

# ***MEDICALLY SUPERVISED WITHDRAWAL FOR INMATES WITH SUBSTANCE USE DISORDERS***

**Federal Bureau of Prisons  
Clinical Guidance**

***FEBRUARY 2020***

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## WHAT'S NEW IN THE DOCUMENT?

This document was previously issued in 2014 as the BOP Clinical Guidance for *Detoxification of Chemically Dependent Inmates*.

**NOTE:** The 2014 BOP Clinical Guidance for *Detoxification of Chemically Dependent Inmates* was revised from a previous version of the guidance to be in line with the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)* that was released in May 2013. Other information was included, based on the *Quick Guide for Clinicians Based on TIP 45: Detoxification and Substance Abuse Treatment*, issued by the Substance Abuse and Mental Health Services Administration (SAMHSA) in 2006.

**Among the revisions to the 2014 guidance contained in this document are:**

### TERMINOLOGY:

- The term *detoxification* has been changed to *medically supervised withdrawal* to be consistent with current medical terminology and the BOP Clinical Guidance on *Medications for Opioid Use Disorder*, to be issued in 2020.
- Changed language throughout document to reflect current terminology (e.g., *abuse* changed to *misuse*).

### OPIOID WITHDRAWAL:

- Information has been revised regarding the use of buprenorphine in the treatment of opioid withdrawal in the BOP, including legal requirements for prescribing and a suggested tapering schedule.
- Amended management of opioid withdrawal to include considerations for maintenance therapy.
- ➔ *In the case of opioid use disorders, **TREATMENT OF WITHDRAWAL** (the subject of this clinical guidance) should NOT be confused with the **TREATMENT OF SUBSTANCE USE DISORDERS**, sometimes referred to as *Medications for Opioid Use Disorders (MOUD)*. Treatment of withdrawal is a short-term procedure by which medications are used to ease the symptoms of withdrawal, whereas medication treatment for opioid use disorders is a maintenance treatment usually over a longer period of time.*

### ALCOHOL WITHDRAWAL:

- Removed carbamazepine for alternative management of alcohol withdrawal.
- Added gabapentin for alternative management of alcohol withdrawal.
- Updated CIWA-Ar scoring classification to reflect current guidance. See [Table 3](#) and [Table 4](#), as well as the **Total CIWA-AR Score** on the Flowsheet in [Appendix 2](#).

### OTHER:

- Removed excerpts from the DSM, due to copyright restrictions.
- Appendix 1, Detoxification Overview, was revised and moved to the new [Section 6, Overview of Withdrawal Management](#). As a result, the main Sections and Appendices have been renumbered.
- [Appendix 1, Symptoms and Signs of Intoxication and Withdrawal](#), was revised to include alcohol.
- Additional revisions were made to improve clarity and readability of this document.

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## 1. PURPOSE

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The Federal Bureau of Prisons (BOP) Clinical Guidance for *Medically Supervised Withdrawal for Inmates with Substance Use Disorders* provides recommended standards for the medical management of withdrawal for federal inmates with substance use disorders.

- ➔ *In the case of opioid use disorders, **TREATMENT OF WITHDRAWAL** (the subject of this clinical guidance) should NOT be confused with the **TREATMENT OF SUBSTANCE USE DISORDERS**, sometimes referred to as Medications for Opioid Use Disorders (MOUD). Treatment of withdrawal is a short-term procedure by which medications are used to ease the symptoms of withdrawal, whereas medication treatment for opioid use disorders is a maintenance treatment usually over a longer period of time.*
- ➔ *For information on medication treatment for opioid use disorder, see the BOP Clinical Guidance on Medications for Opioid Use Disorder.*

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## 2. INTRODUCTION

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**Substance use disorders (SUDs) pose a significant public health problem.** Substance misuse affects not only the individuals who misuse substances and their families, but also society as a whole. Substance misuse is associated with increases in crime, domestic violence, highway fatalities, incarceration, and health care costs.

**Any substance that alters perception, mood, or cognition can be misused.** Commonly misused substances include illicit drugs, alcohol, and certain prescription drugs—which act through their hallucinogenic, stimulant, sedative, hypnotic, anxiolytic, or narcotic effects. Other less commonly misused substances include medications with anticholinergic, antihistaminic, or stimulant effects, e.g., tricyclic antidepressants, antiparkinsonian agents, low potency antipsychotics, anti-emetics, and cold and allergy preparations.

**Substance use disorders are highly prevalent among inmate populations** and, while difficult to accurately measure, some studies have shown that up to 65% of incarcerated persons may have an active SUD.

**The evidence basis for specific evaluation and treatment recommendations is limited.** The recommendations in this guidance reflect expert opinion or consensus and generally accepted standards of care.

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## 3. GENERAL CONSIDERATIONS IN TREATING WITHDRAWAL

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- ➔ *The safe and effective treatment of withdrawal syndromes requires that clinicians be alert to the possibility of SUDs, physiological dependence, and the risk of withdrawal in all new inmate arrivals at their institutions.*
- ➔ *Criteria for the diagnosis of SUDs is published in the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5).*

★ **A careful inmate history and clinical assessment is essential.**

Individuals who misuse substances are rarely accurate in their description of patterns of drug use; they can greatly underestimate or deny their misuse of substances, as well as overstate the extent of their misuse.

→ *The clinical presentations of intoxication and withdrawal for the different groups of substances are listed in [Appendix 1, Symptoms and Signs of Intoxication and Withdrawal](#).*

★ **The use of more than one substance must be carefully considered.**

Individuals who misuse substances are likely to be misusing multiple substances. Intoxication from or dependence on multiple drugs requires careful attention to withdrawal symptoms and may complicate treatment of the withdrawal syndrome.

★ **The intensity of withdrawal cannot always be predicted. Frequent clinical assessments, along with indicated treatment adjustments (in both dose and frequency) are imperative.**

The addictive nature of a substance is determined by many factors including the physiology, psychology, and neurochemistry of the individual, as well as characteristics of the substance itself. Generally, the most addictive substances are those that are high-potency, that cross the blood-brain barrier quickly, that have a short half-life, and that produce a significant change in the neurochemistry of the brain.

★ **Substances that produce dangerous and potentially life-threatening withdrawal syndromes for individuals with physiological dependence include alcohol, sedative/hypnotics, and anxiolytics.**

Although opioid withdrawal rarely causes death directly, it can occur indirectly from suicidality or overdose. Opioid withdrawal results in significant symptomatology, which can be markedly reduced with targeted therapies or prevented with continuation or initiation of medications for opioid use disorder (MOUD). In general, fetal and neonatal outcomes of infants born to mothers in withdrawal are not well-studied, although fetal alcohol syndrome and neonatal abstinence syndrome are well-described.

→ *For more information on withdrawal from opioids see the BOP Clinical Guidance on Medications for Opioid Use Disorders (MOUD).*

★ **Not all substances that are misused produce clinically significant withdrawal syndromes.**

However, discontinuing substances on which an individual is dependent will likely produce some **PSYCHOLOGICAL SYMPTOMS**. Withdrawal from substances such as **STIMULANTS, COCAINE, HALLUCINOGENS, and INHALANTS** can be accomplished with psychological support and symptomatic treatment alone, along with periodic reassessment by a health care provider.

★ **Initiation of withdrawal should be individualized.**

Substance use disorder often leads to significant medical sequelae including liver disease, chronic infections, trauma, cognitive impairment, psychiatric disorders, nutritional deficiencies, and cardiac disease. Withdrawal is stressful, and may exacerbate or precipitate medical or psychological decompensation. In some cases, it may be necessary to medically stabilize the individual and resolve the immediate crisis, prior to initiating withdrawal.

