Basic Tenets of Pain Treatment

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1These individuals were involved in the planning of the original 2017 content.
2These individuals were involved in the 2021 review, update, and approved rerelease of this activity.
Educational objectives

At the conclusion of this activity participants should be able to:

• Describe the sociopsychobiological model of pain and how that impacts treatment approaches
• Review the evidence for pharmacological and non-pharmacological therapies for pain
• Compare recommended strategies for managing common pain conditions
Case

- 53 year old male who developed low back pain three days ago after playing golf
  - Pain rated 9/10, not doing regular morning walk due to pain
- No symptoms radiating to legs, no trauma, no bowel/bladder changes, no constitutional symptoms
- Tried over-the-counter ibuprofen with no relief
- Having trouble sleeping
- History of alcohol use disorder, in remission
- Treated for depression with paroxetine
Case: Questions

- What is your initial approach to management of this patient?
  - Would you recommend medications and if so, which ones?
  - Would you recommend non-pharmacological therapies, and if so, which ones?
- What if the patient does not improve after a week of initial therapies?
- What if he is still having pain after 3 months?
Treating Acute and Chronic Pain

- **Acute (<4 weeks) pain**
  - In most patients, the natural history is for marked improvement over days to a few weeks, analgesics tend to be more effective

- **Chronic (>3 months) pain**
  - Symptoms tend to be persistent or recurrent over time, more difficult to treat

- **Sociopsychobiological perspective**
  - Psychosocial factors are stronger predictors of transition to chronic pain and severity
  - Biological factors (e.g., imaging findings, lab tests) poorly correlate with transition to chronic pain or severity
  - Treatment approaches for chronic pain must address psychosocial contributors to pain to be most effective
  - Chronic illness management approach

Gatchel RJ et al. Psychol Bull 2007;133:581-624
Chou R and Shekelle P. JAMA 2010;303:1295-1302
Persistent Pain

- Secondary Physical Problems
- Sleep Disturbance
- Substance Misuse
- Anxiety
- Depression
- PTSD
- Cognitive Distortions
- Functional Disabilities
- Increased Stresses
Treatment Options For Pain

- Self-management
- Medications
- Exercise and related interventions
- Physical modalities
- Cognitive behavioral therapies and other psycho-behavioral interventions
- Complementary and integrative therapies
- Interventional therapies
- Interdisciplinary rehabilitation
Approach To Treatment for Pain

- Acute pain
  - Avoid prescribed bed rest, early return to activity as able, heat/cold, OTC analgesics
  - Identify and address psychosocial risk factors early to help prevent transition to chronic pain
- Chronic pain
  - Focus on functional goals and improvement
  - Self-care (coping skills, relaxation/meditation, activity/exercise)
  - Identify and address psychosocial contributors to pain
  - Factors to consider when selecting treatments:
    - Safety and efficacy
    - Emphasize active over passive modalities of treatment
      - Active therapies include psycho-behavioral treatments, exercise therapies, interdisciplinary rehabilitation
      - Passive therapies include medications, physical modalities, complementary and alternative treatments, interventional treatments
      - Can be used as an adjunct or bridge to active therapies
    - Costs, availability patient adherence, prior response
Cognitive Behavioral Therapy (CBT)

- Psychological therapy that integrates:
  - Cognitive therapy
    - Restructures maladaptive thinking patterns associated with counterproductive or irrational thinking patterns, coping behaviors, and emotions
  - Behavioral therapy
    - Trains individuals to replace undesirable behaviors with healthier behaviors
- Objectives
  - Go from overwhelmed to manageable
  - Go from passive to active role in care
  - Reduce symptoms
  - Increase function and quality of life
Cognitive Behavioral Therapy

• Basic strategies
  - Break challenges into small pieces, set achievable goals, and strategize solutions
  - Transform negative thoughts to positive self statements
    - Address fear-avoidance and catastrophizing
  - Engagement to distract from pain
  - Practice deep relaxation
  - Practice situational coping strategies to prevent and reduce pain
Effectiveness of CBT

• Systematic review of CBT for chronic pain found small to moderate effects on pain (1 to 2 point reductions on a 0 to 10 point scale), disability, mood and catastrophizing versus usual care/wait list control
• Some effects on mood maintained at 6 months after treatment
• CBT has been found to be effective for specific conditions e.g. low back pain

