

# Psychotropic medications for chronic pain

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The opioid crisis presents a need to consider alternative options for treating chronic pain. There is significant overlap in neuroanatomical circuits that process pain, emotions, and motivation. Neurotransmitters modulated by psychotropic medications are also involved in regulating the pain pathways.<sup>1,2</sup> In light of this, psychotropics can be considered for treating chronic pain in certain patients. The *Table*<sup>1-3</sup> outlines various uses and adverse effects of select psychotropic

medications used to treat pain, as well as their psychiatric uses.

In addition to its psychiatric indications, the serotonin-norepinephrine reuptake inhibitor duloxetine is FDA-approved for treating fibromyalgia and diabetic neuropathic pain. It is often prescribed in the treatment of multiple pain disorders. Tricyclic antidepressants (TCAs) have the largest effect size in the treatment of neuropathic pain.<sup>2</sup> Cyclobenzaprine is a TCA used to treat muscle spasms. Gabapentinoids (alpha-2

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**Disclosures**

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**Table**

## Psychotropic medications used in pain management

Medication(s)	Use(s) in pain management	Psychiatric use(s)	Adverse effects
SNRIs (duloxetine, venlafaxine)	Neuropathic pain, <sup>a,b</sup> chronic musculoskeletal pain, <sup>b</sup> fibromyalgia <sup>b</sup>	Depression, GAD, PTSD	Nausea, sedation, serotonin syndrome
Gabapentinoids (pregabalin and gabapentin)	Neuropathic pain, <sup>a,b</sup> chronic backache, restless leg syndrome, fibromyalgia, migraine	Adjuvants for the treatment of bipolar disorder, anxiety, insomnia, alcohol withdrawal	Blurred vision, weight gain, negative effects on cognition, dizziness, sedation
TCAs (desipramine, amitriptyline, imipramine, nortriptyline)	Neuropathic pain, <sup>a</sup> migraine headache prophylaxis	Depression, GAD, PTSD, OCD	Cardiac arrhythmia, tachycardia, anticholinergic adverse effects (ie, dry mouth, constipation)
Muscle relaxants (cyclobenzaprine, clonidine, baclofen, tizanidine)	Myofascial pain, muscle spasms, <sup>a</sup> fibromyalgia <sup>a</sup>	Clonidine: ADHD, PTSD, Tourette syndrome Baclofen: produces effects similar to benzodiazepines	Urinary retention, somnolence, dizziness, dry mouth Baclofen withdrawal can be fatal and is treated with benzodiazepines
Benzodiazepines	Muscle spasm	Anxiety disorders, alcohol withdrawal, insomnia	Drowsiness, confusion, ataxia, amnesia, dependence
Ketamine	Complex regional pain syndrome, neuropathic pain <sup>a</sup>	Treatment-resistant depression	Confusion, delirium, hallucinations, dysphoria, cardiovascular adverse effects
Cannabinoid-based medications	Neuropathic pain <sup>a</sup>	Insomnia	Psychosis, dependence. Cannabis is a common substance of abuse

ADHD: attention-deficit/hyperactivity disorder; GAD: generalized anxiety disorder; OCD: obsessive-compulsive disorder; PTSD: posttraumatic stress disorder; SNRIs: serotonin-norepinephrine reuptake inhibitors; TCAs: tricyclic antidepressants

<sup>a</sup>Neuropathic pain includes painful polyneuropathy, painful diabetic neuropathy, radiculopathy, and postherpetic neuralgia

<sup>b</sup>Some agents in this class are FDA-approved for this indication

Source: References 1-3

delta-1 calcium channel inhibition) are FDA-approved for treating postherpetic neuralgia, fibromyalgia, and diabetic neuropathy.<sup>1,2</sup>

Ketamine is an anesthetic with analgesic and antidepressant properties used as an IV infusion to manage several pain disorders.<sup>2</sup> The alpha-2 adrenergic agonists tizanidine and clonidine are muscle relaxants<sup>2</sup>; the latter is used to treat attention-deficit/hyperactivity disorder and Tourette syndrome. Benzodiazepines (GABA-A agonists) are used for short-term treatment of anxiety disorders, insomnia, and muscle spasms.<sup>1,2</sup> Baclofen (GABA-B receptor agonist) is used to treat spasticity.<sup>2</sup> Medical cannabis (tetrahydrocannabinol/cannabidiol) is also gaining popularity for treating chronic pain and insomnia.<sup>1-3</sup>

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