

Medication Treatment Options, Therapeutic Benefits And Adverse Effects

MCC Patient Education Module

Opioid addiction isn't a moral or mental weakness. It's a chronic medical condition that results from changes in the brain in susceptible people. Once narcotic addiction has developed, escaping the cycle of detox and relapse is typically a long-term process.

Breaking free of prescription drug abuse takes much more than willpower. Fortunately, *medications and counseling* can improve the chances of success. Newer drugs like buprenorphine (sometimes combined with naloxone) and naltrexone and traditional therapies like methadone and 12-step programs, are helping thousands of people stay on the road to recovery.

Buprenorphine – A Unique Life-Saving Medication. The partial agonist effect of buprenorphine is *unique* to buprenorphine, and means that at a dose that effectively relieves craving, a ceiling effect prevents the euphoria associated with drug abuse and *protects against overdose deaths*. Buprenorphine can allow one to regain a normal state of mind – free of withdrawal, cravings and the drug-induced highs and lows of addiction and enable patients to get back to school, work, and family.

As a medication-assisted treatment (MAT), it suppresses withdrawal symptoms and cravings for opioids, does not cause euphoria in the opioid-dependent patient, and it blocks the effects of the other (problem) opioids for at least 24 hours. If a full opioid is taken within 24 hours of Buprenorphine, then the patient will quickly discover that the full opioid is not working – they will not get high. This 24-hour reprieve gives the patient time to reconsider the wisdom of relapsing with a problem opioid while undergoing MAT.

Why is Naloxone Added To Buprenorphine? Naloxone is added to buprenorphine to decrease the likelihood of diversion and abuse of the combination product. Naloxone is not absorbed into the bloodstream to any significant degree when Buprenorphine/Naloxone is taken correctly by allowing it to dissolve under the tongue or in the inside of your cheek. However, if a Buprenorphine/Naloxone tablet is crushed and then snorted or injected the naloxone component will travel rapidly to the brain and knock opioids already sitting there out of their receptors. This can trigger a *rapid and quite severe* withdrawal syndrome. Naloxone has been added to Buprenorphine for only one purpose – to discourage people from trying to snort or inject it.

Benefits of Buprenorphine Treatment. Due to its unique pharmacologic profile, buprenorphine has a number of advantages for use as an opioid replacement therapy.

1. Treatment does not require participation in a highly regulated federal program such as a methadone clinic, requiring daily doses.
2. Patients can be treated monthly, on an outpatient basis, in a primary care setting.
3. Patients are seen, evaluated, and examined by a doctor at each visit.
4. Buprenorphine allows the brain to start eventually producing its own natural opiates again and helps heal neurotransmitter and receptor sites.
5. Buprenorphine does not significantly prolong the QTc interval, and is associated with less sudden death than is methadone.
6. Buprenorphine is a partial opioid and methadone is a full opioid.
7. Buprenorphine has less medication interactions.
8. Patients report that they feel less medicated and more normal, on buprenorphine as compared to methadone.
9. Since buprenorphine is a semisynthetic partial opioid agonist, it's easier to taper off of than methadone.
10. Buprenorphine treats a broader array of pain phenotypes than do certain potent mu agonists and is associated with less analgesic tolerance.
11. Buprenorphine does not cause hyperalgesia
12. Buprenorphine produces less constipation than methadone, and does not adversely affect the sphincter of Oddi.
13. Buprenorphine is effective for treating cancer pain.
14. Compared to methadone, buprenorphine showed *lower* severity of Neonatal Abstinence Syndrome symptoms, thus requiring *less medication and less time in the hospital*.
15. Buprenorphine causes less cognitive impairment than methadone
16. Buprenorphine is not immunosuppressive like other full opiate agonists, such as methadone.
17. Buprenorphine is effective for treating neuropathic pain.
18. Buprenorphine does not adversely affect the hypothalamic-pituitary-adrenal axis or cause hypogonadism.
19. Buprenorphine is a safe and effective analgesic for the elderly.
20. Buprenorphine is one of the safest opioids to use in patients in renal failure and those on dialysis

21. Withdrawal symptoms are milder and drug dependence is less with buprenorphine.

22. Buprenorphine has a ceiling effect on respiratory depression and is protective against overdose. The rate of overdose with methadone has increased by a factor of 7 since 1990. This is because there is no ceiling effect with methadone and patients can overdose from “dose stacking.”