Williams AC et al. Cochrane Database Syst Rev 2012:CD007407
CBT in Practice

- Time-limited (8-10 sessions, often with refreshers)
- Group-based or individual
- Evolving online self-guided programs
  - FibroGuide – University of Michigan
- Basics can be implemented by diverse professionals, including primary care; may be more effective in persons with psychosocial risk factors
  - STarT Back Screening Tool—Risk stratified approach to use of CBT-informed PT
- Books for patients and non-psychology professionals
  - Managing Your Pain Before It Manages You – Margaret Caudill MD
  - Mastering Chronic Pain/Learning To Master Your Chronic Pain – Robert Jamison PhD
  - Less Pain, Fewer Pills: Avoid the Dangers of Prescription Opioids and Gain Control Over Chronic Pain – Beth Darnall PhD

Meditation/Relaxation

- Helpful technique for self-management and coping
- Often incorporated in CBT and utilizes CBT principles
- Distraction, reduce anxiety, reduce sympathetic arousal, reduce muscle tension, altered central processing
- Evidence on effectiveness limited
- Varied techniques
  - Meditation
  - Mindfulness or mantra/focus-based
  - Progressive muscle relaxation
  - Autogenic training
  - Hypnosis
  - Guided imagery
  - Yoga, Tai Chi and some other therapies involving movement or exercise incorporate meditation or relaxation principles

*Chiesa A et al. J Altern Complement Med 2011;17:83-93*
Role of Clinicians in Promotion of Self-care

- Active listening
- Education
- Link patient with resources
- Set goals and problem solve
  - Motivational interviewing techniques
- Encourage engagement
- Cheering small and big successes
Exercise

- Effects on pain and function (and general health!)
  - Reduce fear avoidance behaviors
- Many different types of exercise
  - Aerobic, strengthening, stretching, mixed
  - McKenzie, motor control and stabilization, active trunk exercise, others
- Related therapies
  - Alexander technique, Pilates, yoga, Tai Chi, others
- Supervised vs. home exercise
- Group vs. individual
- Ideally done within a CBT-informed framework
- Variability in intensity
- Can increase pain in the short term, but has long term benefits
Exercise

• No clear evidence that one type of exercise is superior to another
• Exercise has been shown to prevent low back recurrence
• Exercise will only be effective if patients engage in it
  ▪ Encourage patients to engage in exercise that they enjoy and will continue
• Supervised, individualized exercise programs may be more effective, at least initially
• Hand-outs and videos for home exercise
  ▪ Use as part of self-care/CBT intervention
• Start slow, incremental increases

Hayden JA. Ann Intern Med 2005;142:765-775
Interdisciplinary Rehabilitation

- At a minimum, combines both physical and biopsychosocial treatment components
  - Provided by professionals from at least two different specialties
- Components and intensity of interdisciplinary rehabilitation vary
- Related interventions include functional restoration, work hardening (usually workers’ compensation setting)
- Lack of availability and reimbursement an important barrier
Interdisciplinary Rehabilitation

- Slightly to moderately more effective than non-interdisciplinary rehab for chronic pain at improving pain and function
- Ideal components of interdisciplinary rehabilitation uncertain
  - Exercise and CBT recommended at a minimum
- More intensive programs may be more effective than less intensive programs, but more costly
- Consider for patients who have failed standard treatments, severe functional deficits, or severe psychosocial risk factors
Physical Modalities

- Include a variety of mostly passive treatments:
  - Heat/cold
  - Ultrasound
  - Interferential therapy
  - Shortwave diathermy
  - Transcutaneous electrical nerve stimulation
  - Low level laser therapy
  - Traction
  - Taping
  - Braces and supports
  - Others (magnets, etc.)
Approach To Physical Modalities

- Evidence for most physical modalities is limited and have generally failed to show consistent benefits
  - Heat similarly effective to NSAIDs for acute low back pain
  - Other modalities not routinely recommended
- But, generally safe and some patients may experience/perceive some benefit
  - Caution with certain types of traction
- If used, only as adjunct to active therapies
  - Be aware of costs and discontinue if ineffective in initial trial
Complementary and Integrative Therapies

