Ouch!
Managing Chronic Pain Hurts

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Objectives

- Define the effect chronic pain has on patients and health care providers
- Describe the different treatment options for chronic pain
- Explain the impact of the Centers for Disease Control's recommendations regarding chronic pain management

Disclosure

- The speaker has no financial conflicts of interest
- Off label indications will be discussed and will be highlighted when done

Practice Site

- Family Medical Care Center
- Level 3 Patient Centered Medical Home
  - Diabetes, Depression, & **Chronic Pain**
- Cox Family Medicine Residency

Chronic Pain Definition[1,2]

- In reference to non-cancer pain
  - Nociceptive, neuropathic, or mixed
  - Predominantly musculoskeletal pain conditions
- Variable definitions but generally lasts > 3-6 months or past the time of normal tissue healing

Chronic Pain Prevalence[3]

- 11.2% Americans had daily pain according to a 2012 study
- Top 3 Most Common Disability Diagnoses:
  - Low back pain
  - Other musculoskeletal disorders
  - Neck pain

Types of Chronic Pain[4]

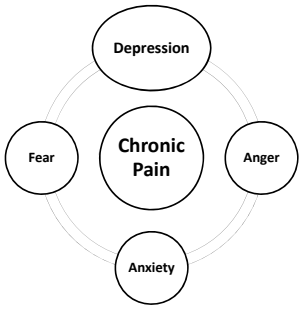
Osteoarthritis, Rheumatoid Arthritis, Neuropathy, Complex Regional Pain Syndrome, Gout, Fibromyalgia

Many people suffer from more than one kind of chronic pain.

Chronic Pain Impact on Patients[1-3]

- Estimated economic impact of pain from direct medical costs and loss of productive time ranges from $560-635 billion every year
  - Direct cost is $261-300 billion

Chronic Pain's Impact on Emotional State[2,4]



Chronic Pain Impact on Providers[1-4]

- Most clinicians have not been well trained in pain management
- Many quality metrics and reimbursements are based on patient satisfaction
- Many providers don't feel comfortable prescribing long-term opioids

Chronic Pain Management Guides[2,5]

- American Chronic Pain Association Resource Guide (2016)
- American Pain Society/American Academy of Pain Medicine (2009)
- Various individual pain syndromes and patient population guidelines

Question

- What must be included in chronic pain management?
  - A. Active patient engagement
  - B. Interdisciplinary care
  - C. Whole person care
  - D. Multiple treatment approaches

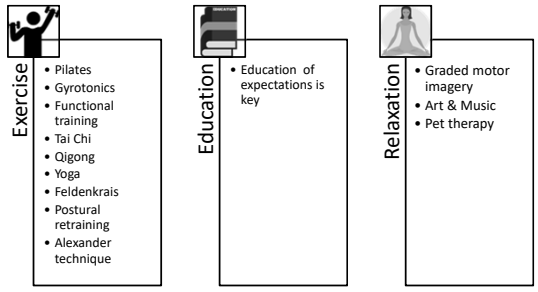
Question

- What is the goal of any treatment?
  - A. Be cured of chronic pain completely
  - B. Return to a functional level
  - C. Have a pain score of 0
  - D. Improve pain score by 1

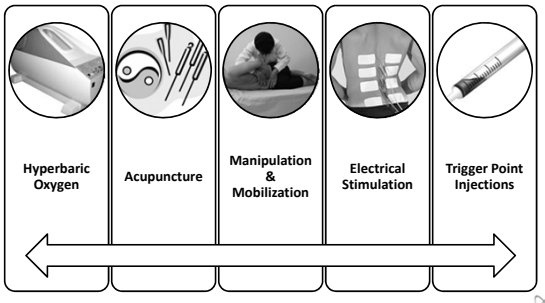
Question[2]

- How many approaches are there to manage pain outside of medications?
  - A. 1-5
  - B. 6-10
  - C. 11-15
  - D. 16-20
  - E. > 20