Risks/Disadvantages of Buprenorphine Treatment. While Buprenorphine is a unique, life-saving medication, there is some risks associated with its use.

1. Buprenorphine is a semisynthetic opiate and individuals can become physically dependent. Abrupt discontinuation of Buprenorphine is not recommended and individuals taking Buprenorphine should taper their dose over time.

2. Buprenorphine should not be taken with other medications that cause central nervous system depression and/or respiratory depression as this increases the likelihood of overdose. Medications that should not be taken with Buprenorphine include: 1) Benzodiazepines (Xanax, Klonopin, Valium, Ativan, Ambien, Restoril), 2) Alcohol, 3) Barbiturates (Fioricet, Phenobarbital), 4) Neurontin, 5) Lyrica, 6) Phenergan, 7) Marijuana 8) Morphine 9) Heroin, 10) Muscle Relaxers (Soma, Zanaflex, Flexeril), and 11) other opiates.

3. Individuals taking Buprenorphine will need to have periodic labs to monitor liver function.

Methadone. Methadone is a long-acting opioid drug. It activates the same opioid receptors as narcotics, effectively eliminating withdrawal symptoms. Providing the correct dose of methadone prevents opioid withdrawal symptoms and eases drug craving but it does not provide the euphoria.

Benefits of Methadone Treatment

1. Methadone is the best-studied, most effective method of recovery from narcotic addiction.

2. The dose can be slowly tapered off, freeing the person from physical dependence without withdrawal symptoms.

3. Relatively inexpensive.

Risks/Disadvantages of Methadone Treatment. While Methadone can be a life-saving medication, there is some risks associated with its use.

1. Requires participation in a highly regulated federal program with daily dosing.

2. Can cause a prolonged QTc interval (affects cardiac conduction), and is associated with sudden cardiac death.

3. Methadone is a full agonist opiate and can be more difficult to wean off of.

4. Methadone has a number of drug interactions.

5. Methadone causes more constipation.

6. Methadone causes hyperalgesia (increased pain).

7. Methadone causes a higher severity of Neonatal Abstinence Syndrome (NAS).

8. Methadone must be used cautiously in patients with renal failure and those who are on dialysis.

9. Methadone does not have a ceiling effect on respiratory depression to protect against overdose. The rate of overdose with methadone has increased by a factor of 7 since 1990. This is because there is no ceiling effect with methadone and patients can overdose from “dose stacking.”

Naltrexone. Naltrexone (ReVia, Vivitrol) is an opiate receptor-blocking medication used in maintenance therapy for narcotic addiction. Unlike methadone and Suboxone, naltrexone does not activate receptors at all, so it does not reduce opioid withdrawal or craving. However, because naltrexone blocks opiate receptors, a person won't get high if he or she uses drugs while taking the medicine. The drug is usually ineffective by itself, because people can simply stop taking it and get high shortly after.

Benefits of Naltrexone Treatment.

1. Because naltrexone blocks opiate receptors, a person will not get “high” if he or she uses drugs while taking the medicine.

2. Naltrexone is able to prevent relapse.

3. Naltrexone is able to prevent overdose.

Risks/Disadvantages of Naltrexone Treatment

1. Naltrexone does not activate receptors at all, so it does not reduce opioid withdrawal or craving.

2. An individual must stop taking opiates for 10 to 14 days before they can begin taking Naltrexone.

Rapid Detoxification. "Rapid detox" programs claim to accelerate the process of detox and opioid withdrawal by giving large doses of opioid blocking drugs. Some programs place an addict under general anesthesia during the detox process. These programs have not proven to be more effective than traditional methods of detox, and may be more dangerous.

Maintenance Therapy After Detox. Completing detox subdues the physical effects of narcotic addiction and opioid withdrawal. But experts say psychological and social factors are the main drivers that push addicts back to using. Stress and situations that

remind the brain of the drug's pleasure are common triggers. When drug cravings strike, they can be impossible to resist. Most people who go through detox and short-term counseling will relapse to prescription drug abuse. Studies show that the chances of beating narcotic addiction are better with long-term maintenance therapy with either methadone or buprenorphine paired with naloxone (Zubsolv, Bunavail, Suboxone) . These drugs are used during the maintenance phase of treatment. People on these drugs are still opioid-dependent, but they are often freed from their destructive drug addiction. They can return to work, drive without impairment, and function normally in society. Some people have a high rate of relapse when maintenance therapy is stopped, and so they remain on the medicines for decades. In others, maintenance therapy is tapered off over months to years.