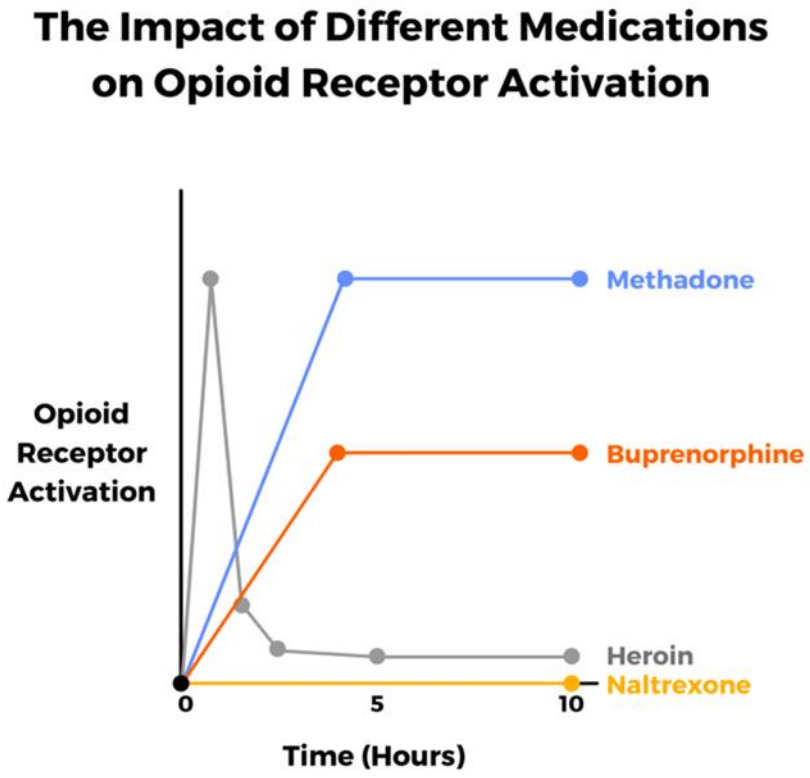
-Increase to 3mg (3mL) daily for 3-7 days

-Increase to 4mg (4mL) daily for 3-7 days

-If needed, the patient can increase to 5mg (5mL) daily

Understanding Bupe

- **Mechanism**
  - Partial μ-agonist
  - High affinity
  - Ceiling effect
- **Initiation**
  - Traditional (COWS ≥8–12)
  - Microinduction overlap
- **Risks**
  - Precipitated withdrawal
  - CNS depressants



Benefits

↓ withdrawal/cravings
Analgesia
Improved function

Take-Home

Treats addiction and pain

Dosing

Target 8–16 mg/day

VA Buprenorphine Guidelines

TABLE 1 – Approximate dose conversion strategies from existing Long-Term Opioid Therapy

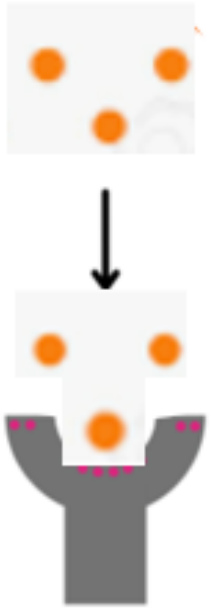
<50 MEDD **RECOMMEND: *FDA approved formulations for pain (e.g. mcg dose transdermal or buccal products)***	**50 – 90 MEDD** **RECOMMEND: *All buprenorphine formulations (mcg or mg) available based on patient response***	**>90 MEDD** **RECOMMEND: *Buprenorphine milligram formulations should be considered***
<30 MEDD – Treat as opioid naïve • Patch is preferred • 5mcg recommended starting dose 30-50 MEDD – • Consider 10mcg/hr patch as initial dose • Onset may be delayed 24 hours • Overlapping dosing of full agonist opioid for first 24 hours is reasonable FDA conversions to buprenorphine are highly conservative – • Manufacturer listed conversions already account for cross-tolerance • Be responsive during titration phase	Patients who are stable on existing LTOT • Appropriate for mcg formulations as initial dose • Buccal film preferred • Overlapping strategies may be helpful Patients with poor function and symptom control despite existing LTOT (or with concern for behavioral risks but without OUD) • Appropriate for consideration of mg formulations with a focus on early stabilization of withdrawal symptoms • Gradual titration to support functional goals after initial stabilization • May stabilize on lower doses than required for OUD.	Early Emphasis on mitigating withdrawal and discomfort during the transition from full-agonist LTOT Veterans with pain may stabilize on lower doses that DSM-V OUD Veteran preference should guide method of transition • STOP- START • Low Dose Buprenorphine initiation (LDBI) †
†Example of a 5-day LDBI strategy may be found VA Academic Detailing Buprenorphine for OUD Clinician Guide or Appendix C below		

MICRODOSAGE (MCG)

Buprenorphine

Transdermal patch

Buccal films



Partial Agonist: Generates Limited Effect

MILLIGRAM (MG)

Buprenorphine

Buprenorphine/ naloxone sublingual Films or tablets

Injectable buprenorphine (380mg IM/mo)

Partial Agonist: Generates Limited Effect

Buprenorphine (mg) – SL tablets/films

- **Strategy 1: Traditional Induction** (COWS ≥8–12)

•Initial dose of 2 mg/0.5 mg can be given.

•Patients continues in opioid withdrawal
  - •administer another 2 mg/0.5 mg dose and continue approximately every 1 to 2 hours as needed (holding for sedation)

•Patient has no withdrawal
  - •may then give 8mg next dose.