- Chiropractic spinal manipulation/mobilization
- Osteopathic manipulation
- Acupuncture
  - Electroacupuncture, acupressure, other related techniques
- Massage
- Meditation/mindfulness previously addressed
- Yoga, Tai Chi and other movement-based therapies covered in exercise section
- Many others
Effectiveness of Complementary and Alternative Medicine Therapies

- Some evidence that spinal manipulation/mobilization, acupuncture, and massage are more effective than no therapy and similarly effective versus exercise
  - Generally safe; caution with manipulation of cervical spine
  - Evidence on effectiveness varies for different pain conditions (e.g., manipulation not effective for fibromyalgia)
- Variability in techniques and number/frequency/duration of sessions
  - Optimal techniques and dose uncertain
  - Often methodological shortcomings in the trials
- Some techniques can be done in primary care with training
- Enhanced access through Affordable Care Act
- Some effects may be non-specific due to “hands-on” nature of therapies, attentional effects; difficult to blind
  - Consider patient expectations of benefit
- Less “active” than exercise/CBT
  - Consider primarily as an adjunct to active therapies
Medications

- Opioids
- Acetaminophen
- NSAIDs
- Tramadol/tapentadol (dual action)
- Gabapentin/pregabalin
- Antidepressants (tricyclics, SNRI’s)
- Skeletal muscle relaxants
- Benzodiazepines
- Topicals
- Others
Approach To Medications

- Analgesics generally more effective for acute pain
- For chronic pain, effectiveness for short-term pain is small to moderate and limited for function; evidence very limited on long-term effects\(^1\)
  - Medications do not address psychosocial factors that contribute to pain
  - Use in conjunction with active non-pharmacological treatments
- Individualize medication decisions based on assessment of potential benefits and harms
  - Opioids carry special risks related to addiction and overdose potential—use cautiously in appropriately selected patients
  - Consider prior response to medications
  - Consider type of pain (nociceptive vs. neuropathic)
  - Specific medications for some conditions (e.g., DMARDs for rheumatoid arthritis, triptans for migraine headaches)
  - Consider co-morbidities (e.g., patients with depression and pain might benefit from an antidepressant with analgesic properties)

Opioids

- Opioids have become widely prescribed for chronic pain
- Moderate short-term effects on pain, small/inconsistent effects on function
- Evidence on long-term benefits very limited
- Serious harms, including overdose, abuse, opioid use disorder
- See opioids webinar for details on approach to opioid therapy
Non-opioid Analgesics

- Acetaminophen: Most prescribed, hepatotoxic in doses >3 to 3.5 g/day; probably less effective than NSAIDs
- NSAIDS
  - Non-COX-2-selective: Cardiac, GI (ulcers), renal, and liver toxicity; platelet inhibition, naproxen may be less cardiotoxic than others; gastropathy the most limiting issues
  - COX-2-selective: Less GI toxicity but may be more cardiotoxic
Non-opioid Analgesics

- Use of non-opioid analgesics may lower total opioid requirement
- Effective for nociceptive pain, some anti-inflammatory properties; little use for neuropathic pain
- NSAIDs first-line for many pain conditions
  - Magnitude of effects small to moderate, but relatively safe for short-term use in appropriate patients
  - Naproxen less cardiotoxic—good first nonselective NSAID choice
  - Use lowest dose of NSAIDs for shortest duration to reduce cardiac and GI toxicity
  - NSAIDs may interfere with aspirin antithrombotic effect, take at least ½ hour before aspirin
- Acetaminophen ineffective for acute LBP in one well-conducted RCT

Tramadol and Tapentadol

- Dual mode of action
  - Opioid mu-receptor agonist and norepinephrine or serotonin/norepinephrine reuptake inhibitor
  - Tramadol: Weak mu-receptor affinity, FDA schedule IV as of August 2014
  - Tapentadol: Strong mu-receptor affinity, FDA schedule II
- No clear difference in efficacy or safety vs. opioids
  - Tramadol can be approached like a weak opioid
  - Tapentadol can be approached like a stronger opioid
  - Seizure caution with tramadol
  - Abuse potential
  - Long-term studies lacking
Gabapentinin and Pregabalin