- **Every effort should be made to ameliorate the inmate's symptoms and signs of withdrawal.** Adequate doses of medication should be used, with frequent reassessment. Inmates experiencing withdrawal should also be kept as physically active as medically permissible.

- **A safe withdrawal plan entails, when feasible, substituting a long-acting, cross-tolerant substance.** That substance is then gradually tapered according to a schedule dependent upon prior dosing, duration of use, and the setting. As such, some taper-off schedules could last days to several months.
- **To the greatest extent possible during withdrawal treatment, the provider should control the inmate's access to the prescribed medication regimen.** Overdose with either the prescribed medication or other drugs is always a possibility. All medications prescribed for the treatment of withdrawal should be administered via directly observed therapy. Ideally, dosing should be three times a day or less, so as to accommodate pill lines at most institutions.
  - ➔ ***Inmates should be counseled on the dangers of supplementing their regimens with over-the-counter medications, prescription medications diverted from other inmates, or illicit drugs and alcohol.***

★ **Conditions that require immediate medical attention are listed in TABLE 1 below.**

**TABLE 1. SYMPTOMS AND SIGNS OF WITHDRAWAL REQUIRING IMMEDIATE MEDICAL ATTENTION**

<ul style="list-style-type: none"><li>• Change in mental status</li><li>• Increasing anxiety</li><li>• Hallucinations</li><li>• Temperature greater than 100.4°F (these patients should be considered potentially infectious)</li><li>• Significant increases and/or decreases in blood pressure and heart rate</li></ul>	<ul style="list-style-type: none"><li>• Insomnia</li><li>• Severe Abdominal pain</li><li>• Upper and lower gastrointestinal bleeding</li><li>• Changes in responsiveness of pupils</li><li>• Heightened deep tendon reflexes and ankle clonus, a reflex beating of the foot when pressed rostrally, indicating profound central nervous system irritability and the potential for seizures</li></ul>
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★ **Medical treatment of withdrawal alone is rarely adequate for the treatment of SUDs.**

- **INMATE EDUCATION** regarding the withdrawal process is a necessary component of a successful treatment plan.
- Clinicians should conduct **PERIODIC ASSESSMENTS** to detect the development of any psychiatric symptoms such as depression, suicidal thinking, or underlying psychosis.
- **A REFERRAL TO PSYCHOLOGY SERVICES** for an evaluation of drug treatment needs and ongoing psychological support services is recommended. These services provide alternative methods of coping with the stresses that trigger alcohol or drug misuse. Psychology staff can also determine whether referrals to drug education or to nonresidential or residential drug treatment programs are indicated.

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## 4. MANAGEMENT OF INMATES WITH COMPLICATING MEDICAL AND PSYCHIATRIC CONDITIONS

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Careful consideration should be given to inmates with co-morbid medical and psychiatric conditions, since these patients are at greater risk for severe withdrawal symptoms and complications.

- **BRAIN INJURY:** Inmates with a history of any brain injury are more likely to suffer seizures and/or delirium during withdrawal, and therefore require closer monitoring.
- **CO-MORBID SEIZURE DISORDER:** The presence of an underlying seizure disorder must be considered when managing withdrawal from benzodiazepines, barbiturates, and alcohol. Patients with pre-existing seizure disorders will be more susceptible to seizures as their medications are withdrawn; and a slower taper may be indicated for these inmates.
- **CARDIAC DISEASE:** Inmates with cardiac disease are more sensitive to sympathetic hyperactivity. Careful monitoring and control of symptoms is essential, and a slow taper may be indicated.
- **LIVER AND KIDNEY DISEASES:** Inmates with liver or renal disease may metabolize drugs and medications more slowly; as such, they require closer monitoring for drug toxicity and possible adjustments as withdrawal is managed.
- **PSYCHIATRIC DISORDERS:** Inmates with pre-existing psychiatric conditions may suffer an exacerbation of their illness during withdrawal. A collaborative treatment effort with psychology and psychiatry staff is warranted for management of these inmates. Inmates without pre-existing psychiatric illness may also experience significant psychological distress, including the development of suicidal ideation, plan, and intent. A careful assessment of the inmate's mental status, with particular attention to thoughts of self-harm, should be part of every evaluation.
- **ELDERLY INMATES:** Elderly inmates are at increased risk of complications during withdrawal. The elderly are less likely to show marked sympathetic hyperactivity during withdrawal, but they are just as likely to suffer a severe withdrawal syndrome. Withdrawal in the elderly is further complicated by a greater use of prescription drugs and, therefore, the potential for drug-drug interactions. Because of a higher incidence of complicating medical conditions such as heart disease and cognitive disorders, careful monitoring, ongoing titration of medications, and even inpatient hospitalization for complicated patients are often necessary. Because of a greater risk of drug toxicity in the elderly due to slower drug metabolism, if withdrawal is managed with a medication taper, it may be necessary to use short-acting medications.
- **PREGNANCY AND LACTATION:** Pregnancy significantly complicates treatment of withdrawal. Many medications cross the placenta and/or are secreted in breast milk. Careful consideration must be given to the effects of medications on the fetus or infant, and these must be weighed against the risks of withdrawal. In most cases, pregnant women should be maintained on their medication for SUD throughout their pregnancy, unless contraindicated. Each case is unique, however, and should be managed in close consultation with an obstetrical specialist. Because there may be an increased risk of preterm delivery, low infant birth weight, and other morbidities, the benefits of MOUD during pregnancy are believed to outweigh the risks.

Continuation of MOUD during pregnancy is generally recommended if clinically appropriate and there are no contraindications. Pregnant women with alcohol dependence should be managed in an inpatient setting, due to the risk of miscarriage during withdrawal.

→ For more information on MOUD during pregnancy, see the BOP Clinical Guidance on Medications for Opioid Use Disorders.

- **RISK OF SUICIDE:** The frequency of suicide attempts is substantially higher among patients with a substance use disorder, even for those without a pre-existing psychiatric condition. Frequent and thorough patient assessments are indicated during the withdrawal period, with particular attention to thoughts of self-harm.
- **SHORT-STAY INMATES:** In general, inmates with short sentences, or with lengths of stay thirty days or less, should **NOT** be tapered off benzodiazepines or barbiturates if these agents are currently medically indicated. If discontinuation of opioids is clinically indicated, treatment of withdrawal can be completed safely in less than two weeks. Treatment of withdrawal from alcohol is necessary for all inmates who present with alcohol use disorder or withdrawal.

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## 5. PLACEMENT OF INMATES FOR TREATMENT OF WITHDRAWAL

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**Treatment of withdrawal can be safely and effectively accomplished for inmates in a variety of housing placements, including:** locked jail units, general population, observation cells in the health services unit, Special Housing Units, and as inpatients in a community hospital or Medical Referral Center (MRC).

- **The specific housing placement should be in the least restrictive setting necessary, as determined on a case-by-case basis,** in accordance with BOP policy and through multidisciplinary recommendations made by health care, psychology, and custody staff. The optimal placement will depend on the type of substance, the severity of the withdrawal syndrome, the inmate's co-morbid medical and psychiatric conditions, security concerns, and the resources of the institution.
- **If an inmate is placed in a locked unit or Special Housing Unit for treatment of withdrawal,** their medications, medical assessments, and ongoing monitoring must all be provided in a timely manner. If treatment in a locked unit or Special Housing Unit cannot be accomplished with these assurances, strong consideration should be given to one of two options: **(1)** inpatient placement or **(2)** medical stabilization and maintenance, with postponement of attempts for treatment of withdrawal.
- Transferring patients from mainline facilities to MRCs for the management of withdrawal is **NOT** typically indicated or necessary.

## 6. OVERVIEW OF WITHDRAWAL MANAGEMENT

Management of withdrawal, including treatment and monitoring, is specific to the substance being misused. **TABLE 2** below provides an overview for the most commonly misused substances, including links to more detailed information.