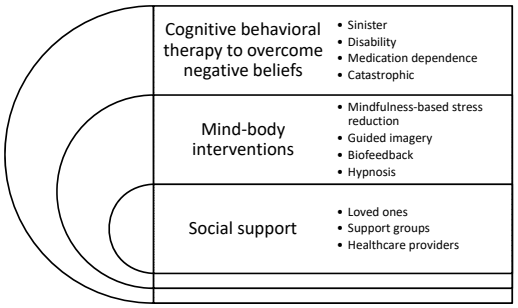
Active Patient Interventions[2]



Passive Therapies & Physical Modalities[2]



Psychological & Behavioral Approaches[2]



Invasive Interventions[2]

- Intra-articular steroid injections
- Viscosupplementation
- Spinal cord stimulation
- Implanted targeted intrathecal drug delivery systems (pain pumps)
- Epidurals, nerve and facet blocks, and radiofrequency ablation

Other Considerations[2]

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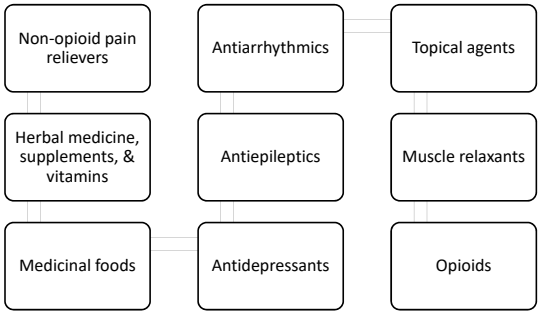
Medications[2]



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Over-The-Counter (OTC) Relievers[2,6]

Name	Normal Dosing	Comments
Acetaminophen	325-1000 mg every 4-6 hours as needed	MAX 3000 mg/day
Aspirin	325-1000 mg every 4-6 hours as needed	MAX 3900 mg/day
Ibuprofen	200-800 mg every 4-6 hours as needed	MAX 3200 mg/day
Naproxen	250-500 mg twice daily	MAX 1000-1500 mg/day

NSAIDS: Increased risk of cardiovascular disease in patients with risk factors or prior history

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Non-opioid Relievers[2,6]

Name	Dosing	Comments
Ketoprofen - Immediate-release - Extended-release	 25-50 mg every 6-8 hours as needed 200 mg once daily	 MAX 300 mg/day MAX 200 mg/day
Meloxicam	7.5-15 mg once daily	MAX 15 mg/day
Celecoxib	100-400 mg daily	
Diclofenac	18-35 mg 3 times daily	
Ketorolac	10 mg every 4-6 hours as needed	MAX 40 mg/day x 5 days
Nabumetone	1000-2000 mg 1-2 times daily	

Beers criteria: all have potential to be inappropriate in older adults

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Herbal Supplements[2,6]

Name	Dosing	Comments
White Willow Bark (Salix)[8]	Various	OFF-LABEL
Devil's Claw Root	1.5-3 g 3 times daily	OFF-LABEL
Alpha lipoic acid	200-600 mg 1-2 times daily	OFF-LABEL
Acetyl-L-carnitine[9]	500-1000 mg/day	OFF-LABEL
Glucosamine/chondroitin	800-1200 mg 1-2 times daily/1500 mg/day	OFF-LABEL
Curcumin (turmeric)	1.5-3 g daily	OFF-LABEL
Vitamins B & D supplementation	Varies on extent of deficiency	

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Medical Foods[2]

Metanx®
- Targeted for neuropathy

Theramine®
- Targeted for pain and inflammation

Limbrel®
- Targeted for osteoarthritis

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Antidepressants[2,6,7]

Class	Dosing	Comments
Tricyclic Antidepressants (TCAs) - Amitriptyline - Doxepin - Imipramine - Desipramine - Nortriptyline	 25-150 mg at bedtime 25-300 mg at bedtime 50-150 mg at bedtime 25-150 mg at bedtime 10-150 mg at bedtime	Beers criteria; OFF-LABEL
Selective Serotonin and Norepinephrine Reuptake Inhibitors (SNRIs) - Duloxetine - Milnacipran - Venlafaxine extended-release	 30-60 mg/day 50 mg twice daily 37.5-225 mg daily	 OFF-LABEL