Diagram credit: Michigan Opioid Collaborative https://michigan-open.org/

Low Dose Buprenorphine Initiation

- **Strategy 2: 7 day start (well really 8)**

Continue the full opioid agonist

Start low dose buprenorphine

Day 1: 0.5 mg buprenorphine

Day 2: 0.5 buprenorphine BID (1mg total/24 h)

Day 3: 1mg buprenorphine BID (2mg total/24 h)

Day 4: 2mg buprenorphine BID (4mg total/24 h)

Day 5: 3 mg buprenorphine BID (6mg total/24 h)

Day 6: 4mg buprenorphine BID (8mg total/24 h)

Day 7: 6 mg buprenorphine BID (12 mg total/24h)

Day 8: 16 mg buprenorphine daily and 4mg q 6 hours prn withdrawal (max 32) and wean or stop the full opioid agonist.

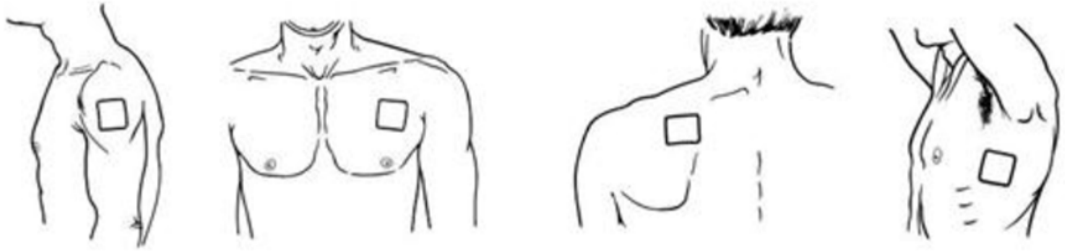
Transdermal Buprenorphine

Before Applying BUTRANS:

- Do not use soap, alcohol, lotions, oils, or other products to remove any leftover adhesive from a patch because this may cause more BUTRANS to pass through the skin.
- Each patch is sealed in its own protective pouch. Do not remove a patch from the pouch until you are ready to use it.
- Do not use a patch if the seal on the protective pouch is broken or if the patch is cut, damaged or changed in any way.
- BUTRANS patches are available in different strengths and patch sizes. Make sure you have the right strength patch that has been prescribed for you.

Where to apply BUTRANS:

- BUTRANS should be applied to the **upper outer arm, upper chest, upper back, or the side of the chest (See Figure A)**. These 4 sites (located on both sides of the body) possible BUTRANS application sites.



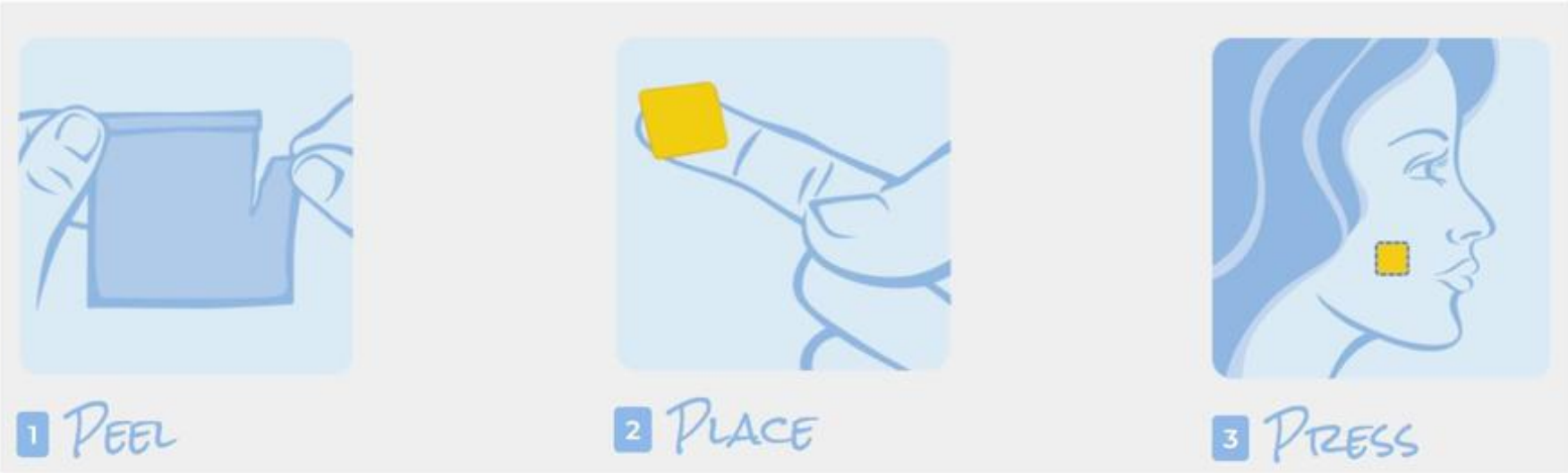
If pt has excessive perspiration and/or the patch peels off early, you can have the pt place a transparent dressing over the patch for the entire week.

Prior Auth language:

This is an URGENT prior auth request for Buprenorphine 5mcg qweekly patch – justification is for Chronic Pain (G89.4) in a pt who is too high risk for formulary full opioid agonist medications due to prior AUD or SUD history or active Cannabis Use Disorder. Transdermal buprenorphine is the safest option for this (geriatric) patient

Or pt is high risk due to COPD with chronic respiratory failure requiring oxygen or has a high risk of falls.