➔ **This document is for guidance only. Prescribing practitioners must be familiar with official FDA labeling of any medication they prescribe.**

**TABLE 2. OVERVIEW OF WITHDRAWAL MANAGEMENT**

SUBSTANCE (section in this guidance)	MONITORING	PRIMARY TREATMENT	HOSPITALIZATION?
<b>ALCOHOL</b> ( <a href="#">Section 7</a> )	<b>CIWA-Ar Score:</b> As frequently as every hour  See <a href="#">Appendix 2</a> .	<ul style="list-style-type: none"> <li>• Lorazepam</li> <li>• Thiamine</li> </ul>	<p><b>Strongly recommended for the following:</b></p> <ul style="list-style-type: none"> <li>• CIWA-Ar score &gt;20</li> <li>• Wernicke encephalopathy and/or Korsakoff psychosis</li> <li>• Current or prior history of delirium tremens or alcohol-induced seizures</li> <li>• Pregnancy</li> </ul> <p><b>Consider hospitalization</b> for patients with CIWA-Ar scores 16–20, significant malnutrition, or comorbidities.</p>
<b>BENZODIAZEPINES</b> ( <a href="#">Section 8</a> )	<b>Vital Signs:</b> Three times a day for 3 days	<ul style="list-style-type: none"> <li>• Clonazepam</li> </ul>	<p><b>As needed for patients showing signs of late (severe) withdrawal</b>, including:</p> <ul style="list-style-type: none"> <li>• Delirium with hallucinations</li> <li>• Changes in consciousness</li> <li>• Profound agitation</li> <li>• Autonomic instability</li> <li>• Seizures</li> </ul>
<b>BARBITURATES</b> ( <a href="#">Section 9</a> )	<b>Vital Signs:</b> Three times a day for 3 days	<ul style="list-style-type: none"> <li>• Phenobarbital</li> </ul>	<p><b>As needed for patients showing signs of severe withdrawal</b>, including:</p> <ul style="list-style-type: none"> <li>• Changes in consciousness</li> <li>• Profound agitation</li> <li>• Hallucinations</li> <li>• Autonomic instability</li> <li>• Seizures</li> </ul>
<b>OPIOIDS</b> ( <a href="#">Section 10</a> )	<b>Vital Signs:</b> Daily; more often if clonidine used	<ul style="list-style-type: none"> <li>• Buprenorphine</li> <li>• Methadone</li> <li>• Symptomatic</li> </ul>	Usually not necessary
<b>COCAINE</b> ( <a href="#">Section 11</a> )	<b>Vital Signs:</b> As needed	<ul style="list-style-type: none"> <li>• Symptomatic</li> </ul>	Usually not necessary

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## 7. ALCOHOL WITHDRAWAL

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- ➔ **All incoming inmates should be screened for a history of alcohol use.** *Inmates presenting with alcohol intoxication should be presumed to have alcohol use disorder until proven otherwise. A full assessment should be attempted with all inmates, not only those that present intoxicated.*

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### DIAGNOSIS OF ALCOHOL USE DISORDERS AND WITHDRAWAL

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#### PATIENT EVALUATION

A careful patient history and physical examination by a clinician is indicated for all inmates suspected of clinically significant alcohol use:

- **Inmates may be brought to the Health Services Unit for assessment of intoxication** after being given a breathalyzer test by a correctional officer. Although performance of this test remains the function of Correctional Services, the results are medically relevant and should be ascertained and assessed by the clinician.
- **An assessment should be made about alcohol use**, including frequency of alcohol use, length of time used, amount used, symptoms of withdrawal when use is decreased or discontinued, and the date and amount of alcohol last consumed.
- **If alcohol use disorder is suspected, further inmate history** should cover, in part, other substances used, symptoms and signs of gastritis or gastrointestinal hemorrhage, history of trauma (especially head trauma), liver disease, history of seizure disorder, pancreatitis, psychiatric illness, and suicidal ideation.
- **Physical examination** is necessary to evaluate the inmate for the aforementioned conditions, as well as to assess vital signs, possible cardiac and lung disease, and neurologic and mental status.
- **Laboratory evaluation** should include a complete blood count, comprehensive serum chemistry panel, urine toxicology (for medical reasons, not correctional), viral hepatitis panel, screening for HIV, and a pregnancy test for women.
- **Other studies** may be indicated by the assessment of the individual inmate such as a chest radiograph, electrocardiogram, and screening for sexually transmitted diseases.

#### ALCOHOL WITHDRAWAL SYNDROME

**Alcohol withdrawal syndrome can develop in any individual who has a history of regular, heavy use of alcohol; has a known dependence on alcohol; or has clinical signs of intoxication.** Alcohol withdrawal syndromes can be mild, moderate, or life-threatening. The severity of an individual's alcohol withdrawal syndrome is difficult to predict. A history of problems with withdrawal makes it likely that a similarly severe withdrawal syndrome will occur again. Individuals with a high blood alcohol level (>100 mg/dL) and concurrent signs of withdrawal are at particularly high risk for a severe withdrawal syndrome.

- ➔ **Prior to initiating treatment, the inmate's status should be scored using the *Clinical Institute Withdrawal Assessment of Alcohol, revised (CIWA-Ar)*, (BP-S708.060).** *The CIWA-Ar is an evidence-based scoring system that should be used to objectively assess the severity and progression of alcohol withdrawal symptoms. The CIWA scoring system and a sample record for CIWA-Ar scores are provided in [Appendix 2](#).*

**SYMPTOMS AND SIGNS OF WITHDRAWAL:** Alcohol withdrawal symptoms can develop within a few hours of decreasing or discontinuing use. Symptoms peak within 24–36 hours after abstinence begins, and mild alcohol withdrawal is usually completed within five days. Early symptoms and signs of withdrawal include gastrointestinal distress, anxiety, irritability, increased blood pressure, and increased heart rate.

Later, symptoms of moderate intensity develop, including insomnia, tremor, fever, anorexia, and diaphoresis. Withdrawal seizures can occur at various times during alcohol withdrawal, but can begin within 48 hours of the last drink. Withdrawal delirium (**DELIRIUM TREMENS**) begins 48–72 hours after the last drink. If allowed to progress, delirium can result in changes in consciousness, marked autonomic instability, electrolyte imbalances, hallucinations, and death. With appropriate intensive treatment, mortality from delirium tremens is markedly reduced (to 1% or less).

➔ *In many alcoholics, the severity of withdrawal symptoms increases after repeated withdrawal episodes. This is known as the **KINDLING PHENOMENON**, and suggests that even patients who experience only mild withdrawal should be treated aggressively to reduce the severity of withdrawal symptoms in subsequent episodes. Kindling also may contribute to a patient's relapse risk and to alcohol-related brain damage and cognitive impairment.*

## TREATMENT OF ALCOHOL WITHDRAWAL

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- Specific treatment strategies for alcohol withdrawal should be determined by the condition of the individual inmate.
- For most patients, withdrawal may be managed in the institution. Patients with severe symptoms with or at risk of having seizures and/or delirium tremens should typically be transferred to an inpatient setting for closer monitoring.
- Inmates undergoing alcohol withdrawal should be counseled by a health care provider on the symptoms and signs of withdrawal, the anticipated treatment plan, and patient responsibilities. Educational information in [Appendix 5, Patient Information – Alcohol Withdrawal](#) should be used when appropriate.
- Supportive care is appropriate for all severity levels of alcohol withdrawal and may include nutritional supplementation, IV fluids, management of electrolyte abnormalities, and periodic clinical re-evaluations, as clinically indicated.