Antiepilectics[2,6]

Name	Dosing	Comments
Carbamazepine - Immediate-release - Extended-release	200-1200 mg/day	Attempts to reduce the dose should be made at least once every 3 months to minimize side effects
Gabapentin	300-2400 mg/day	Abuse potential***
Pregabalin	150-450 mg/day	Controlled med

Antiarrhythmics[2]

Name	Dosing	Comments
Mexiletine[10]	600 mg/day	OFF-LABEL
Flecainide[11]	50-100 mg twice daily	OFF-LABEL

Topical Agents[2,6,7]

Name	Dosing	Comments
Counterirritants	Applied 3-4 times daily	Various OTC products
Diclofenac	Applied 2-4 times daily	Various formulations
Capsaicin	Applied 3-4 times daily	
Eutectic mixture of local anesthetics (EMLA) - Lidocaine/prilocaine	Applied to affected area daily	OFF-LABEL
Lidocaine patch	On for 12 hours, then off for 12 hours	Can place up to 3 patches simultaneously
Compounds	Multiple times per day	Various prescription products combined into one product but often not covered by insurances

Muscle Relaxants[2,6]

Name	Dosing	Comments
Carisoprodol	250-350 mg 4 times daily	Beers criteria; max duration of 2-3 weeks recommended
Cyclobenzaprine	5-10 mg 3 times daily or 10-30 mg at bedtime	
Methocarbamol	4000 mg/day	
Chlorzoxazone	500-750 mg 3-4 times daily	
Orphenadrine	100 mg twice daily	
Tizanidine	Up to 36 mg/day	Shouldn't have as much tolerance develop so can be used for longer durations
Baclofen	Up to 80 mg/day	

Other Medications[2,6]

Name	Dosing	Comments
Clonidine[12]	75-150 mcg/day	OFF-LABEL
Botulinum toxins	Varies by the product	Migraine, spasticity
N-methyl-D-aspartate (NMDA) inhibitors[13] - Memantine - Dextromethorphan	 10-30 mg/day 45-400 mg/day	OFF-LABEL
Naltrexone[14]	4.5 mg daily	Opioid dependence OFF-LABEL

Short Acting Opioids[2,6]

Name	Dosing	Comments
Codeine	15-60 mg every 4 hours as needed	
Oxycodone (+ APAP combinations) (+ ASA combination)	5-15 mg every 4-6 hours as needed 2.5-10mg/325-650mg every 6 hours as needed 4.8mg/325mg every 6 hours as needed	
Hydrocodone + APAP combinations	5-10mg/300-325mg every 4-6 hours as needed	
Tramadol (+ APAP combinations)	25-100 mg every 4-6 hours as needed 75mg/325mg every 4-6 hours as needed	ODT product available
Fentanyl	100-400 mcg up to 4 times daily as needed for breakthrough pain	Various formulations; TIRF REMS; For oncology purposes only
Hydromorphone	2-4 mg every 4-6 hours as needed	
Oxymorphone	5-20 mg every 4-6 hours as needed	
Tapentadol	50-100 mg every 4-6 hours as needed	

Sustained-Release and Long Acting Opioids[2,6]

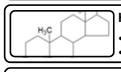
** For opioid tolerant patients only***

Name	Dosing	Comments
Morphine - Avinza®, Kadian® - Morphabond™, MSContin® - Arymo™	 30+ mg every 24 hours 15+ mg every 12 hours 15+ mg every 8-12 hours	
Oxycodone - Xtampza™ - OxyContin®	 9+ mg every 12 hours 10+ mg every 12 hours	Manipulation resistant
Oxymorphone	5+ mg every 12 hours	
Hydrocodone - Vantrela™ - Zohydro®	 15+ mg every 12 hours 10+ mg every 12 hours	
Hydromorphone	8+ mg every 24 hours	
Fentanyl	12+ mcg placed every 72 hours	Transdermal
Tapentadol	50-250 mg every 12 hours	
Buprenorphine	5+ mcg placed every 7 days	Transdermal
Methadone	2.5-10+ mg every 8-12 hours	