- GABA analogues
  - Bind to alpha 2-delta subunit of voltage-gated calcium channels, inhibiting neurotransmitter release (glutamate and norepinephrine)
  - Pregabalin is a structural congener of gabapentin with superior absorption, resulting in higher potency and more predictable effects
- First line agent for neuropathic pain
  - Pregabalin approved for fibromyalgia; both drugs increasingly used off-label for other non-neuropathic pain
  - Adverse effects include sedation, dizziness, ataxia
  - No clear differences between gabapentin and pregabalin, though pharmacokinetics of pregabalin are more predictable and can use lower doses
  - Appears ineffective for LBP (with or without radiculopathy)
- Often used off-label in US for anxiety and/or insomnia
  - Caution when used with opioids: Potential increased overdose risk

References:
Bockbrader HN. Clin Pharmacokinet 2010;49:661-9
Enke O et al. CMAJ 2018;190(26):E786-E793
Gabapentin

- Best studied for post-herpetic and diabetic neuropathy
  - FDA approved for post-herpetic neuralgia
- Titrate slowly from 300 mg/day up to 3600 mg/day in divided doses (BID to QID)
  - >3600 mg/day sometimes used in clinical practice but off-label
- Poorly absorbed and may take 2 months for adequate trial
- Adverse effects: Sedation, weight gain, dizziness, frequency of dosing
- Risks: Overuse in substance use disorder populations, renal dose adjustment
Pregabalin

- FDA-approved for use in fibromyalgia
- Can be more quickly titrated to max recommended dose (600 mg) than gabapentin
- 300-600 mg efficacy for post-herpetic and diabetic neuropathy better than for fibromyalgia and central neuropathic pain
- Similar side effects to gabapentin, perhaps less sedation
- Schedule V due to reports of euphoria
Other Anti-seizure Medications

- Long history of use for neuropathic pain since the 1960s
- Direct analgesic effects plus calming/mood stabilizing effect, but these are second or third-line agents
- Exception is carbamazepine for trigeminal neuralgia, used in post-herpetic neuralgia
  - Oxcarbazepine similar—complicated interactions
- Blood levels do not correlate with pain efficacy
  - Follow normal prescribing precautions, such as checking liver tests, monitoring blood counts
Antidepressants

- First-line agents for neuropathic pain
  - Off-label for this condition, except duloxetine for diabetic neuropathy
  - Caution with TCAs and older patients (anticholinergic and cardiac conduction effects)
- Best studied in neuropathic pain, fibromyalgia, and headaches
- Mechanism of action: Block re-uptake of norepinephrine and serotonin, and other receptors/channels
- Efficacy for neuropathic pain does not correlate with antidepressant response
- SSRIs less effective for pain than TCAs and SNRIs
Serotonin/norepinephrine Reuptake Inhibitors (SNRIs)

- Can think of as kinder/gentler TCAs
- Lack the adrenergic cholinergic and sodium channel effects of TCAs
- Much better tolerability and better safety profile
- Venlafaxine, duloxetine, and milnacipran in this class
- First or second line agents for neuropathic pain
- Duloxetine FDA-approved for fibromyalgia, diabetic neuropathy, and chronic musculoskeletal pain (LBP and chronic pain due to osteoarthritis)
  - Pain efficacy may be no better for 120 mg than for 60 mg; antidepressant efficacy may require higher dose
- Milnacipran FDA-approved for fibromyalgia
- Head-to-head trials of SNRIs lacking
- Tolerability may vary - venlafaxine associated with hypertension
Skeletal Muscle Relaxants

- Drugs classified as skeletal muscle relaxants by FDA have heterogeneous chemical structures and mechanisms of action and don’t represent a true “drug class”
  - Cyclobenzaprine: Similar to TCA
  - Tizanidine: Similar to clonidine
  - Orphenadrine: Similar to diphenhydramine
  - Carisoprodol: Metabolized to a barbiturate (addiction potential, recommend avoiding use)
  - Baclofen—acts on GABA receptors
  - Others
- Different indications
  - Musculoskeletal conditions: Cyclobenzaprine, methocarbamol, orphenadrine, others
  - Treatment of spasticity: Baclofen, dantrolene (serious liver toxicity caution), tizanidine
Skeletal Muscle Relaxants