## THIAMINE REPLACEMENT

**Thiamine deficiency in patients with a history of heavy alcohol use is common and can result in WERNICKE'S ENCEPHALOPATHY.** To reduce the risk of encephalopathy, all inmates with suspected alcohol use disorder should be treated with **THIAMINE (VITAMIN B1)**, 100 mg daily, either orally or intramuscularly.

- Length of treatment—ranging from ten days up to four weeks—is determined by degree of malnutrition.
- Due to the potential dire consequences of non-compliance, oral doses should be administered via directly observed therapy.

**PARENTERAL THIAMINE replacement should always precede administration of PARENTERAL GLUCOSE (if indicated for hypoglycemia)** to prevent depletion of endogenous thiamine by the high glucose intake and the subsequent precipitation or worsening of encephalopathy:

- **WERNICKE ENCEPHALOPATHY:** Characterized by confusion, lethargy, inattentiveness, impaired memory, vision changes (e.g., nystagmus), and ataxia. Often undetected and under-diagnosed, untreated Wernicke’s encephalopathy can advance to Korsakoff psychosis.
  - **KORSAKOFF PSYCHOSIS:** Permanent condition with no known treatment, characterized by impaired memory (particularly new memory formation), hallucinations, and confabulation. Korsakoff psychosis is associated with significant morbidity and a 15–20% fatality rate.
- ➔ **PARENTERAL THIAMINE is preferred for the treatment of known or suspected encephalopathy because intestinal absorption is unpredictable. Patients with suspected Wernicke encephalopathy and/or Korsakoff psychosis require immediate parenteral administration of thiamine and transfer to a local hospital.**

### BENZODIAZEPINE THERAPY FOR ALCOHOL WITHDRAWAL

**BENZODIAZEPINES are the mainstay of alcohol withdrawal treatment in the correctional setting.** Benzodiazepine treatment for alcohol withdrawal in the BOP should be based on the CIWA-Ar score (see [Appendix 2](#)), in accordance with the guidelines shown below in **TABLE 3**.

- ➔ *Patients actively seizing as a result of alcohol withdrawal, or showing signs of delirium tremens, should be treated immediately with benzodiazepines and transferred to a local hospital.*

**TABLE 3. OVERVIEW OF TREATMENT OF ALCOHOL WITHDRAWAL, BASED ON CIWA-AR SCORE**

CIWA-AR SCORE	LEVEL OF WITHDRAWAL	RECOMMENDED TREATMENT
<10	NONE TO VERY MILD	Supportive care and close monitoring are indicated. Pharmacologic therapy usually is not needed unless the patient has history of alcohol withdrawal seizures or co-morbid cardiovascular conditions.
10–15	MILD	Supportive care and close monitoring are indicated. Medication may be indicated based on clinical judgement.
16–20	MODERATE	Supportive care and close monitoring are indicated. Medication is usually indicated to reduce symptoms and the risk of major complications.
>20	SEVERE	Strong consideration should be given to <b>HOSPITALIZATION</b> of inmates who exhibit severe symptoms, as they are at increased risk for serious complications.

**LORAZEPAM is the recommended benzodiazepine for managing alcohol withdrawal in most inmates.**

- **Lorazepam does not require cytochrome oxidation for metabolism, so its clearance is not impaired by liver disease,** a common co-morbidity for this inmate population. This is in contrast to other benzodiazepines such as chlordiazepoxide, diazepam, and clonazepam, which are metabolized in the liver and can accumulate with slow metabolizers or with liver disease.

- **Lorazepam can be administered orally, intravenously, or intramuscularly**—unlike diazepam and chlordiazepoxide, which should NEVER be given intramuscularly because of erratic absorption.
  - ▶ **Ambulatory treatment of withdrawal from alcohol is normally managed with oral benzodiazepines.** Intramuscular administration should be avoided, due to variable drug absorption.
  - ▶ **IV access should be established in all patients who are at risk of severe withdrawal.** All patients with seizures or delirium tremens should be given IV benzodiazepines. IV administration should only be considered in the hospital/inpatient setting.

**TABLE 4 below outlines lorazepam dosing recommendations based upon CIWA-Ar scores.**

- For inmates with **MODERATE TO SEVERE WITHDRAWAL**, symptom-triggered therapy based upon CIWA-Ar scores is recommended and has been shown to require less overall benzodiazepine use.
  - A fixed-dose schedule is recommended for inmates with **MILD WITHDRAWAL** who are being treated with lorazepam because they have either a history of alcohol withdrawal seizures or co-morbid cardiovascular conditions.
- ➔ For information about benzodiazepine dependence, see [Section 8, Benzodiazepine Withdrawal](#).

**TABLE 4. RECOMMENDED SCHEDULE FOR LORAZEPAM TREATMENT OF ALCOHOL WITHDRAWAL**

<b>MILD WITHDRAWAL</b> CIWA-Ar Score = 10–15	<b>MODERATE WITHDRAWAL</b> CIWA-Ar Score = 16–20	<b>SEVERE WITHDRAWAL</b> CIWA-Ar Score >20
<b>MOST INMATES</b>		
<ul style="list-style-type: none"> <li>• <b>Repeat CIWA-Ar every 4–8 hours</b> until CIWA-Ar score has remained less than 10 for 24 hours without medication.</li> <li>• Lorazepam may be indicated based on severity of symptoms and clinical judgment.</li> <li>• <a href="#">Alternative/adjunctive</a> medications may be appropriate for the treatment of mild withdrawal symptoms.</li> </ul>	<p>➔ <b>HOSPITALIZATION for treatment of withdrawal and monitoring may be considered.</b></p> <p><b>Follow these steps:</b></p> <ol style="list-style-type: none"> <li>1. Administer lorazepam every hour: 2–4 mg IM, PO, or IV.</li> <li>2. Repeat CIWA-Ar in one hour (90 minutes, if giving lorazepam orally).</li> <li>3. Repeat lorazepam 2–4 mg every 60–90 minutes until CIWA-Ar score is less than 10. Then, discontinue lorazepam.</li> <li>4. Repeat CIWA-Ar every 4–8 hours until the score has remained less than 10 for 24 hours. If the score rises again within this 24-hour period, repeat steps 1–3 above.</li> </ol>	<p>➔ <b>HOSPITALIZATION for treatment of withdrawal and monitoring is strongly suggested.</b></p> <ul style="list-style-type: none"> <li>• Lorazepam is administered according to the same schedule as described under “Moderate Withdrawal.” However, an increase in frequency of both lorazepam and CIWA-Ar may be indicated.</li> <li>• Lorazepam can be given up to 2–4 mg IV, as frequently as every 15–20 minutes.</li> </ul>
<i>(TABLE 4 CONTINUES ON NEXT PAGE.)</i>		