Opioid Adverse Effects[2]

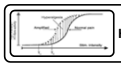
Nausea
- Vomiting
- Constipation

Thought & Memory Impairment
- Drowsiness



Hormonal changes
- Decreases testosterone and estrogen
- Decreases sex drive

Respiratory Depression

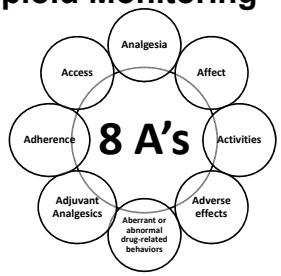


Hyperalgesia

Question: Match Opioid Terms to Definitions[2]

Terms	Definitions
• Opioid-responsiveness • Addiction • Physical Dependence • Withdrawal • Tolerance • Pseudotolerance • Drug Misuse • Diversion	• Need to increase when other factors are present • Signs of discomfort when abruptly stopped • Developed as part of addiction • Effects diminishes over time • Ability to achieve pain relief • Allowing others access to meds • Incorrect use of medications other than prescribed • Pathologically pursuing response

Opioid Monitoring [2,15]



- Prescription Drug Monitoring Programs (PDMPs)
- Opioid treatment agreements
- Urine drug tests (UDTs)

Opioid Outcomes [1,3]

- US counts for 4.6% of global population but used 69% of opioid supply in 2014
  - ↓opioid prescriptions ≠ ↓opioid-related deaths
  - 28,647 deaths were related to opioids
    - 61% of all drug overdose death
    - 18,893 deaths were due to prescription opioids
- Risk Evaluation and Mitigation Strategies (REMS)

Naloxone[15]

	INTRANASAL	INTRAMUSCULAR
Formulations	1 mg/mL Luer-Jet™ Luer-Lock needleless syringe; Narcan® 4 mg	0.4 mg/mL single-use 1 mL vial or 10 mL multi-dose vial; Evzio™ auto-injector 0.4 mg
Directions	Spray 1 mL (half of the syringe) into each nostril Narcan®: contents of one device (4 mg) into one nostril Repeat after 3 minutes if no or minimal response.	Inject 1 mL in shoulder or thigh Evzio: 0.4 mg SUBQ or IM in the thigh Repeat after 3 minutes if no or minimal response.
Cost	$25-50 Narcan®: $150 (2 units)	Single use vial: $60 Evzio™ - $$$$

Copay cards available for commercial insurances patients; Narcan® has a program for cash paying patient

Naloxone[15-17]

- Illinois:
  - Has Naloxone Access and Drug Overdose Good Samaritan Law
  - http://stopoverdoseil.org/narcan.html
- Missouri:
  - Can be given by a first responder
  - Allows pharmacists to sell and dispense naloxone without a prescription under a protocol with an authorizing prescriber
  - http://www.pr.mo.gov/boards/pharmacy/Pharmacist-Naloxone-FAQ-Guidance.pdf

Question

- Which of the following is a valid resource for naloxone?
  - A. Harm Reduction Coalition
  - B. National Institute of Health: National Institute of Drug Abuse
  - C. Opioid Overdose Prevention Kit
  - D. Evzio™ and Narcan® websites

Washington Post-Kaiser Family Foundation National Poll of Long-Term Opioid Users (n=809)[19]

- 92%
  - Feel their opioids make a significant difference in reducing pain at least somewhat well
    - 53% opioids reducing pain very well
- 57%
  - Report improved quality of life with opioid
- 20%
  - Report a negative impact on mental health
    - 20% positive impact
    - 60% no difference

Guidelines for Prescribing Opioids[1,3]

- Centers for Disease Control and Prevention's (CDC) Guideline for Prescribing Opioids for Chronic Pain (2016)
- Responsible, Safe, and Effective Prescription of Opioids for Chronic Non-Cancer Pain: American Society of Interventional Pain Physicians (ASIPP) Guidelines (2017)