FDA APPROVED BUCCAL BUPRENORPHINE - FOR PAIN



- With clean, dry fingers, **peel** open the foil package. Fold along the dotted line at the top of the package and tear at the perforation
- You can also use scissors to carefully cut along the dotted line

- Wet the inside of your cheek with your tongue or with water
- Carefully remove the film from the foil package and
- **Place** the film on your dry finger with the yellow side facing up

- **Press** the yellow side against the inside of your cheek. Hold it in place for 5 seconds, and then take your finger away
- Leave on the inside of your cheek until fully dissolved, usually within 30 minutes

Case 1 cont…

- Pt reports some improvement in her pain on LDN 4mg dose. She takes it at bedtime since it is causing fatigue if she takes it in the morning. However, doesn't feel it helps her neck pain that is progressively getting worse.
- States that her hands are becoming numb and more painful (RF/anti CCP/ESR negative).
- A cervical spine x ray shows: Reversal of the normal cervical lordosis. Multilevel anterior marginal osteophyte formation and endplate cortical change and loss of height about the C4-5, C5-6, C6-7 levels.
- CT scan of c-spine (unable to do an MRI): multilevel spondylosis with neural foraminal stenosis at C3-C4 C4-C5 through C7-T1; moderate to severe on the right at C5-C6 and on the left at C6-C7 level. There is moderate multilevel spinal stenosis at C3-C7 levels.
- Pt referred for injection treatment, therapy and is agreeable to signing a controlled substance agreement.

What is the next best step?

A. Stop the LDN, start hydrocodone 5/325mg TID prn pain.

B. Stop the LDN, start buprenorphine/naloxone – micro-induction method.

C. Continue the LDN, start transdermal buprenorphine 5mcg qweekly.

D. Stop the LDN, start transdermal buprenorphine 5mcg qweekly.

Dental Education

Always document a baseline dental assessment: edentulism, periodontal disease, missing teeth, dental hygiene prior to Rx buprenorphine

FDA warns about dental problems with buprenorphine medicines dissolved in the mouth to treat opioid use disorder and pain

Benefits for use outweigh these risks and oral care can help

1-12-2022 FDA Drug Safety Communication

What safety concern is FDA announcing?

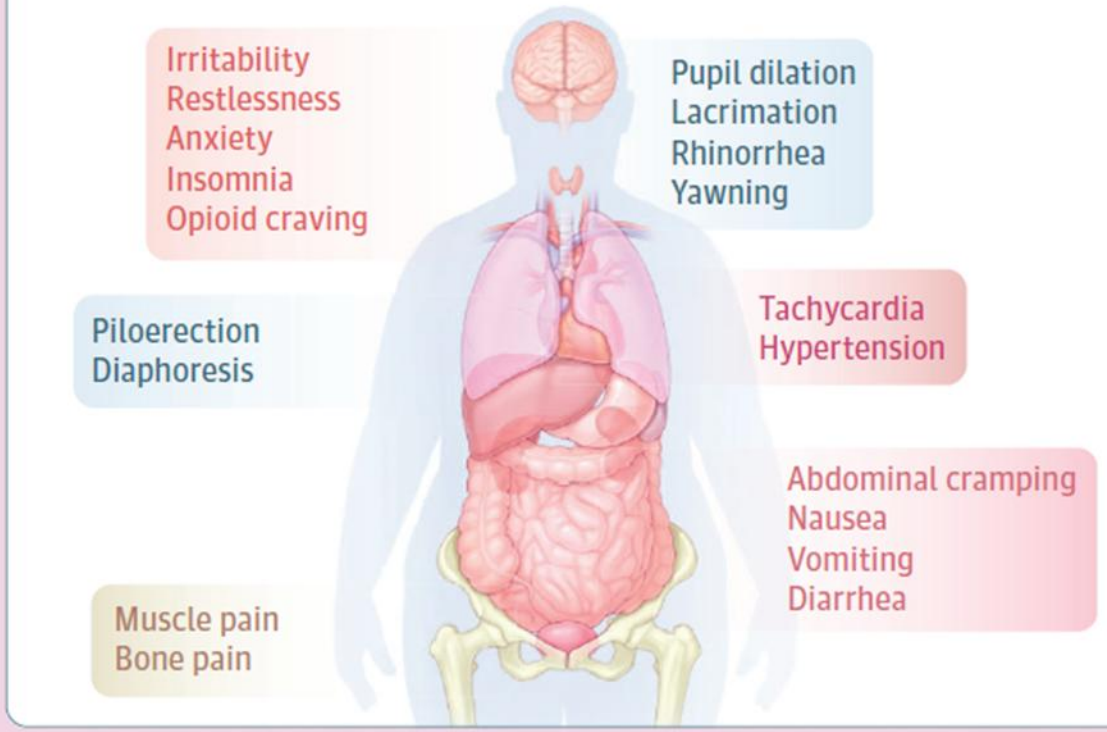
The U.S. Food and Drug Administration (FDA) is warning that dental problems have been reported with medicines containing buprenorphine that are dissolved in the mouth. The dental problems, including tooth decay, cavities, oral infections, and loss of teeth, can be serious and have been reported even in patients with no history of dental issues. Despite these risks, buprenorphine is an important treatment option for opioid use disorder (OUD) and pain, and the benefits of these medicines clearly outweigh the risks.

Despite these risks, buprenorphine is an important treatment option for opioid use disorder and pain, and the benefits of these medicines clearly outweigh the risks.

Rinsing with ½ tsp/1 tsp baking sods in 8oz of water for 30-60 seconds after each dose can help neutralize the acidity of the mouth. DO NOT BRUSH IMMEDIATELY AFTER DISSOLVING BUPRENORPHINE.