- All skeletal muscle relaxants are sedating
- Not well studied for chronic pain; 2\textsuperscript{nd} or 3\textsuperscript{rd} line for acute pain
  - Be familiar with properties of one or two muscle relaxers and use those
  - Cyclobenzaprine and tizanidine best studied for chronic pain
  - Short-term (e.g., <1-2 weeks) use for acute pain (may help with sleep)
    - No evidence of efficacy with long-term use
  - Avoid carisoprodol due to addiction potential (Schedule IV as of 2012)
Benzodiazepines

- Generally AVOID for treatment of acute or chronic pain
- Mechanism of action on GABA\textsubscript{A} receptors
- Used off-label as muscle relaxers
- Sedating, anxiolytic effects
- Risk of misuse/addiction (schedule IV), withdrawal can be severe and result in seizures/death
- High risk of overdose when used with opioids or other CNS depressants such as alcohol
- Evidence for use in pain very limited; other medications recommended for treating anxiety/insomnia, particularly long-term
Topical Agents

- A number of agents are available
  - Topical lidocaine: Effective for neuropathic pain
  - Topical NSAIDs: Effective for localized osteoarthritis
    o Head-to-head trials show effectiveness similar to oral NSAIDs
    o Low serum levels of NSAIDs may result in fewer serious AE’s
    o Absorption of NSAIDs depends on the NSAID and carrier; several FDA-approved formulations (caution with compounded formulations)
  - Topical salicylates/rubefacients: Unclear if effective
    o Surface effects and local effects from rubbing; not absorbed beneath the skin
  - Topical capsaicin: Effective for musculoskeletal pain, neuropathic pain (off-label)
    o Depletes substance P. initial flare/burning sensation, irritation of skin and mucous membranes
Combination Therapy

- Because no one drug is a “magic bullet,” polypharmacy often occurs
  - Avoid or minimize polypharmacy by doing trials of individual drugs, stopping drugs that are ineffective or causing side effects, be aware of and avoid drug-drug interactions
- Few studies have examined efficacy of drug combinations
- Non-opioid analgesic combinations with opioids are common
  - Unclear if they are more effective than opioid or non-opioid alone
Interventional Pain Procedures

- Trigger point injections
- Diagnostic blocks/procedures
- Corticosteroid injections
- Variety of ablative procedures
- Nerve blocks
- Intrathecal drug delivery
- Spinal cord stimulation
- Deep brain stimulation—in the future?
- Others
Approach to Interventional Pain Procedures

• Consider for patients with persistent severe pain despite standard treatments, high risk for opioids, failure to improve
• Evidence varies for different interventions
  ▪ Caution when evidence is limited or doesn’t clearly show benefit
  ▪ Magnitude of benefits is relatively modest or limited in duration for some interventional procedures
• Risks associated with invasive procedures
  ▪ Some procedures associated with long-term or permanent placement of hardware, with attendant risks
• Costs
Treatment Recommendations for Common Pain Conditions

- Evidence-based treatment recommendations for:
  - Low back pain
  - Migraines
  - Fibromyalgia
  - Osteoarthritis
  - Neuropathic pain
Acute Low Back Pain

- Most acute, nonspecific low back pain resolves over time without specific treatment
  - Controlling pain and maintaining function while symptoms diminish on their own is the goal for most patients with acute low back pain
- Self-care, including advice to remain active
  - Discourage bed rest
- Non-pharmacological therapy preferred: Superficial heat, massage, acupuncture, spinal manipulation
- NSAIDs first-line analgesics
  - Acetaminophen may be ineffective, but safe in most patients
  - Opioids in appropriately selected patients with moderate/severe pain, 3-5 days sufficient in most cases
  - May consider skeletal muscle relaxants for 3-5 days in persons with sleep issues related to pain
- Inform patients that back pain is common and that the spontaneous recovery rate is more than 50-75% at 4 weeks and more than 90% at 6 weeks
Chronic Low Back Pain

- Self-care and education in all patients
- Non-pharmacological therapies
  - Active modalities preferred: Exercise (yoga, Tai Chi), CBT, mindfulness-based stress reduction, interdisciplinary rehabilitation
  - Supplement with spinal manipulation, acupuncture, or massage based on response to active modalities and patient preferences
- Medications
  - First line: NSAIDs
  - Second line: SNRI, tramadol
  - Consider short-term trial of opioids in carefully selected patients
  - Avoid benzodiazepines, systemic corticosteroids, carisoprodol
  - Treat psychiatric co-morbidities