MILD WITHDRAWAL CIWA-Ar Score = 10–15	MODERATE WITHDRAWAL CIWA-Ar Score = 16–20	SEVERE WITHDRAWAL CIWA-Ar Score >20
<b>TABLE 4 (CONTINUED FROM PREVIOUS PAGE)</b>		
<b>INMATES WITH HISTORY OF ALCOHOL WITHDRAWAL SEIZURES</b>		
<b>Do NOT give anti-seizure medications</b> unless the inmate also has an underlying seizure disorder. <b>HOSPITALIZATION</b> is strongly suggested for patients with history of alcohol withdrawal seizures.		
<p><i>Consider lorazepam treatment, even if withdrawal symptoms are mild, based on CIWA-Ar score.</i></p> <p><b>Suggested initial regimen: *</b></p> <p><b>Days 1–6:</b> Monitor every 8 hours with CIWA-Ar.**</p> <p><b>Days 1–2:</b> Lorazepam 2 mg, q8h</p> <p><b>Days 3:</b> Lorazepam 1 mg, q8h</p> <p><b>Day 4:</b> Lorazepam 1mg, q12h</p> <p><b>Day 5:</b> Lorazepam 1 mg, single dose (AM or HS)</p>	<p>Same as recommended for <b>MOST INMATES.</b></p>	<p>Same as recommended for <b>MOST INMATES.</b></p>
<b>INMATES WITH CO-MORBID CARDIOVASCULAR CONDITIONS</b>		
<b>Conditions include:</b> Hypertension, angina, congestive heart failure, or history of myocardial infarction or stroke.		
<p><i>Consider lorazepam treatment, even if withdrawal symptoms are mild, based on CIWA-Ar score.</i></p> <p><b>Suggested initial regimen: *</b></p> <p><b>Days 1–6:</b> Monitor every 8 hours with CIWA-Ar.**</p> <p><b>Days 1–2:</b> Lorazepam 2 mg, q8h</p> <p><b>Days 3:</b> Lorazepam 1 mg, q8h</p> <p><b>Day 4:</b> Lorazepam 1mg q12h</p> <p><b>Day 5:</b> Lorazepam 1 mg, single dose (AM or HS)</p>	<p>Same as recommended for <b>MOST INMATES.</b></p>	<p>Same as recommended for <b>MOST INMATES.</b></p>
<p>* In these cases, the dose of lorazepam may need to be decreased if the inmate experiences somnolence, ataxic gait, slurred speech, or other signs of medication intoxication.</p> <p>** If the CIWA-Ar score does not decrease, or if it increases to 10 or greater at any time, consider stepping up to the <b>MODERATE WITHDRAWAL</b> protocol.</p>		

## **ALTERNATIVE/ADJUNCTIVE TREATMENTS FOR MILD ALCOHOL WITHDRAWAL**

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Some medications (e.g., gabapentin and clonidine) may be used to alleviate symptoms of **MILD WITHDRAWAL**, but are not routinely used in the treatment of moderate to severe alcohol withdrawal.

### **GABAPENTIN**

Several clinical trials have shown **GABAPENTIN** to be a safe and effective **ALTERNATIVE to benzodiazepines for the treatment of MILD alcohol withdrawal in the ambulatory setting.**

- ➔ *Gabapentin has not been found to reduce or prevent withdrawal seizures or delirium tremens, and should **NOT** be prescribed for this purpose.*
- **Usual side effects include dizziness, ataxia, diarrhea, weakness, and nausea and vomiting.** Gabapentin may exhibit fewer side effects and fewer drug-drug interactions than older anticonvulsants such as **CARBAMAZEPINE**. Gabapentin is safe in patients with impaired liver function.
- **Gabapentin may be subject to misuse by some patients**, and administration must be carefully monitored through directly observed therapy. Alternative therapies may be warranted if there is a concern for misuse.
- **The following fixed DOSING SCHEDULE is suggested:**
  - ▶ **Day 1:** 300mg every 6 hours
  - ▶ **Day 2:** 300mg every 8 hours
  - ▶ **Day 3:** 300mg every 12 hours
  - ▶ **Day 4:** 300mg once daily
- ➔ *Flexibility in dosing and length of treatment may be required, as resolution of withdrawal symptoms may progress at different rates in different individuals.*

### **CLONIDINE**

Many of the symptoms of alcohol withdrawal are caused by increased sympathetic activity (increased sweating, heart rate, and/or blood pressure). **CLONIDINE** has been used successfully to attenuate these symptoms.

- **Clonidine should ONLY be used for MILD withdrawal symptoms.** Clonidine will mask the symptoms of withdrawal and artificially lower the CIWA-Ar score, without decreasing the risk for seizures or delirium tremens. **Therefore, clonidine should NOT be utilized for moderate or severe withdrawal.**
- **A variety of DOSING SCHEDULES for clonidine have been used to suppress acute symptoms of alcohol withdrawal.** A dose of 0.1 to 0.2 mg every 8 hours is adequate to control symptoms, and can be tapered over three to five days as symptoms subside.
- **Clonidine's usual SIDE EFFECTS include hypotension and somnolence.** Treatment with clonidine requires careful monitoring of vital signs and increased vigilance for other withdrawal symptoms. Decreased renal function may require more frequent monitoring and lower doses.
- **Patients in active substance withdrawal are at increased risk of suicide, and clonidine is fatal in overdose.** Extra care is warranted, including monitoring inmates for thoughts of self-harm and limiting its administration to directly observed therapy. Consider administering crushed immediate-release tablets to prevent “tonguing” or “cheeking” of the medication.
- **Concurrent beta-blocker therapy may exacerbate an increase in blood pressure upon clonidine withdrawal.** If a patient is taking clonidine concurrently with a beta-blocker, it is best to *first*

gradually withdraw the beta-blocker, and *then* withdraw the clonidine over two to four days. The beta-blocker can then be reinstated after clonidine has been successfully withdrawn.

## OTHER ADJUNCTIVE TREATMENTS OF ALCOHOL WITHDRAWAL

- **Oxcarbazepine** has not been studied extensively for management of alcohol withdrawal and is **NOT recommended**.
- **Most anti-seizure medications are ineffective for alcohol withdrawal-induced seizures and delirium tremens.** Benzodiazepines are the first-line agents for prevention and/or management of these conditions. It is recommended that inmates experiencing seizures be hospitalized for closer monitoring until seizures abate. Long-term anti-seizure therapy after resolution of symptoms is not indicated for most patients.
- **Individuals in alcohol withdrawal often develop fluid imbalances, electrolyte abnormalities, and hypoglycemia.** Careful attention to these issues can prevent significant medical complications. Treatment may require the use of intravenous fluids, glucose (after appropriate thiamine replacement), and electrolytes.
- **Hypomagnesemia may develop during alcohol withdrawal.** However, routine magnesium supplementation has not been proven to be medically necessary, and is not recommended.
- **Individuals with alcohol use disorder frequently suffer from malnutrition.** Short-term supplementation with a daily multivitamin (containing folate) is advisable if malnutrition is suspected. Refer to BOP National Formulary for non-formulary use criteria for multivitamins.

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## 8. BENZODIAZEPINE WITHDRAWAL

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### DIAGNOSIS OF BENZODIAZEPINE USE DISORDERS AND WITHDRAWAL

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➔ ***Because of the high risk of delirium, seizures, and death, benzodiazepine withdrawal should ALWAYS be treated. (See [Table 5](#) next page.)***

**PHYSIOLOGICAL DEPENDENCE ON BENZODIAZEPINE** is diagnosed through a careful determination of **several factors**: type of medications used, length of time used, amount used, reasons for use, symptoms that occur when doses are missed or medication is discontinued, and date and amount of drug last used.

- **Physiological dependence develops within 3–4 weeks of regular use.**
- **Physiological dependence can occur even when the medication is taken only as prescribed** and may not include any significant biopsychosocial consequences.
- **A full psychological or psychiatric evaluation is indicated for inmates who have developed drug dependence while taking prescribed benzodiazepines.** Although recreational use and misuse of benzodiazepines does occur, most inmates who present with benzodiazepine use disorder had previously been prescribed these medications to treat a psychiatric disorder. Therefore, psychiatric symptoms are likely to recur during withdrawal from benzodiazepines and should be treated as needed.

The onset of BENZODIAZEPINE WITHDRAWAL SYNDROME will vary dependent upon the half-life of the benzodiazepine used. Symptoms may begin within 24 to 48 hours of last use with SHORT-ACTING drugs, or may be delayed up to three weeks with LONG-ACTING benzodiazepines. Most symptoms will resolve after one to two weeks.