Acute Opioid Withdrawal

Opioid withdrawal characteristics



History:

- Encourage patients to report withdrawal, recognizing that many may fear disclosure given past negative experiences

Typical onset:

- 8-12 h After last use of most short-acting opioids (eg, heroin or oxycodone)
- 24-72 h After last use of long-acting opioids (eg, methadone)
- 8-24 h (Variable onset) after last use of fentanyl

Standardized assessments:

- Formal withdrawal assessments like the Clinical Opiate Withdrawal Scale (COWS) can guide clinicians when initiating or intensifying opioid withdrawal treatment, but are not required to treat opioid withdrawal. (COWS is an 11-point bedside assessment that incorporates objective and subjective signs).

Withdrawal severity: Objective signs such as sweating, pupil dilation, vomiting, diarrhea, irritability, shifting in bed, frequent yawning, and piloerection suggest severe withdrawal. Symptoms may be subjective or less severe in milder withdrawal.

Measured by the Clinical Opiate Withdrawal Scale (COWS): https://www.mdcalc.com/calc/1985/cows-score-opiate-withdrawal

Subjective Opiate Withdrawal Scale (SOWS)

Instructions: We want to know how you're feeling. In the column below today's date and time, use the scale to write in a number from 0-4 about how you feel about each symptom right now.

Scale: 0 = not at all 1 = a little 2 = moderately 3 = quite a bit 4 = extremely

DATE						
TIME						
SYMPTOM		SCORE	SCORE	SCORE	SCORE	SCORE
1	I feel anxious					
2	I feel like yawning					
3	I am perspiring					
4	My eyes are tearing					
5	My nose is running					
6	I have goosebumps					
7	I am shaking					
8	I have hot flushes					
9	I have cold flushes					
10	My bones and muscles ache					
11	I feel restless					
12	I feel nauseous					
13	I feel like vomiting					
14	My muscles twitch					
15	I have stomach cramps					
16	I feel like using now					
TOTAL						

Mild Withdrawal = score of 1 – 10
Moderate withdrawal = 11 – 20
Severe withdrawal = 21 – 30

Withdrawal Management

Withdrawal Symptoms	Adjunctive Medications
Anxiety/restlessness	•a-$_2$ Adrenergic agonists (e.g. clonidine) • Hydroxyzine, Gabapentin
Insomnia	•Sedating antidepressants (e.g. trazodone)
Musculoskeletal pain	•Acetaminophen, Ibuprofen •Tizanidine, Methocarbamol
GI Distress (nausea, vomiting, diarrhea)	•Oral hydration •Antiemetics (e.g. ondansetron) •Anti-diarrheals (e.g. loperamide)

Treat the withdrawal

SHINE PROTOCOL - INPATIENT

Phase 1:
Gabapentin 300mg TID x 4 days
Gabapentin 600mg qhs x 4 days
Hydroxyzine Pamoate 50mg QID x 4 days
Tizanidine 4mg QID x 4 days
Liposomal Vitamin C 3000mg QID x 4 days

Phase 2:
Gabapentin 100mg TID x 4 days
Gabapentin 300mg QHS x 4 days
Hydroxyzine Pamoate 25mg QID x 4 days
Tizanidine 2mg QID x 4 days
Liposomal Vitamin C 3000mg BID

Phase 3:
Hydroxyzine Pamoate 25mg QID thru stay (7 days)
Tizanidine 2mg BID thru stay (7 days)
Liposomal Vitamin C 3000mg BID thru stay

MEDICATION ORDERS: always include holding parameters for any CNS depressant medications – "hold if the patient is asleep or sedated."

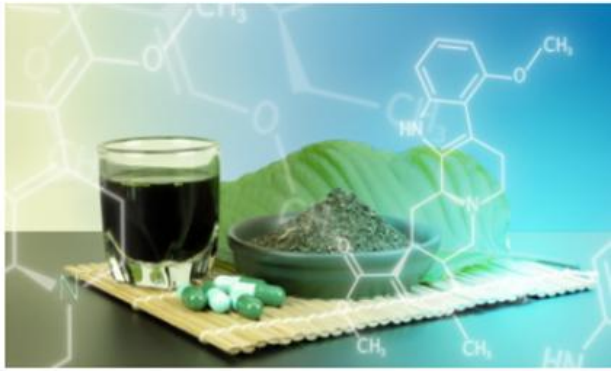
Shine protocol can be modified to lower dosages for patients on a lower MME regimen.

Other treatment options:
Clonidine 0.1mg TID/QID PRN
SBP>150 or DBP>90

Amantadine 100mg TID/QID PRN
restless legs

Rudolf et al AJDAA 2017. https://pubmed.ncbi.nlm.nih.gov/28795846/

Kratom



Kratom is a tropical tree (Mitragyna speciosa) that is native to Southeast Asia. Products prepared from kratom leaves are available in the U.S. online and in brick-and-mortar stores. Kratom is often used to self-treat conditions such as pain, coughing, diarrhea, anxiety and depression, opioid use disorder, and opioid withdrawal, with regular kratom users self-reporting using less than 6g of botanical kratom per consumption, per several recent studies. An estimated 1.7 million Americans aged 12 and older used kratom in 2021, according to the Substance Abuse and Mental Health Services Administration's National Survey on Drug Use and Health.

