How-To Guide: How to Conduct Buprenorphine Induction

Clinical tips and advice about:

- Basic induction and dosing
- Complications of induction
- Transferring patients from methadone to buprenorphine
- Maintenance dosage
- Tapering/discontinuation
- Medically supervised withdrawal (detoxification)

Plus resources on each page with additional tips and tools!

Written by Clinical Tools, Inc.

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Reviewed by experts in buprenorphine treatment

Publication updated: November 2011. Updated December 2013.

Phases of Buprenorphine Treatment

Buprenorphine maintenance can be divided into three phrases: induction, stabilization, and maintenance.

Induction

The goal of the induction is to find the patient's ideal daily dose of buprenorphine. The ideal daily dose minimizes both side effects and drug craving. For most opioid-dependent patients, the daily dose is 12 to 16 mg/day of the buprenorphine+ naloxone combination film or tablet. Induction usually takes 2 to 4 days to complete.

Stabilization

Stabilization occurs in the 6 to 8 weeks following induction. This period begins when the patient is no longer experiencing withdrawal symptoms or intense cravings.The main goal of stabilization is to eliminate opioid use, as noted by patient reports and confirmed by urine drug testing.

Maintenance

The maintenance phase lasts indefinitely (SAMHSA 2004). Long-term maintenance is recommended due to high relapse rates. For example, in one study of 255 individuals, approximately 87% relapsed at 3 months (Ling 2009). During this phase, the patient is maintained at a comfortable dose and reports minimal craving or side effects.

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Tags: Induction
Methadone
Topics: Induction and dosing

[Archive] Basic Induction and Dosing Guidelines

This information is not current

Standardized dosing protocols are available, but induction should be conducted through careful observation and the dosing should be adjusted accordingly

Buprenorphine induction and maintenance doses may differ for each patient. When planning induction, first consider whether a patient is dependent upon short-acting opioids (e.g. heroin, most prescription narcotics) versus long-acting opioids (e.g. methadone). It will take longer for patients who are dependent on long-acting opioids to prepare for induction (longer abstinence period in the days prior to induction).

Most patients can be started and maintained on the buprenorphine/naloxone combination tablet (generic or brand name: Zubsolv®*) or film (brand name: Suboxone®). The combination formulation contains a 4:1 ratio of buprenorphine and naloxone. The monotherapy tablet is recommended for use in those who are pregnant or have a naloxone allergy.

*We are using brand names since there is a difference in the product that is not reflected in the generic name. We are not advocating one brand or the other.

Related Resources:

Patient Handout: Buprenorphine or Naloxone Combination-What Does It Mean for You?

Description: This patient handout explains buprenorphine, its makeup, and how it works to treat withdrawal.

Buprenorphine/Naloxone Combination Film or Tablets -- What do They Mean for You?

Your physician has prescribed buprenorphine/naloxone combination tablets (generic or Zubsolv®*) or film (Suboxone®) for you. There are a few things you should know before you begin taking it.

What is buprenorphine?
Buprenorphine is a type of drug called an opioid, similar to heroin, methadone or Oxycontin®. Taking buprenorphine will prevent you from going into withdrawal and should stop you from craving other opioids.

What is naloxone?
Naloxone counteracts opioids --including buprenorphine. If you take naloxone while you have an opioid in your system, or if you are dependent on opioids and find that you go into withdrawal without them, naloxone can trigger withdrawal.

That doesn't make sense --why would my provider prescribe a drug which will send me into withdrawal?
Your buprenorphine/naloxone combination medication will not send you into withdrawal --provided you take them as your provider prescribes!

If you dissolve the tablets or film under your tongue, or if you accidentally swallow one, the naloxone will not affect you --your body breaks the naloxone down too quickly for it to take effect! However, if you inject a combination tablet or film, the naloxone will take effect. You will probably not feel anything from the buprenorphine, and you could go into withdrawal.

