

NONOPIOID ALTERNATIVES FOR THE TREATMENT OF PAIN

Background

[House Bill 751](#) requires the Montana Department of Health and Human Services (DPHHS) to develop an educational pamphlet regarding the use of nonopioid alternatives for the treatment of acute nonoperative, acute perioperative, subacute, or chronic pain. Nonopioid alternatives for treating pain are plentiful, as described below. Pain is categorized by the duration or circumstances related to onset. The [CDC Clinical Practice Guideline for Prescribing Opioids for Pain – United States, 2022](#) defines acute (duration <1 month), subacute (duration of 1-3 months), and chronic (duration of >3 months) pain. Perioperative refers to the period around the time of a surgical operation.

General advantages of nonopioid alternatives

- Can control and alleviate mild to moderate pain with few side effects.
- Can reduce exposure to opioids and dependency.

General disadvantages of nonopioid alternatives

- May not be covered by insurance.
- Pain relief may not be immediate.
- May not be effective for severe pain.

PHARMACOLOGIC ALTERNATIVES TO OPIOIDS

MEDICATIONS

POTENTIAL INDICATION, ADVANTAGES, *DISADVANTAGES*

Acetaminophen

Can be effective for mild to moderate pain. *Risks of acetaminophen include dose-dependent liver toxicity, especially when the drug is taken at high doses, with alcohol, or by those with liver disease*

Nonsteroidal anti-inflammatory medications (NSAIDs) (e.g., ibuprofen, naproxen, aspirin)

Can provide significant pain relief for inflammation, such as pain from arthritis, bone fractures or tumors, muscle pains, headache, and acute pain caused by injury or surgery. *Nonselective NSAIDs can be associated with gastritis, gastric ulcers, and gastrointestinal (GI) bleeding. The use of NSAIDs may be associated with renal insufficiency, hypertension, and cardiac-related events.*

Anticonvulsants (e.g., gabapentin, pregabalin)

Originally developed to treat seizures, but also commonly used to treat different pain syndromes, including postherpetic neuralgia, peripheral neuropathy, and migraine. *May cause significant sedation and have recently been associated with a possible risk of misuse.*

Antidepressants (e.g., tricyclic antidepressants (TCAs), selective norepinephrine reuptake inhibitors (SNRIs))

TCAs are effective in a variety of chronic pain conditions, including neuropathic pain. *Adverse effects include dry mouth, dizziness, sedation, memory impairment, orthostatic hypotension, urinary retention, and cardiac conduction abnormalities.* SNRIs are effective for a variety of chronic pain conditions, including musculoskeletal pain, fibromyalgia, and neuropathic pain conditions and have *markedly fewer adverse effects (e.g., lower risk of drowsiness, memory impairment, and cardiac conduction abnormalities) than TCAs.*

Medicated Creams, Foams, Gels, Lotions, Ointments, Sprays and Patches

May include agents noted above formulated for topical use. Can be used to relieve mild-moderate pain because medication is applied to the pain site. Anesthetics relieve nerve pain (shooting and burning pain) by numbing an area; NSAIDs relieve the pain of osteoarthritis, sprains, strains and overuse injuries; and capsaicin relieves musculoskeletal and neuropathic pain. *Skin irritation may occur. Adverse effects are dependent on the medication class. Capsaicin can cause warmth, stinging or burning on the skin.*

PHARMACOLOGIC ALTERNATIVES TO OPIOIDS, continued	
MEDICATIONS	POTENTIAL INDICATION, ADVANTAGES, DISADVANTAGES
Interventional pain management	Includes anesthetic or steroid injections around nerves, tendons, joint, or muscles; neuromodulation; drug delivery systems; or temporary/permanent nerve blocks. <i>Adverse events are dependent on the agents used and the nature of the treatment.</i>
Non-opioid anesthesia	Non-opioid anesthesia used to block pain during and after surgery. <i>Adverse events are dependent on the agents used.</i>
NON-PHARMACOLOGIC INTERVENTIONS TO OPIOIDS	
RESTORATIVE THERAPIES	
Self-Care	Heat or cold therapies do not require a visit with a healthcare provider and incur relatively low costs. Ice relieves pain and reduces inflammation and swelling while heat reduces muscle pain or stiffness. <i>Too much heat can increase swelling and inflammation.</i> Regular exercise and physical activity can relieve pain. <i>Maintaining daily exercise and overcoming barriers to exercise can be a challenge.</i>
Active/rehabilitative therapies	Physical therapy treats pain by restoring, enhancing, and maintaining physical and functional abilities. Therapy includes activities that increase coordination, balance, flexibility and range of motion Occupational therapy treats pain through the therapeutic use of performing everyday activities. Yoga can be therapeutic in the treatment of chronic pain conditions (e.g., low back pain). <i>Therapy interventions and recommendations will not help if the patient does not practice as instructed.</i>
Behavioral and mental health therapies	Psychiatrists, clinical social workers, marriage and family therapists, and mental health counselors provide therapies that identify and treat psychosocial contributors to pain that may interfere with pain management. <i>When used to manage pain, these therapies can take time.</i>
Passive therapies	Acupuncture can help ease some types of chronic pain. <i>Bleeding, bruising, and soreness may occur at insertion sites.</i> Massage and manipulative therapies may be clinically effective for short-term pain relief. <i>Discomfort may occur during or after treatment.</i> Transcutaneous electrical nerve stimulation (TENS) is considered a safe self-care option for patients (with appropriate education). <i>Allergic reaction to adhesive pads is possible.</i>

References

1. Chou, R., Wagner, J., Ahmed, A., & al., e. (2020, December). *Treatments for Acute Pain: A Systematic Review [Internet]*. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK566500/>
2. Dowell, D., Ragan, K., Jones, C., Baldwin, G. T., & Chou, R. (2022, November 4). *Morbidity and Mortality Weekly (MMWR)*. Retrieved from CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022: https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm?s_cid=rr7103a1_w
3. Florida Department of Health. (2021). *Non-Opioid Pain Management*. Retrieved from Florida Health: <https://www.floridahealth.gov/programs-and-services/non-opioid-pain-management/documents/alternatives-facts-8.5x11-eng.pdf>
4. U.S. Department of Health and Human Services (2019, May). Pain Management Best Practices Inter-Agency Task Force Report: Updates, Gaps, Inconsistencies, and Recommendations. Retrieved from U. S. Department of Health and Human Services website: <https://www.hhs.gov/sites/default/files/pmtf-final-report-2019-05-23.pdf>