Of note, 7-hydroxymitragynine (7-OH) is a naturally occurring alkaloid in the kratom plant, but only a minor constituent that comprises less than 2% of the total alkaloid content in natural kratom leaves. However, 7-OH demonstrates substantially greater mu-opioid receptor potency than kratom's primary alkaloid constituent mitragynine, as well as other classical opioids such as morphine. For more information about the agency's efforts regarding 7-OH, see Hiding in Plain Sight: 7-OH Products.

Michigan Sounds the Alarm – HB5537

- The State of Michigan House passed the Kratom bill 5537 to ban **all kratom products** on 3/24/26 – now under review by the Senate.
- Physicians and other Healthcare Professionals must be attentive to the risks patients may have with abrupt discontinuation.
- 7-OH is the synthetic extract and partial agonist at the mu-opioid receptor implicated in most poison control cases and inpatient detoxification admission.
- Not all kratom products are the same – concerns about a complete ban causing more harm.

Michigan Department of Health & Human Services

MDHHS

Michigan Department of Health & Human Services

7-Hydroxymitragynine (7-OH)-Enhanced kratom products: What Michigan providers need to know

Public Health Bulletin for Health Care Providers – March 2026

Dear colleagues,

We want to bring to your attention the rise of **"synthetic kratom"** and **concentrated 7-hydroxymitragynine (7-OH) products** (or 7-OH-enhanced kratom products) in Michigan's unregulated market, and the ongoing public health impacts.

While kratom (*mitragyna speciosa*) is a Southeast Asian tree known for mild stimulant effects from mitragynine and trace amounts of 7-OH, modern products carrying the "kratom" label are often unregulated, significantly more potent – containing added concentrations of 7-OH – and dangerous. These high-potency products, or 7-OH-enhanced products, are rapidly displacing traditional kratom leaf-products on retail shelves, creating a false sense of safety for consumers and increasing public health risks.

https://www.michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/Keeping-Michigan-Healthy/Public-Health-Admin/Bulletins/Provider-Bulletin-on-7-OH-Enhanced-Kratom-Products---32326.pdf

Clinical Case 2: Kratom/7-OH

Chief Complaint

- “I can’t function without kratom anymore, and it’s making me feel sick.”

History of Present Illness: 38 year old male with a history of AUD (in remission) presents to clinic reporting worsening fatigue, nausea, irritability, and inability to reduce his kratom use. Began using kratom 2 years ago for chronic back pain. States he was offered a “free sample” at the local smoke shop and his use quickly escalated.

- Initially used 2–3 grams/day of powder
- Over time escalated to: **30-50 grams/day kratom/7-OH**
- Recently switched to concentrated extracts labeled “7-OH” (7-hydroxymitragynine products) in pill form (pressed).
- Reports: Short-lived pain relief, interdose withdrawal: sweating, restlessness, rhinorrhea, anxiety, morning “need to dose to feel normal”
- Multiple failed attempts to taper
- Increasing cost and impact on work performance
- Denies illicit opioid use but acknowledges prior struggles with alcohol dependence

Case 2 continued

- **PMHx:** Chronic lumbar radiculopathy (L5-S1 disc herniation), anxiety, nicotine use disorder.
- **Medications:** Ibuprofen PRN, duloxetine 30 mg daily
- **SHx:** separated, construction foreman, in remission from alcohol use disorder (went through inpatient rehab program)
- **FHx**: Father with heart disease, mother with depression/AUD, siblings are healthy
- **Physical Exam:** Vitals: HR 96, BP 138/86, afebrile

  General: Mild diaphoresis, anxious, mild periodontal disease

  Pupils: Mildly dilated

  MSK: Lumbar paraspinal tenderness, limited flexion, neg SLR test

  Neuro: No focal deficits
- UDS: NEGATIVE

ORT-Revised score?

ORT-R=4

What is the next best step?

A. Recommend tapering kratom alone

B. Start symptomatic withdrawal management only

C. Initiate buprenorphine/naloxone treatment

D. Refer to inpatient detox

Kratom addiction=OUD

- Meets criteria for OUD
- Failed outpatient taper
- Experiencing functional impairment
- Evidence supports buprenorphine for kratom-related OUD

Kratom dependence is physiologically similar to opioid dependence

- Buprenorphine can:
  - Reduce withdrawal
  - Improve pain control
  - Stabilize function

Challenges

- Uncertain potency of 7-OH products
- Risk of **precipitated withdrawal**

Approach: Low-Dose / Micro-induction

- Pt prefers the micro-induction method

Day 1–2

- Buprenorphine/naloxone 0.5 mg SL x1, then BID
- Continue kratom at reduced dose

Day 3–4

- Increase to 1 mg BID
- Begins spacing kratom doses

Day 5–6

- 2–4 mg total daily
- Stops kratom

Day 7+

- His target dose: 4/1mg SL BID
- However, during a 1 week follow up appt, he notices more pain by the middle of the day and stabilizes on buprenorphine/naloxone 4/1mg TID dosing

Monitoring

- ➢ **SOWS (Subj. Clinical Opiate Withdrawal Scale)**
- Withdrawal symptoms
- Pain control
- Cravings

Pain & Withdrawal Management

- ➢ Prescribed short-term gabapentin 300mg BID and methocarbamol 750mg TID prn
- ➢ Increase duloxetine to 30mg BID

Additional:

- SUD Therapy referral
- Consider gabapentin and/or symptomatic agents
- Buprenorphine (dosed TID/QID) provides **analgesia + OUD treatment**

Kratom/7-OH Teaching Points

1

Kratom Can Cause True OUD

Especially high-dose and 7-OH extracts

Do not underestimate withdrawal severity

2

Buprenorphine is Effective

Reduces both withdrawal and chronic pain

Appropriate even if substance is “legal” or “herbal”