How Taken Buprenorphine Naloxone	What you feel
Under the tongue (as directed)	• Works properly • Broken down by the body • No withdrawal; reduced craving
Swallowed (accidental)	• Broken down by body

	• Medicine will not work; you could go into withdrawal or feel cravings
Injected (abuse)	• Blocked by naloxone • Blocks effects of opioids • You could go into withdrawal very quickly

*We are using brand names since there is a difference in the product that is not reflected in the generic name. We are not advocating one brand or the other.

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Topics: Induction and dosing
Tags: Dosing
Induction

Preparing for Induction

After determining that a patient is appropriate for buprenorphine treatment, the clinician should do the following before starting induction:

- Conduct a history & physical
- Verify the patient's list of medications, illicit drugs, and alcohol use
- Conduct a brief psychosocial assessment
- Conduct lab testing: liver function tests, urine toxicology screen, pregnancy test
- Have patient review and sign consent forms and treatment agreement
- Determine when and where to start induction (clinic vs. home induction)
- Provide education to the patient about the induction, stabilization, and maintenance processes
- Advise patients not to use opioids for appropropriate amount of time to prevent precipitated withdrawal
- Recommend that the patient get a friend or family member to drive them home if doing clinic-based induction

Preparing for the First Dose

When presenting for their first dose, patients should be in mild to moderate withdrawal. Patients

who are dependent on short-acting opioids should abstain from 12 to 24 hours before beginning induction to achieve this; it will take 36 to 72 hours for those dependent on methadone.

It is important to use an objective measure - like the Clinical Opioid Withdrawal Scale (COWS) - to evaluate the patient's withdrawal symptoms prior to induction since patients may exaggerate their symptoms to avoid discomfort. When patients have a COWS score about 12 or 13 (mild to moderate withdrawal), they are ready for their first dose.

The biggest concern in transferring patients from methadone to buprenorphine is precipitated withdrawal. In order to minimize this risk, patients who are maintained on high doses of methadone should be tapered down to a 30 mg daily dose (ideally) just prior to transfer and maintained on this dose for a week.

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Tags: Dependence
Dosing
Topics: Induction and dosing

Standard Induction Protocol

Though pre-induction guidelines are slightly different for patients dependent on long- vs. short-acting opioids, the induction and dosing process is the same. Give the first dose when the patient is in mild to moderate opioid withdrawal on the COWS scale.

Induction Day 1

On Day 1, patients should be experiencing mild to moderate withdrawal. If using short acting opioids, patients must remain abstinent 12-24 hours before induction. Patients using long acting opioids should remain abstinent 36-72 hours prior to induction. Opioid-dependent patients should be inducted with a 4mg buprenorphine dose, observed for 1-2 hours, then given a second 4mg dose if withdrawal symptoms reappear. Some clinicians prefer to start with just a 2mg dose, which minimizes side effects (if any) and the chance of precipitated withdrawal. A maximum dose of 8-12mg is recommended for Day 1. It's helpful to allow a 2-4 hour window of office time on the first day of induction. You don't necessarily need to require patients to sit in the office the entire time.

Induction Day 2

If a patient was over-medicated at the end of the first day, the dose can be decreased on Day 2. If the patient experiences withdrawal symptoms or cravings after taking a total of 8-12mg on Day 1, the dose should be increased on Day 2. Start on day 2 by giving the patient an initial 12-16mg dose (their Day 1 dose + 4mg). Then wait 1-2 hours and increase the dose in 2-4mg increments when withdrawal symptoms return. The total recommended dose for Day 2 should not exceed 16mg.

If withdrawal symptoms do not return within a few hours, you have established the patient's maintenance dose. Most patients' maintenance dose is between 12-16mg.

Induction Day 3+

If the patient experiences withdrawal symptoms or cravings after taking a total of 16mg on Day 2, first assess whether the patient is taking the medication correctly (letting it dissolve under the tongue, not talking until it is dissolved, etc.). If so, then the dose should be increased on Day 3. Start day 3 by giving the patient an initial 18-20mg dose and increase dosing in the same manner as Day 2.

