



# Buprenorphine for Pain Management & Treatment of Opioid Use Disorder (OUD)

**Buprenorphine** is most commonly used for **treating OUD** but also has a role in **pain management**.

These clinical uses rely on this drug's **partial agonist** effect on the  $\mu$  opioid receptor. There are some significant differences in the way buprenorphine is prescribed for pain vs OUD.

## Here are the different uses for buprenorphine:

### 1. Buprenorphine for pain

- ✓ Dosed in **micrograms**
- ✓ Formulations include:
  - Buccal film dosed every 12 to 24 hours
  - Transdermal patch dosed every 7 days
- ✓ These formulations **CANNOT be used off-label** for treating OUD.
- ✓ There are **specific protocols for starting buprenorphine** for treating pain in opioid-naive and opioid-tolerant patients. All opioid-tolerant patients should have their current opioid tapered to no more than 30 morphine milligram equivalents (MMEs) before initiating buprenorphine. The initial buprenorphine dose will then be determined based on the patient's opioid dose before the taper.



## 2. Buprenorphine for OUD



- ✓ There is **no longer a requirement for a special waiver** to prescribe buprenorphine for OUD. Only a standard DEA license to prescribe controlled substances is needed.
- ✓ Dosed in **milligrams**
- ✓ Formulations include:
  - Dissolving tablet once or twice daily
  - Dissolving film once or twice daily
  - Extended-release subcutaneous injection weekly or monthly
- ✓ Tablets and film are available as monotherapy or in combination with **naloxone** (to discourage misuse by injection route).
- ✓ There are **specific protocols for starting buprenorphine** for treating OUD in opioid-tolerant patients:
  - Because buprenorphine has a **high affinity** for  $\mu$  opioid receptors, it can displace other opioids that bind with less affinity to these receptors.
  - As the partial-agonist effect of buprenorphine replaces the full-agonist effect of the displaced opioid, severe opioid withdrawal can occur if the patient is opioid dependent.
  - To avoid withdrawal, patients should no longer have any residual opioid effect from their **last dose of opioid** — as evidenced by mild opioid withdrawal symptoms — before receiving a first dose of buprenorphine.

## 3. Buprenorphine for OUD & chronic pain

- ✓ Because the analgesic duration of buprenorphine is around 8 hours, the transmucosal formulations that are FDA approved for treating OUD (#2 above) can be **dosed every 8 hours** to treat both OUD and chronic pain.



### How to treat severe acute pain requiring opioids (e.g., major surgery or trauma) in a patient taking buprenorphine for OUD

**Divide the patient's total daily buprenorphine dose into a dosing interval of every 8 hours for better pain coverage. WHY** The once-daily maintenance buprenorphine will provide very little if any analgesia after the first 8 hours because of its shorter analgesic half-life compared with its duration of action for treating OUD (24–36 hours).



Try a multimodal pain-management strategy — with nonopioid medications (nonsteroidal antiinflammatory drugs and acetaminophen) as well as epidural/spinal analgesia or nerve blocks.

**If opioids are indicated, consider a short duration (1–3 days) of full agonist opioids, to be taken in combination with the buprenorphine divided into every 8 hours dosing. WHY**

Although there has been a theoretical concern that buprenorphine could block the effects of subsequently administered opioid analgesics, recent studies have suggested that concurrent use of opioid analgesics is effective in patients receiving buprenorphine maintenance therapy for OUD. Notably, patients with a history of OUD may need higher-than-usual doses of the short-acting opioid because of cross-tolerance and increased pain sensitivity. This approach should only be considered if the patient can be closely monitored.

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#### References:

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