3

Induction Requires Flexibility

Consider:

Microinduction

Traditional induction if already in withdrawal

4

Avoid Common Pitfalls

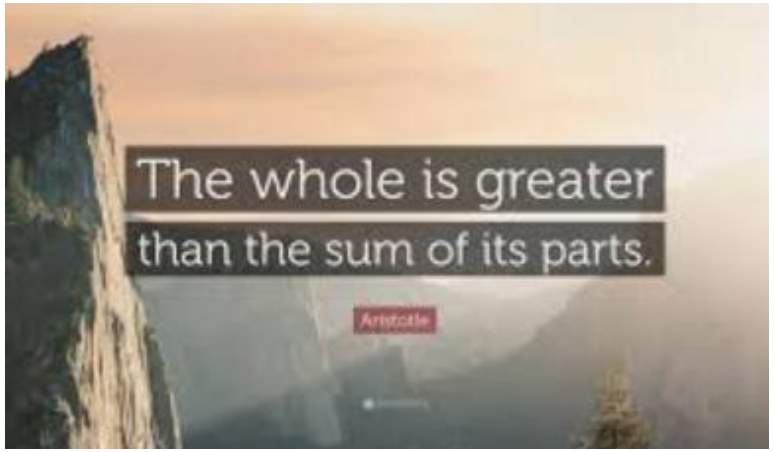
Mislabeling as “supplement misuse” instead of OUD

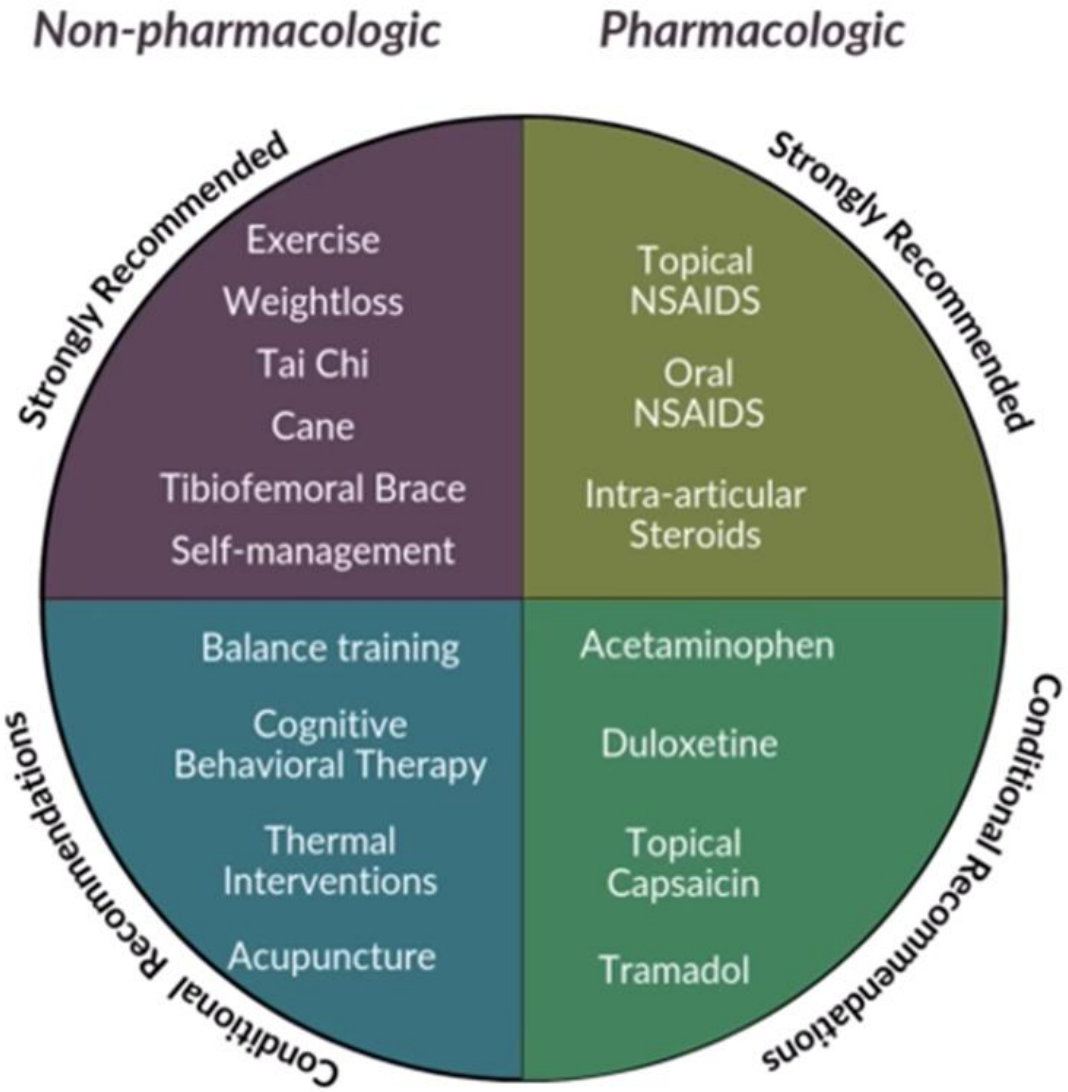
Under-treating withdrawal

Ignoring pain component

*Buprenorphine treats both **addiction and pain**—making it ideal for complex patients like those using kratom extracts.*

Integrative Treatment





Yoga and meditation

Mindfulness

- Mindfulness-Based stress reduction a therapeutic intervention that involves weekly group classes and daily mindfulness exercises to practice at home, over an 8-week period.

