

Supplemental Text: Plain Language Summary

What is this article about?

In this article, we discuss medications called **opioid antagonists**. We talk about how different opioid antagonists are used for different medical conditions, and we summarize their safety profiles.

What are opioid antagonists?

Opioid antagonists are medications that cause their therapeutic effects by interacting with opioid receptors in the body and blocking their activation. This contrasts with opioid agonists, which are drugs that activate opioid receptors to bring about pain relief. The feelings of euphoria caused by opioid agonists can make them drugs of abuse. Opioid antagonists are not addictive and are not subject to abuse.

Are opioid antagonists safe?

As a class, opioid antagonists do not have the same safety concerns as opioid agonists. The safety profiles of opioid antagonists are different for each medication.

What are the different opioid antagonists? What are they used for?

Centrally acting opioid antagonists work in the brain and spinal cord:

- **Samidorphan** (an opioid antagonist), in combination with olanzapine (an antipsychotic medication), is used to reduce the amount of weight gain associated with olanzapine when given alone.
- **Nalmefene** and **naloxone** reverse the effects of opioid agonist overdose.
- **Naltrexone** treats opioid agonist addiction and alcohol addiction.

Peripherally acting opioid antagonists work in the gut:

- **Naldemedine**, **naloxegol**, and **methylnaltrexone** treat constipation caused by opioid agonists, a common side effect.
- **Alvimopan** treats the stomach pain and bloating that sometimes occur after surgery.

Opioid antagonists are important medications used for diverse conditions. Gaining knowledge on when to use them, their individual characteristics, and their safety profiles helps to ensure their safe and effective use.