CDC's Key Clinical Questions[1]

- Effectiveness of long-term opioid therapy
- Risks of opioids
- Comparative effectiveness of opioid dosing strategies
- Accuracy of instruments for predicting opioid overdose, addiction, abuse, or misuse
- Effects of prescribing opioid therapy

CDC Guideline Highlights[1]

Determining when to Initiate or Continue Opioids for Chronic Pain	Opioid Selection, Dosage, Duration, Follow-Up, and Discontinuation	Assessing Risk and Addressing Harms of Opioid Use
• Opioids are not first line therapy • Establish goals for pain and function • Discuss risks and benefits	• Use immediate-release opioids when starting • Use the lowest effective dose • Prescribe short durations for acute pain • Evaluate benefits and harms frequently	• Use strategies to mitigate risk • Review PDMP data • Use urine drug testing • Avoid concurrent opioid and benzodiazepine prescribing • Offer treatment for opioid use disorder

ASIPP Objectives[3]

- To provide guidance for the prescription of opioids for the management of chronic non-cancer pain
- To develop a consistent philosophy among many diverse groups with an interest in opioid use as to how appropriately prescribe opioids
- To improve the treatment of chronic non-cancer pain
- To reduce the likelihood of drug abuse and diversion

Intended to provide a systematic and standardized approach to this complex and difficult arena of practice while recognizing that every clinical situation is unique

ASIPP Summary of Recommendations[3]

Initial Steps of Opioid Therapy

- Comprehensive assessment and documentation
- Screening for opioid abuse to identify opioid abusers
- Utilization of prescription drug monitoring programs
- Utilization of urine drug testing
- Establish appropriate physical diagnosis and psychological diagnosis if available
- Consider appropriate imaging, physical diagnosis, and psychological status to collaborate with subjective complaints
- Establish medical necessity based on average moderate to severe pain and/or disability
- Stratify patients based on risk
- Establish treatment goals of opioid therapy with regard to pain relief and improvement in function
- Obtain a robust opioid agreement, which is followed by all parties

ASIPP Summary of Recommendations[3]

Assessment of Effectiveness of Long-Term Opioid Therapy

- Initiate opioid therapy with low dose, short-acting drugs with appropriate monitoring
- Consider up to 40 morphine milligram equivalent (MME) as low dose, 41-90 MME as moderate dose, and > 91 MME as high dose
- Avoid long-acting opioids for the initiation of opioid therapy
- Recommend methadone only for use after failure of other opioid therapy and only by clinicians with specific training in its risks and uses, within FDA recommended doses
- Understand and educate the patients of the effectiveness and adverse consequences of long-acting opioids
- Similar effectiveness for long-acting opioids and short-acting opioids with increased adverse consequences of long-acting opioids
- Periodically assess pain relief and/or functional status improvement of > 30% without adverse consequences
- Recommend long-acting or high dose opioids only in specific circumstances with severe intractable pain

ASIPP Summary of Recommendations[3]

Monitoring for Adherence and Side Effects

- Monitor for adherence, abuse, and noncompliance by UDT and PDMPs
- Monitor patients on methadone with an electrocardiogram periodically
- Monitor for side effects including constipation and manage them appropriately, including discontinuation of opioids when indicated

Final Phase

- May continue with monitoring with continued medical necessity, with appropriate outcomes
- Discontinue opioid therapy for lack of response, adverse consequences, and abuse with rehabilitation

Question

- What is not in common between the CDC and ASIPP recommendation?
  - A. Avoid combining opioids and benzodiazepine
  - B. Review PDMPs and UDTs
  - C. Start with low-dose opioids
  - D. Screen for abuse

Summary

- Different chronic pain syndromes plague millions of Americans
- There are several options including passive, active, invasive, and medication therapies
- National organizations like CDC and ASIPP have provided several key guidance statements in prescribing opioids for chronic pain

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Questions?

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