- Two elements: Attention & Acceptance

- Jon Kabat-Zinn “the awareness that arises through paying attention, on purpose, in the present moment, and non-judgmentally.”

Received: 29 October 2023 | Revised: 19 January 2024 | Accepted: 24 January 2024
DOI: 10.1111/bcp.16147

REVIEW ARTICLE

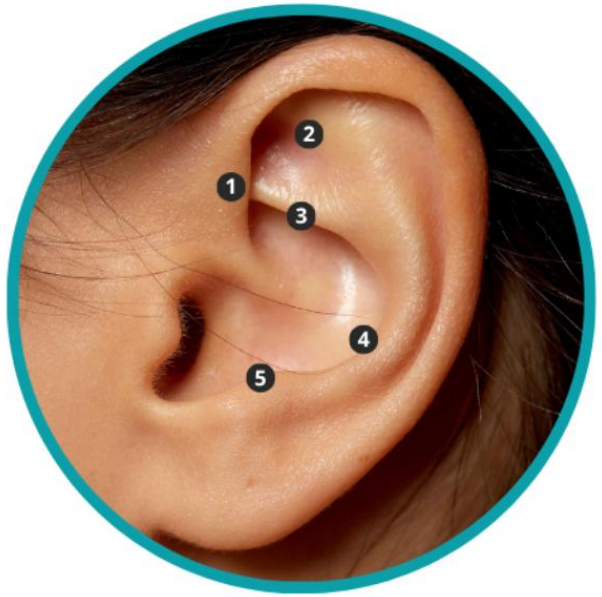
Mindfulness-Oriented Recovery Enhancement: Implementing an evidence-based intervention for chronic pain, opioid use, and opioid addiction in clinical settings

TABLE 1 Core components of Mindfulness-Oriented Recovery Enhancement (MORE) in each treatment session.

Session	Session topic	Example techniques
1	Mindfulness of physical and emotional pain	Using mindfulness to disentangle sensation from the maladaptive cognitive–emotional reactions that lead to suffering
2	Mindfulness of automaticity	Cultivating awareness of automatic habits by practising mindfulness during exposure to a piece of chocolate
3	Reappraisal to regulate negative emotions	Using reappraisal to reframe maladaptive thoughts about a recent stressful situation (e.g., an interpersonal conflict or pain flare) as a means of decreasing negative emotional reactivity
4	Savouring to increase natural reward experience	Savouring a rose by focusing mindful awareness on the pleasant colours, textures, and scent of the flower, appreciating and amplifying any positive emotions or pleasant sensations arising during the savouring practice
5	Mindfulness to regulate craving	First evoking craving by imaginal exposure to opioids and then using mindfulness to deconstruct the craving into its cognitive, emotional and sensory components, while cultivating a state of meta-awareness
6	Disrupting the link between pain, stress and craving	First evoking stress through an imaginal stress exposure exercise and then engaging a mindful relaxation response
7	Mindfulness to meaning and self-transcendence	Meditating on meaning in life and interdependence by reflecting on how objects (e.g., a raisin) are interconnected with and depend on their context (e.g., grapes, soil, water, sunshine)
8	Mindful recovery plan	Identifying triggers that could lead to relapsing back into addictive behaviour and identifying skills that can be used to address each trigger

Acupuncture – National Acupuncture Detoxification Association (NADA)

- Michael O. Smith, MD, DAc, founder of the National Acupuncture Detoxification Association (NADA)
- Recognized for developing an acupuncture treatment protocol for chemical dependency
- Energetic treatment using the ear as a microsystem of the human body



The NADA protocol targets five auricular points to aid in detox, emotional regulation, and overall recovery.

1 SYMPATHETIC
Relaxes muscles and calms nervous system

2 SHEN MEN
Eases anxiety and calms the mind, reduces cravings and insomnia

3 KIDNEY
Supports physical healing and reduces fear and fatigue

4 LIVER
Helps with anger and irritability, depression, and detox

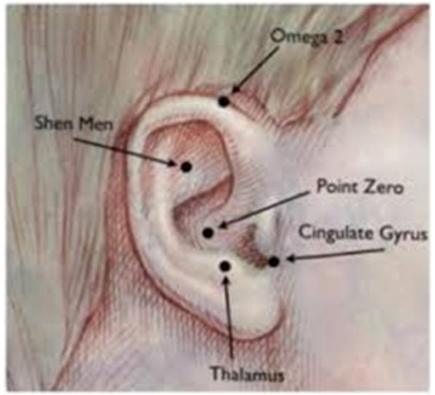
5 LUNGS
Supports breathing, grief processing, and immune health