- Subclinical signs of withdrawal (e.g., insomnia and anxiety) may take months or years to resolve and should be treated with a non-addictive medication before they dominate the clinical picture. **It may be necessary to delay benzodiazepine taper until the inmate has been on a therapeutic dose of an antidepressant or other appropriate medication for several weeks.**
- **The withdrawal syndrome from benzodiazepines is similar to that of alcohol and barbiturates,** with the time course depending on the half-life of the substance used. Individuals with benzodiazepine use disorder often concurrently misuse alcohol, which further complicates their withdrawal course.
  - ➔ **Do NOT use the CIWA-Ar for assessing benzodiazepine withdrawal.**

### SYMPTOMS AND SIGNS OF BENZODIAZEPINE WITHDRAWAL

No objective measure or scoring system has been validated to assess benzodiazepine withdrawal.

- Inmates with suspected benzodiazepine withdrawal should be given a **TARGETED PHYSICAL EXAMINATION** that includes vital signs and an evaluation of cardiovascular, neurologic, and mental health status.
- **LABORATORY EVALUATIONS** should include a complete blood count, comprehensive serum chemistry panel, urine toxicology (for medical reasons, not correctional), viral hepatitis panel, screening for HIV and a pregnancy test for women.

Treatment of withdrawal is indicated for ALL patients with benzodiazepine dependence—the goal being to prevent the progression of withdrawal symptoms. (See [Treatment of Benzodiazepine Withdrawal](#) next page.) If left untreated, benzodiazepine withdrawal may progress to life-threatening symptoms, as outlined below in **TABLE 5**.

**TABLE 5. POTENTIAL PROGRESSION OF UNTREATED BENZODIAZEPINE WITHDRAWAL SYMPTOMS**

STAGE	SYMPTOMS
<b>EARLY WITHDRAWAL</b>	Increased pulse and blood pressure, anxiety, panic attacks, restlessness, and gastrointestinal upset.
<b>MID WITHDRAWAL</b>	In addition to the above, may progress to include tremor, fever, diaphoresis, insomnia, anorexia, and diarrhea.
<b>LATE WITHDRAWAL</b>	If left untreated, a delirium may develop with hallucinations, changes in consciousness, profound agitation, autonomic instability, seizures, and death. <b>Patients showing signs of late (severe) withdrawal should be HOSPITALIZED.</b>

## TREATMENT OF BENZODIAZEPINE WITHDRAWAL

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- ➔ *Specific treatment strategies for benzodiazepine withdrawal should be determined by the condition of the individual patient, and should be reviewed and approved by a physician.*

The general principle of substituting a SHORT-ACTING medication with a LONG-ACTING one is especially important in the treatment of benzodiazepine withdrawal. Many inmates will present with histories of chronic use of alprazolam (Xanax<sup>®</sup>) or lorazepam (Ativan<sup>®</sup>), both high-potency, short-acting substances. Attempts at tapering these substances are often unsuccessful and can lead to significant withdrawal symptoms.

**Benzodiazepines with long half-lives—such as CLONAZEPAM—are often used for benzodiazepine taper.** However, they can accumulate and cause excessive sedation or intoxication. Careful monitoring is absolutely necessary, especially in the initial stages of changing the inmate to the longer-acting medication. (See TREATMENT WITH CLONAZEPAM below.)

**Inmates experiencing benzodiazepine withdrawal should be counseled by a health care provider** on the symptoms and signs of withdrawal, the anticipated treatment plan, and patient responsibilities. Educational information in [Appendix 6, Patient Information – Treatment of Withdrawal from Benzodiazepines](#), should be used when appropriate.

### TREATMENT WITH CLONAZEPAM

Clonazepam is a high-potency medication with a half-life of greater than 24 hours; it is well-tolerated, easy to administer and is the preferred medication for treatment of benzodiazepine withdrawal for most patients.

- ➔ *Clonazepam can be substituted for other benzodiazepines, according to the dose equivalencies listed in [Appendix 3, Benzodiazepine Dose Equivalents](#). Individuals metabolize clonazepam at different rates; therefore, the dose equivalencies will not hold for all inmates and must be individualized according to the inmate's response.*
- **DOSING:** Clonazepam is initiated on a three-times-a-day schedule; however, because of the long half-life, some tapering may be successfully accomplished through once-daily dosing. The frequency can be adjusted according to appropriate withdrawal symptom monitoring. As in alcohol withdrawal, sympathetic hyperactivity is an early sign of benzodiazepine withdrawal. Control of these symptoms is accomplished with adequate dosing of clonazepam.
- **MONITORING:** During the first three days of treatment with clonazepam, the inmate should be examined for withdrawal symptoms and have vital signs taken at least every 8 hours. If the inmate becomes over-sedated or intoxicated, the dose can be lowered until the inmate is more alert, so long as vital signs remain in the normal range. Stabilization may take two to three days on clonazepam. After the inmate's condition has stabilized, the clonazepam can be given twice-daily, and then tapered gradually.
- **TAPERING:** The tapering schedule will depend on several factors, including the setting in which the inmate is treated and the presence of co-morbid medical or psychiatric conditions.
  - ▶ **If the inmate is hospitalized,** the medication can be tapered by 10% per day. Throughout the tapering schedule, inpatients should continue to be evaluated for withdrawal symptoms every 8 hours.

- ▶ **If the patient is ambulatory**, the medication should not be tapered any more rapidly than 25% per week. Outpatients should be evaluated daily for at least the first week, or as their condition indicates.

As the taper nears the end, it may be necessary to slow it further if anxiety or insomnia develop. These symptoms can continue for many months. Referral to Psychological Services for supportive care, as well as stress management, sleep hygiene, and relaxation training, may be helpful both during and after treatment.

### ADJUNCTIVE TREATMENTS OF BENZODIAZEPINE WITHDRAWAL

- **Psychological and psychiatric treatments are often necessary** in the management of patients physiologically dependent on benzodiazepines. The nature of those treatments will depend on the individual's needs. Psychology or psychiatry staff should closely monitor the inmate if a co-morbid psychiatric disorder is present. **INMATE EDUCATION** regarding the withdrawal process, expected symptoms, and possible recurrence of psychiatric symptoms is essential. (See [Appendix 6](#) for patient information handout.)
- **Beta-blockers (e.g., propranolol) and alpha-2 adrenergic agonist medications (e.g., clonidine) have sometimes been used** to attenuate the sympathetic hyperactivity associated with benzodiazepine withdrawal. **However, these drugs are NOT routinely recommended.** They mask the very symptoms that signal an inadequate dosage of clonazepam, and thereby place the inmate at increased risk for developing severe withdrawal. If the inmate is already on one of these medications for other medical conditions such as hypertension, increased vigilance is necessary to prevent severe withdrawal symptoms from developing.
- **Anti-seizure medications are generally NOT indicated for treating withdrawal from benzodiazepines.** Carbamazepine has been shown to have some efficacy in treating benzodiazepine withdrawal, but it has many drug-drug interactions and significant side effects, and can be problematic in patients with liver disease.
  - ➔ *Inmates with underlying seizure disorders should have their seizure medication adjusted to therapeutic blood levels. Seizure medication levels should be monitored throughout the withdrawal process.*

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## 9. BARBITURATE WITHDRAWAL

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### DIAGNOSIS OF BARBITURATE USE DISORDER AND WITHDRAWAL

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- ➔ ***Due to the severity of barbiturate withdrawal, a low threshold should exist for admission to a local hospital if needed.***
- Barbiturates have short half-lives, and withdrawal symptoms can develop within a few hours of the last dose.
- Discontinuation of barbiturates produces a withdrawal syndrome essentially identical to that of alcohol and benzodiazepines, and can similarly result in significant morbidity and mortality if left untreated.
- Unlike benzodiazepines, barbiturates have a narrow therapeutic margin, above which toxicity and respiratory depression quickly develop.