Qaseem A et al. 2017 ACP Clinical Guidelines: Noninvasive treatments for acute, subacute, and chronic low back pain, Ann Intern Med;166:514-530
Migraine: Acute Treatment

- Aspirin, acetaminophen, NSAIDs
  - Combining with caffeine may enhance antimigraine effect
- Anti-nausea medication (may be given by suppository)
- Triptans—migraine-specific
  - Contraindicated in persons with uncontrolled high blood pressure, vascular disease, pregnant, severe kidney or liver disease, familial hemiplegic migraine, basilar migraine
- Ergots—combined with caffeine
  - Not as effective as triptans, more nausea
- Medications more effective if taken early and as larger single dose than repeated smaller doses
  - Non-oral routes may be necessary if nausea/vomiting severe
- Avoid medication overuse
  - Can result in rebound headaches
  - Opioids and barbiturates generally not recommended; less effective, little evidence, abuse potential, and risk of overuse headaches
Migraine: Preventive Treatment

- Beta-blockers
  - Side effects depression and impotence
- Tricyclic antidepressants
  - Amitriptyline best studied
- Antiseizure medications
  - Valproate, gabapentin, topiramate
- Calcium channel blockers
- Calcitonin gene-related peptide antagonists
- Preventive treatments may take 3-4 weeks to show effectiveness
- Non-pharmacological treatments
  - CBT, relaxation training, biofeedback, exercise therapy
  - Avoid migraine triggers
  - Your Headache Isn’t All in Your Head by Adriaan Louw
  - American Migraine Foundation
Pharmacologic Treatment: Neuropathic Pain

<table>
<thead>
<tr>
<th>Medication</th>
<th>Optimum Dose</th>
<th>Number needed to Treat</th>
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<tbody>
<tr>
<td><strong>FIRST LINE</strong></td>
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<tr>
<td>TCAs</td>
<td>25-150mg QHS</td>
<td>2-3</td>
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<tr>
<td>(2\textsuperscript{nd} generation Nortriptyline)</td>
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<td></td>
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<tr>
<td>(3\textsuperscript{rd} generation Amitriptyline)</td>
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<tr>
<td><strong>SNRIs</strong></td>
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<tr>
<td>Venlafaxine</td>
<td>150-225mg/day 60-120mg/day</td>
<td>4.5 5-6</td>
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<tr>
<td>Duloxetine</td>
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<td></td>
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<tr>
<td><strong>Calcium channel alpha 2-(\delta) ligand</strong></td>
<td></td>
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<tr>
<td>Gabapentin</td>
<td>900-1,200mg TID 50 TID or 75mg BID</td>
<td>3-8 3-5</td>
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<tr>
<td>Pregabalin</td>
<td></td>
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<tr>
<td><strong>Lidocaine Patch or gel 5%</strong></td>
<td>Max 3 patches daily x 12 hr</td>
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Pharmacologic Treatment: Neuropathic Pain

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<th>Optimum Dose</th>
<th>Number needed to Treat</th>
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<tbody>
<tr>
<td>SECOND LINE: Opioids*</td>
<td></td>
<td>2.5-4.8</td>
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<tr>
<td>THIRD LINE</td>
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<tr>
<td>Lamotrigine</td>
<td>25-500mg</td>
<td>2.1-5.4</td>
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<tr>
<td>Carbamazepine</td>
<td>400-1220mg</td>
<td>2.6-3.3</td>
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<tr>
<td>Topical capsaicin</td>
<td>QID dosing</td>
<td>3.2 – 6.7</td>
</tr>
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*In appropriately selected and monitored patients

Osteoarthritis

- Non-pharmacologic treatments generally tried before medications
  - Exercise, weight loss, patient education
  - Yoga, CBT, orthoses, acupuncture as options
  - Consider acupuncture as adjunct
- Medications
  - First line: Acetaminophen, oral NSAIDs, topical NSAIDs or capsaicin, duloxetine
  - Intra-articular glucocorticoids if acetaminophen and NSAIDs insufficient
  - Second line: Opioid analgesics, intra-articular hyaluronic acid, glucosamine and chondroitin
Fibromyalgia