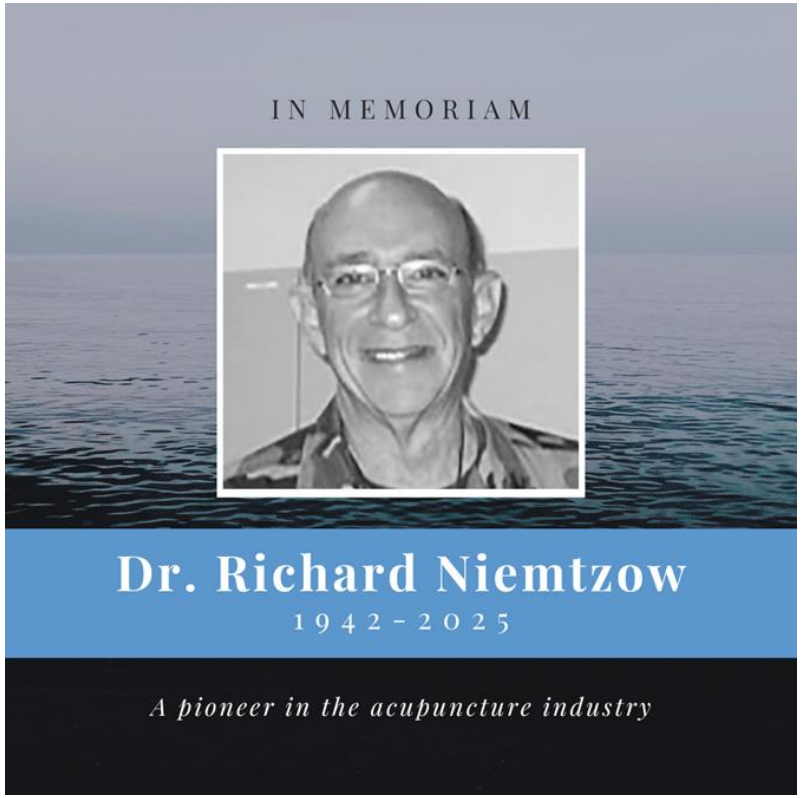
www.acudetox.com

Battlefield Acupuncture (BFA)

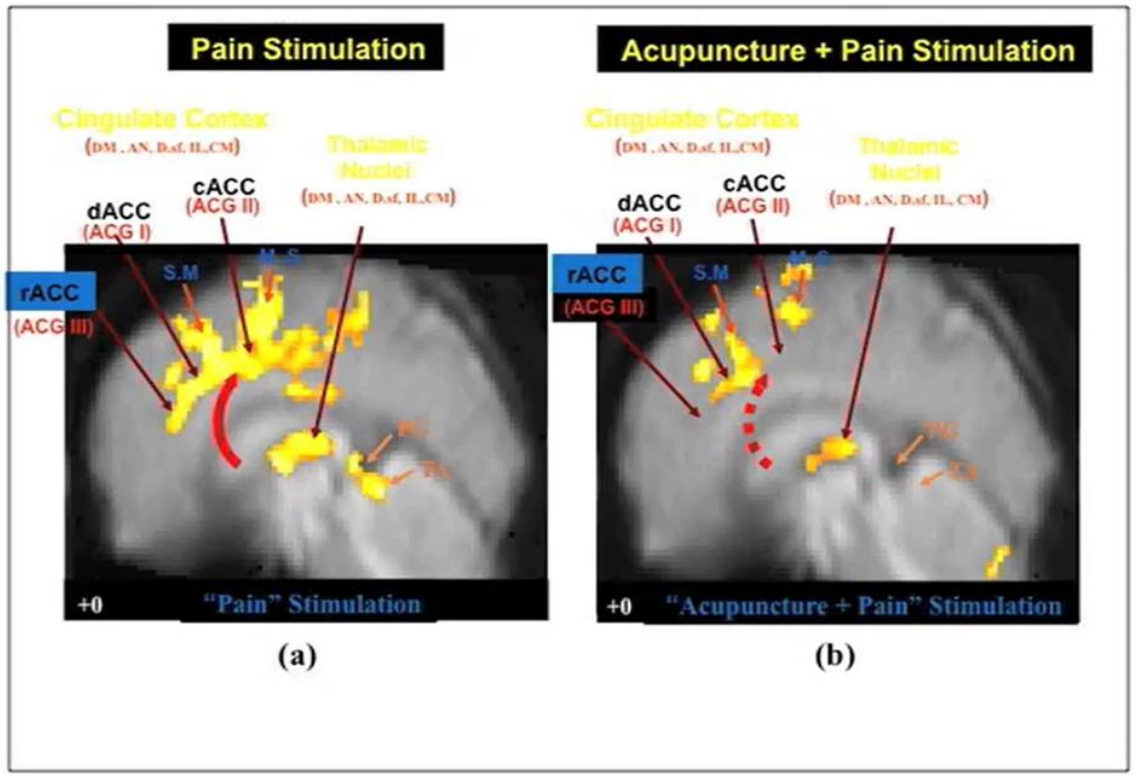
- Ear acupuncture technique developed by the Department of Defense by Richard Niemtzow, MD, Air Force Physician

- Utilized in the Veterans Administration (VA) as a federally approved acupuncture technique to treat chronic pain





https://www.jba.af.mil/News/Features/Display/Article/460993/complementary-and-alternative-medicine-a-profile-on-dr-richard-c-niemtzow/



https://www.youtube.com/watch?v=c9Ay7I1paqU

https://academic.oup.com/painmedicine/article/22/8/1721/6189013?login=false

Resources

Michigan Peer Warmline Staff are here to help you.

You can call us anonymously.

7 DAYS A WEEK | 10AM. - 2AM.

1-888-PEER-753

1-888-733-7753

FOR ALL MICHIGANDERS

988 SUICIDE & CRISIS LIFELINE

Warmlines are an alternative to traditional psychiatric crisis hotlines and are used to avoid extreme emotional distress that can lead to hospitalization or other severe outcomes that are preventable with early intervention of peer support. Warmlines alleviate the burden on crisis responders by offering a solution for non-crisis callers. The Michigan Warmline will offer support from certified peer support specialist/recovery coaches to individuals feeling isolated from society.

The warmline will provide support to individuals who often lack social connectedness and may now have increased anxiety and feelings of severe isolation during this critical time. It is available to all Michiganders, regardless of insurance status.

Thank you.