*(List continues on next page.)*

- Although tolerance develops to the sedative and euphoric effects of barbiturates, little tolerance develops to respiratory depression.
- Withdrawal from barbiturates progresses as shown in **TABLE 6** below.

### SYMPTOMS AND SIGNS OF BARBITURATE WITHDRAWAL

➔ **Do NOT use the CIWA-Ar for assessing barbiturate withdrawal.**

The general principles used in assessing benzodiazepine withdrawal, including a targeted physical examination and laboratory evaluations, apply to the management of barbiturate withdrawal. (See [Symptoms and Signs of Benzodiazepine Withdrawal](#))

**TABLE 6. SYMPTOMS OF BARBITURATE WITHDRAWAL**

STAGE	SYMPTOMS
MILD WITHDRAWAL	Increased pulse and/or blood pressure, anxiety, panic attacks, restlessness, gastrointestinal distress.
MODERATE WITHDRAWAL	In addition to the above, may include tremor, fever, diaphoresis, insomnia, anorexia, diarrhea.
SEVERE WITHDRAWAL	Changes in consciousness, profound agitation, hallucinations, autonomic instability, seizures. <b>Any signs or symptoms of severe withdrawal should prompt HOSPITALIZATION.</b>

### TREATMENT OF BARBITURATE WITHDRAWAL

**Inmates experiencing barbiturate withdrawal should be counseled by a health care provider** on the symptoms and signs of withdrawal, the anticipated treatment plan, and patient responsibilities. Educational information in [Appendix 7, Patient Information – Barbiturate Withdrawal](#) should be used when appropriate.

**Inmates experiencing barbiturate withdrawal should always be actively medicated.** Specific treatment strategies for barbiturate withdrawal should be determined by the condition of the individual inmate, and should be reviewed and approved by a physician.

#### TREATMENT WITH PHENOBARBITAL

- **DOSING AND TAPERING:** Substitute phenobarbital for the drug being misused in equivalent doses as per [Appendix 4, Barbiturate Dose Equivalents](#).
  - ▶ Administer phenobarbital on a four-times-a-day schedule. It may be necessary to establish a non-standard pill line time to meet the need for directly observed administration of phenobarbital.
  - ▶ Stabilize the inmate on the baseline dose for three days, followed by tapering the dose by no more than 10% every three to five days.
    - For outpatients, consider slowing the taper toward the end of the withdrawal schedule.
    - Inpatients may be tapered as quickly as 10% of their drug dosage per day.
- **MONITORING:** Assess the inmate’s condition and vital signs at least every 8 hours during the first three days of treatment; then, at least every day for the first week; and then as the inmate’s condition dictates. If this level of monitoring is not possible, consult the Regional Medical Director for advice, or consider admitting the patient to a local hospital.

## ADJUNCTIVE TREATMENTS FOR BARBITURATE WITHDRAWAL

- **Symptoms of anxiety and insomnia may continue for months after the completion of withdrawal.** As previously mentioned, inmate education is paramount. Referral to Psychology Services for stress management, relaxation training, and sleep hygiene may be indicated for certain inmates.
- **Beta-blockers (e.g., propranolol) and alpha-2 adrenergic agonist medications (e.g., clonidine) will mask withdrawal symptoms and complicate management.** As such, these drugs are not routinely recommended in adjunctive treatment for barbiturate withdrawal.
- **Inmates with seizure disorders should have anti-seizure medications maintained in the therapeutic range** and should have blood levels checked frequently throughout the process.

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## 10. OPIOID WITHDRAWAL

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**OPIOIDS** are natural or synthetic chemicals that interact with opioid receptors on the nerve cells in the body and in the brain to reduce feelings of pain. Historically, *opiates* referred to drugs derived from the opium poppy, while *opioids* referred to synthetic drugs active at the mu receptor. Today, the term **OPIOIDS** is used for the entire class of mu agonist drugs, regardless of origin.

**Medically supervised opioid withdrawal should NOT be confused with medications for opioid use disorders (MOUD).** Medically supervised opioid withdrawal involves treatment of withdrawal symptoms with medications usually over a short period of time; MOUD is a maintenance treatment of opioid use disorders. This section covers only treatment of withdrawal, and does not cover MOUD or address the management of opioid intoxication or overdose.

**The treatment of withdrawal symptoms typically occurs as part of the transition to MOUD.** The decision to initiate or continue MOUD is a clinical one that should be made after careful discussion between the patient and the provider. MOUD should **NOT** be withheld for administrative reasons.

→ For more information on MOUD, see the BOP Clinical Guidance on Medications for Opioid Use Disorder.

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## DIAGNOSIS AND EVALUATION OF OPIOID USE DISORDERS

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**OPIOID WITHDRAWAL** is a physiologic syndrome resulting from the sudden cessation of chronic opioid use, whether from prescribed medications or misuse of illicit drugs. The diagnosis of **OPIOID USE DISORDER** is made through a careful patient history and physical examination.

**The PATIENT HISTORY should focus on the following information:**

- Types of drugs used, route of use, length of time drugs have been used, symptoms when drugs have been stopped or decreased, and date and amount of last drug use.
- Review of risk factors, symptoms, and previous testing for blood borne pathogens— hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).
- Determination of past medical history and review of symptoms for medical conditions associated with chronic opioid use such as malnutrition, tuberculosis infection and disease, trauma, skin infections, endocarditis, and sexually transmitted diseases.

**The PHYSICAL EXAMINATION should include, in part:** An evaluation of the inmate's vital signs and cardiopulmonary status for evidence of fever, heart murmur, or hemodynamic instability. In addition, there should be a focused examination of the skin for signs of scarring, atrophy, infection, and the stigmata of endocarditis.

**The LABORATORY EVALUATION should include:** A complete blood count, comprehensive serum chemistry panel, urine toxicology, viral hepatitis panel, screening for HIV and a pregnancy test in women. Other studies such as an electrocardiogram, chest x-ray, and screening for sexually transmitted diseases could be conducted, depending on the individual historical findings and physical examination.

## DIAGNOSIS OF OPIOID WITHDRAWAL

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**Untreated opioid withdrawal symptoms typically peak within 72 hours of onset.** Symptoms of withdrawal from short-acting opioids can begin within hours of the last dose, peak within 36–72 hours, and subside over 5–10 days. Longer-acting opioids such as methadone produce a more protracted withdrawal syndrome, beginning in 24–48 hours, peaking in 72 hours, and subsiding over 1–3 weeks.

- **Early signs of opioid withdrawal include:** Rhinorrhea, diaphoresis, lacrimation, yawning, dilated pupils, and increased temperature.
- **Later signs of opioid withdrawal include:** Anorexia, nausea, vomiting, diarrhea, tenesmus, piloerection (goose flesh), weakness, increased blood pressure and pulse, agitation, restlessness, and severe muscle and bone pain.
- **The differential diagnosis of opioid withdrawal includes:** Sympathomimetic intoxication, as well as co-occurring withdrawal from alcohol or sedative hypnotics.
- **Once the diagnosis of opioid withdrawal is confirmed, the symptom severity should be quantified** with the Clinical Opiate Withdrawal Scale (**COWS**), available at <https://www.drugabuse.gov/sites/default/files/files/ClinicalOpiateWithdrawalScale.pdf>. A BEMR-compatible form is also available in the BOP Clinical Guidance on *Medications for Opioid Use Disorder*.

## TREATMENT OF OPIOID WITHDRAWAL

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**Treatment is aimed at reducing the symptoms and signs of withdrawal.** Specific treatment should always be determined by the condition of the individual inmate.