The total recommended dose for Day 3 and after should not exceed 32mg/day, although very few patients will need a dose this high. Doses higher than this will not harm the patient but will do little to decrease patients' cravings, due to a ceiling effect. Patients who require a high dose should be re-evaluated at the time of induction and/or monitored for diversion.

Related Resources: Clinical Opioid Withdrawal Scale (COWS)
Description: This PDF Document contains the Clinical Opioid Withdrawal Scale (COWS), a common instrument used to assess a patient's opioid withdrawal severity.

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Source: California Society of Addiction Medicine (CSAM)
field_vote:

Resource Type: Patient education materials
Printable form/checklist
Commonly Used Forms: Induction/first treatment
Medical assessment/first visit
Topics: Screening and diagnosis
Physician stage in practice: Becoming waivered
Experienced prescriber
Just became waivered
Need to refer
Setting up a practice
Tags: Assessment
COWS
Screening
Withdrawal
Patient Handouts: Withdrawal

-

Topics: Induction and dosing
Tags: Dependence
Dosing

Dealing with Complications During Induction

Each practice should have a contingency plan in place in case of complications during induction. Before starting your buprenorphine practice, you may want to establish a relationship with another buprenorphine provider in your area for consultation if problems arise.

Severe adverse reactions to buprenorphine during induction are exceedingly rare - the most commonly reported adverse reaction is the development of precipitated opioid withdrawal. You can minimize the risk of precipitated opioid withdrawal by documenting that the patient is in opioid withdrawal prior to induction (using an opiate withdrawal scale instrument), and then dosing carefully. Patients should also be closely monitored between doses so that you can manage any side effects or adverse events that may occur.

Additionally, complications can arise when patients are taking medications that interact with buprenorphine, such as benzodiazepines. Taking a thorough history and conducting urinalysis prior to induction should reduce the likelihood of such problems occurring.

Managing Withdrawal Symptoms

Patients' withdrawal symptoms during induction can be treated with non-opioid medications. These are sometimes called "comfort meds" and are most often needed by patients transferring from long-acting opioids:

- Anxiolytics (use very carefully and in limited quantities)
- Non-opioid pain relievers (NSAIDs or acetaminophen), while considering risks vs. benefits
- Antidiarrheal agents
- Antiemetics
- Antispasmodics

Related Resources: Clinical Opioid Withdrawal Scale (COWS)
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Tags: Assessment
COWS
Screening
Withdrawal
Patient Handouts: Withdrawal

Side Effect Management
Description: This form provides a list of possible symptoms that a patient may have during buprenorphine treatment, possible causes, and recommended management of the symptoms.
Source: Colleen LaBelle, RN/Boston Medical Center

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field_vote:

Topics: Induction and dosing
Stabilization and maintenance
Tags: Induction
Maintenance
Side effects
Symptoms
Physician stage in practice: Just became waivered

Clinical Use of Buprenorphine
Description: This continuing education course instructs physicians, physician assistants, and nurse practitioners who prescribe narcotics on some the requirements and subtleties of buprenorphine treatment that can lead to effective and relatively safe treatment of opioid use disorder.
Source: Clinical Tools, Inc.

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field_vote:

Topics: Induction and dosing
Stabilization and maintenance
Physician and staff training
Physician stage in practice: Becoming waivered

Just became waivered
Setting up a practice
Resource Type: Misc. informational materials
Tags: Precautions
Suboxone
Tapering
Tolerance
Training
Withdrawal

Objective Opiate Withdrawal Scale (OOWS)
Description: The Objective Opiate Withdrawal Scale (OOWS) contains 13 physically observable signs, rated present or absent, based on a timed period of observation of the patient by a rater.
Source: Reprinted from Handelsman, L., Cochrane, K. J., Aronson, M. J., et al. (1987) Two new rating scales for opiate withdrawal. American Journal of Drug and Alcohol Abuse, 13 (3), 293–308. By courtesy of Marcel Dekker, Inc.
field_vote:

Topics: Screening and diagnosis
Resource Type: Patient education materials
Printable form/checklist
Patient Handouts: Withdrawal
Tags: Withdrawal

Subjective Opiate Withdrawal Scale (SOWS)
Description: The Subjective Opiate Withdrawal Scale (SOWS) contains 16 symptoms whose intensity the patient rates on a scale of 0 (not at all) to 4 (extremely).
Source: Reprinted from Handelsman et al. 1987, p. 296, by courtesy of Marcel Dekker, Inc.
field_vote:

Topics: Screening and diagnosis
Resource Type: Patient education materials
Printable form/checklist
Patient Handouts: Withdrawal
Tags: Withdrawal

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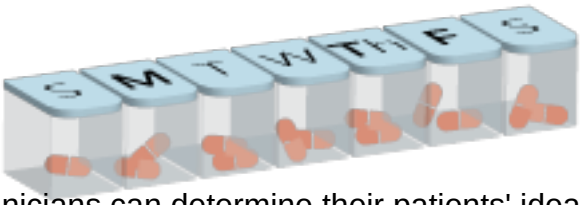
Topics: Induction and dosing
Tags: Complications
Induction

Establishing a Maintenance Dose of Buprenorphine



Clinicians can determine their patients' ideal daily dose within the first few days of induction. The next few weeks are a stabilization period, during which time patients should be maintained at their daily dose with close monitoring and adjustments as needed. Regular and frequent clinic visits (recommended: weekly) should continue until the patient stabilizes medically and psychosocially.

At an ideal daily dose, the patient should experience no withdrawal symptoms and no cravings. Most patients' daily maintenance dose is between 12 to 16mg, but may be up to 32/mg.

The maintenance phase will continue indefinitely for most patients (SAMHSA 2004). Long-term maintenance is recommended due to high relapse rates. For example, in one study of 255 individuals, approximately 87% relapsed at 3 months (Ling 2009).

Patients can be maintained at a 12-16 mg daily dose indefinitely, as long as the patient is comfortable and happy with treatment (McNicholas 2011). Clinic visits can be decreased but patients should still be seen regularly. Clinicians should monitor the patient's cravings for opioids and adherence to psychosocial therapies. Additionally, conduct periodic lab testing:

- Monthly urine toxicology screens
- Conduct initial pregnancy tests for all women of childbearing age, and ask each month, thereafter, if the patient thinks they may be pregnant, or test the patient as seems indicated. Request to be notified if they think they are pregnant.
- Liver function tests every 6 months, if the initial test was abnormal, or with liver disease

Opioid abuse during maintenance should not be grounds for terminating buprenorphine treatment. Alternative responses include checking on proper use of buprenorphine and dose, increased office visits, and making continued treatment contingent on increased psychosocial support.

Related Resources: TIP 40 Chapter 4: Treatment Protocols
Description: Discusses protocols for office-based buprenorphine treatment, including the administering of the drug itself, devising a treatment plan, and choosing an appropriate frequency for visits.
Source: Substance Abuse and Mental Health Services Administration (SAMHSA)

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field_vote:

Topics: Induction and dosing
Logistics of buprenorphine treatment
Tags: Dosing
Induction
Maintenance
Schedule
Tapering
Physician stage in practice: Just became waivered
Setting up a practice

-

Topics: Induction and dosing

Tapering and Discontinuation of Patients from Buprenorphine

Discontinuing Buprenorphine:

The discontinuation phase of buprenorphine treatment involves a gradual reduction or tapering from the patient's maintenance dose.

1. Discontinuing buprenorphine is not required. Patients can continue buprenorphine therapy indefinitely (SAMHSA, 2004):

- Assuming they want to
- They experience no complications
- They adhere to treatment

There is a high risk for relapse, even if maintenance has been stable for a while, when medication assisted treatment is discontinued (SAMHSA, 2004; Stephenson, 2008). To explain that continuing the medication reduces risk of relapse to patients, it can be helpful to draw a parallel to medication for a chronic condition, such as hypertension being continued indefinitely.