- 3 FDA approved medications
  - Pregabalin 300mg (Number needed to treat for a 50% reduction of pain (NNT50) = 6-14)\(^1\)
  - Duloxetine 60mg (Number needed to treat for a 30% reduction of pain (NNT30) = 6; NNT50=8)
  - Milnacipran (NNT 13-14 at 50mg BID and 100mg BID)\(^3-4\)
- Moderately intense aerobic exercise or strength training
- Cognitive behavioral therapy
- Interdisciplinary rehab
- Acupuncture
- Biofeedback

Fibromyalgia: Other meds that may work

- All off-label, evidence limited: Second line therapies
- Amitriptyline or nortriptyline (NNT 4, but low quality evidence)
- Gabapentin (NNT for 30% reduction of pain = 5)
- Venlafaxine
- Tramadol + tylenol (NNT for 30% reduction of pain =1.62; NNT for 50% reduction of pain = 1.91)
- Tizanidine
- Compounded naltrexone 4.5mg
Case

- Initial treatment for acute low back pain
  - No neurological signs or symptoms
  - Education, reassurance, heat, advice to remain active
  - Offered 3 days of skeletal muscle relaxant to help with sleep
  - Continued over the counter NSAID
- Failure to improve after 1 week
  - Patient reports stress at work and at home, poor sleep, mood doing worse
  - Afraid of walking/exercising due to concerns of damaging back
  - Switched SSRI (paroxetine) to SNRI (duloxetine) and titrated up
  - Naproxen 500 mg bid (prescription dose)
  - Discussed contribution of psychosocial factors to pain and coping strategies
- Failure to improve after 3 months
  - Referred for supervised exercise therapy and cognitive behavioral therapy
  - Patient interested in acupuncture; referred to acupuncture as adjunctive therapy
- Pain and function improved at 5 month follow-up visit
  - Back to playing golf and walking daily with home exercise program
  - Mood improved
  - Pain still present but manageable
Conclusions

• Numerous medications and non-pharmacological therapies available for pain
• For acute pain, favorable prognosis; main goals are symptom relief and early activity/self-care
• Approach chronic pain from a sociopsychobiological perspective
  ▪ Assess psychosocial risk factors
  ▪ Self-care
  ▪ Focus on active treatments (exercise/CBT)
  ▪ Treat psychiatric comorbidities
  ▪ Consider benefits and harms of therapies, and supporting evidence
    – Understand first-line options
    – Use condition-specific medications when available
  ▪ Consider costs
  ▪ Consider patient preferences when options are present
References

References

References

PCSS Mentoring Program

- PCSS Mentor Program is designed to offer general information to clinicians about evidence-based clinical practices in prescribing medications for opioid use disorder.

- PCSS Mentors are a national network of providers with expertise in addictions, pain, evidence-based treatment including medications for opioid use disorder (MOUD).

- 3-tiered approach allows every mentor/mentee relationship to be unique and catered to the specific needs of the mentee.

- No cost.

For more information visit: [https://pcssNOW.org/mentoring/](https://pcssNOW.org/mentoring/)
Have a clinical question?

Ask a Colleague

A simple and direct way to receive an answer related to medications for opioid use disorder. Designed to provide a prompt response to simple practice-related questions.

http://pcss.invisionzone.com/register
**PCSS** is a collaborative effort led by the American Academy of Addiction Psychiatry (AAAP) in partnership with:

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<th>Addiction Technology Transfer Center</th>
<th>American Society of Addiction Medicine</th>
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<td>Council on Social Work Education</td>
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<td>International Nurses Society on Addictions</td>
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<td>American College of Emergency Physicians</td>
<td>National Association of Social Workers</td>
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<td>American Dental Association</td>
<td>National Council for Behavioral Health</td>
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<td>American Medical Association</td>
<td>The National Judicial College</td>
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<tr>
<td>American Osteopathic Academy of Addiction Medicine</td>
<td>Physician Assistant Education Association</td>
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<tr>
<td>American Psychiatric Association</td>
<td>Society for Academic Emergency Medicine</td>
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