2. Opioid abuse should not be grounds for terminating buprenorphine treatment. Alternative responses include checking on proper use of buprenorphine and dose, increased office visits, and making continued treatment contingent on increased psychosocial support.

Discussing Discontinuing Buprenorphine with Patients:

Discontinuing buprenorphine should be discussed thoroughly with patients and their significant others. Ask patients why they want to discontinue treatment and encourage them to remain on the therapeutic dose as long as it is needed. Include a discussion of potential consequences:

1. Unfortunately, relapse rates are high (around 88% positive urine drug tests at 3 months post-taper in one major NIDA funded study -- Ling et al., 2009).
2. Some patients can taper down to 2 or 4 mg (sublingual tablets or equivalent of other formulations) but cannot get off completely without uncomfortable withdrawal symptoms.
3. If patients wish to discontinue buprenorphine use, alternative forms of pharmacotherapy may be their best chance for remaining abstinent in the long-term
4. Patients who discontinue buprenorphine should still be monitored and assessed for cravings and adherence to psychosocial therapies.
5. Encourage your patients to return for maintenance treatment if cravings develop after withdrawal.

Related Resources: TIP 40 Chapter 4: Treatment Protocols
Description: Discusses protocols for office-based buprenorphine treatment, including the administering of the drug itself, devising a treatment plan, and choosing an appropriate frequency for visits.
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field_vote:

Topics: Induction and dosing
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Topics: Induction and dosing
Tags: Tapering

Procedure for Detoxification (Medically Supervised Withdrawal)

Detoxification, or medically supervised withdrawal (MSW), involves using a medication to take a patient from an opioid-dependent to an opioid-free state. Patients who want to stop using opioids but not want to be maintained on buprenorphine may request MSW. Conducting MSW involves inducting the patient onto buprenorphine following the standard induction protocol and then tapering the patient back off of buprenorphine. The buprenorphine/naloxone combination formulation should be used in most cases.

Risks of MSW

Relapse is a significant concern when conducting MSW. It is extremely common and, in some cases, can lead to overdose. The implications of relapse and possible risk of overdose should be carefully explained to patients who are requesting MSW. Also, the benefits of maintenance therapy should be discussed.

During detoxification, the patient should be closely monitored, offered appropriate psychosocial support, and offered medication maintenance treatment if they become unstable during the detoxification process. Detoxification is often conducted in an inpatient setting.

Clinical Guidelines

There is no absolute standard for how fast or slow to detoxify a patient using buprenorphine, but the general guideline is to detoxify as gradually as possible to minimize symptoms of acute opioid withdrawal.

Dosing Schedule for Medically Supervised Withdrawal:

In some instances the MSW process can be completed in a week:

1. Induction on days 1 to 3
2. Tapering on days 4 to 7

However, a slower taper is recommended for most patients to reduce the severity of withdrawal symptoms and monitor their psychosocial situation. In all instances, you should work closely with the patient to determine a realistic time frame for conducting MSW.

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Tags: Detoxification
Withdrawal
Topics: Induction and dosing

Summary

Clinicians who are prescribing buprenorphine should:

- Understand the phases of buprenorphine treatment: induction, stabilization, and maintenance
- Taper methadone and have patients abstain from opioids so that they are in mild to moderate withdrawal prior to induction
- Follow dosing protocols but monitor and adjust as needed
- Have a contingency plan in place for potential complications during induction
- Determine maintenance dose (usually 12-16mg) based on the lowest dose needed for absence of withdrawal symptoms
- Monitor patients during tapering and encourage use of non-pharmacological support
- Be familiar with the alternative of medically supervised withdrawal (detoxification) for patients who do not want to be maintained on buprenorphine

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