### TREATMENT WITH METHADONE

- ➔ **Methadone is a pure mu receptor agonist. Therefore, methadone can cause opioid overdose, either alone or in combination with other opioids or other sedative/hypnotics. In addition to lethal respiratory suppression, methadone can also cause long QT and torsades de pointes.**
- ➔ **The terms Narcotic Treatment Program and Opioid Treatment Program are used interchangeably by the DEA and SAMSHA. In the BOP, the term **OPIOID TREATMENT PROGRAM (OTP)** is used.**

**LICENSED OTP FACILITIES:** The Federal Narcotic Addict Treatment Act of 1974 restricts the use of methadone in the treatment of opioid dependence to facilities that are appropriately licensed as an OTP for maintenance or treatment of opioid withdrawal with methadone. **Methadone can be provided without an OTP license for up to three days** while arranging for an appropriate referral of the patient to a licensed facility. This three-day allowance cannot be renewed or extended;

therefore, within the BOP, treatment of withdrawal with methadone requires that arrangements be made to continue treatment at an OTP licensed by the DEA.

**METHADONE as a treatment for opioid withdrawal should ordinarily be administered in accordance with the following guidance:**

- Once a patient is in mild to moderate withdrawal (COWS score 5–24 or above), the **INITIAL DOSE** of methadone is 20 mg.
- Methadone can be given in doses of 5–10 mgs orally, every 4–6 hours as needed to control objective signs of withdrawal, to a maximum dose of 40 mg/day.
- The 40 mg/day dose may be continued for 2–3 days while the patient is enrolled in an OPT to continue management of withdrawal or to resume MOUD.
- Frequent monitoring for respiratory depression and over-sedation is necessary until the inmate is stabilized.
- Once signs of withdrawal are controlled and the inmate is stabilized over 2–3 days, tapering the methadone can begin at a rate of 10% per day.
- **CLONIDINE** is usually given in conjunction with methadone to minimize withdrawal symptoms (see [Treatment with Clonidine](#) next page).

**TREATMENT WITH BUPRENORPHINE**

- **BUPRENORPHINE is a partial mu receptor agonist/antagonist.** As such, buprenorphine has a ceiling effect and is safer than full agonist opioids.
- Prescribing practitioners must have a **DATA WAIVER** from the DEA (“X-number”) when not prescribing buprenorphine through an OTP.
- The usual buprenorphine product is a sublingual film containing buprenorphine in a fixed dose, combined with naloxone (Suboxone®). The dose is expressed in mg of buprenorphine.
- Because of its partial antagonist activity, buprenorphine can precipitate withdrawal in opioid dependent patients if it is started before the patient is in mild to moderate withdrawal (COWS score of 10–24 or higher).

**The following is a suggested DOSING SCHEDULE for titrating and tapering buprenorphine/naloxone for medically supervised withdrawal.**

- **DAY 1:** An initial 4 mg dose of buprenorphine/naloxone is administered after confirming mild to moderate opioid withdrawal. An additional 4 mg dose may be given no less than one hour after the first dose if withdrawal symptoms are not well-controlled. The usual total dose on **DAY 1** is 8 mg, although some prescribers will go up to 12 mg for symptom control. Other non-opioid medications may be used if withdrawal symptoms are not controlled or worsen after the first dose.
- **DAY 2:** The starting dose on **DAY 2** is the total daily dose from **DAY 1**. Additional doses, up to 12 mg total daily dose, may be administered to achieve symptom control.
- **DAY 3:** The one-time dose on **DAY 3** is the total daily dose from **DAY 2**.
- **DAY 4 AND BEYOND:** Once symptoms are well-controlled for at least 24 hours, tapering may be accomplished with daily dose reductions. Daily doses of 12 mg or more may be tapered by 4 mg each day until reaching a daily dose of 8 to 10 mg. The dose is then tapered by 2 mg each day until the medication withdrawal is complete.

## SYMPTOMATIC TREATMENT FOR OPIOID WITHDRAWAL

**Symptomatic treatment for opioid withdrawal should be provided over 5–10 days, using standard doses of the following medications unless otherwise contraindicated:**

- **NONSTEROIDAL ANTI-INFLAMMATORY AGENTS** can be used for pain and fever.
- **ANTIDIARRHEALS AND ANTI-EMETICS** can be used to control gastrointestinal symptoms.
- **BENZODIAZEPINES** are useful for insomnia and restlessness, although, unless the patient is being treated for co-occurring alcohol withdrawal, they are not typically recommended in the BOP due to risk of diversion and misuse.
- **BUSPIRONE** has shown efficacy in reducing anxiety and symptoms associated with opioid withdrawal, and may be prescribed as needed on a case-by-case basis.
- **CLONIDINE** is an acceptable alternative/adjunctive treatment for symptoms of opioid withdrawal, and may be considered. (*See discussion below.*)

### SYMPTOMATIC TREATMENT WITH CLONIDINE

Clonidine is often used together with other medications for symptomatic relief during withdrawal. Clonidine will suppress many of the symptoms of withdrawal, including sympathetic hyperactivity, nausea, vomiting, diarrhea, cramps, and sweating. However, clonidine has no effect on muscle or bone pain, insomnia, or severe drug craving.

**Clonidine is administered in accordance with the following guidance:**

- **DOSING:** Clonidine can be given in doses of 0.1–0.2 mg orally, three to four times daily. Maintain baseline clonidine dosing for 2–3 days; then, taper off over 5–10 days. Clonidine patches can be utilized in mild withdrawal cases and are left on for seven days.
- **Clonidine can cause hypotension and somnolence** (increasing risk of injury), and careful monitoring is required. Withhold clonidine if systolic blood pressure drops below 90 mm Hg or if bradycardia develops.
- **Patients in active substance withdrawal are at increased risk of suicide, and clonidine is fatal in overdose.** Extra care is warranted, including monitoring inmates for thoughts of self-harm and limiting its administration to directly observed therapy. Consider administering crushed immediate-release tablets to prevent “tonguing” or “cheeking” of the medication.

### INMATE COUNSELING AND EDUCATION

Patients with opioid use disorders often express significant fear and anticipatory anxiety regarding withdrawal—even when symptoms are well-controlled—especially those who have experienced multiple episodes of withdrawal prior to incarceration.

- Inmates experiencing opioid withdrawal should be counseled by a health care provider on the symptoms and signs of withdrawal, the anticipated treatment plan, and patient responsibilities.
  - Psychological support is often necessary to help ease these anxieties. The inmate’s mental health status should be monitored on an ongoing basis during withdrawal. Referrals to psychology and psychiatry staff should be initiated as warranted.
- Educational information in [Appendix 8, Patient Information – Opioids \(Narcotics\) Withdrawal](#) should be used when appropriate.

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## 11. COCAINE/STIMULANTS

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For most inmates who use cocaine or other stimulants, medications are not ordinarily indicated as an initial treatment for withdrawal or dependence, as none have shown efficacy. The cessation of these substances does not always cause specific withdrawal symptoms. However, symptoms may be severe enough to require clinical intervention.

- ➔ *SAMHSA recommends that patients withdrawing from stimulants should be monitored closely for complications of stimulant withdrawal—depression and suicidality, as well as prolonged QTc intervals and seizures. An ECG is recommended during cocaine withdrawal to monitor for cardiac complications.*

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## 12. INHALANTS

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Inhalants are commonly used to obtain a quick high. Substances such as paint thinner, cleaners, and glue can be breathed in through the nose—a process known as **HUFFING**. The various symptoms associated with huffing include dizziness, impaired coordination, slurred speech, unsteady gait, lethargy, blurred vision, and even stupor or coma. There are no general lab tests for patients suspected of inhaling a substance. In most cases, treatment is supportive, but in the case of an overdose, emergency support may be necessary, as well as increased observation to monitor vital signs.

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## DEFINITIONS

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**ADDICTION** is the use of substances or engagement in behaviors that become compulsive and often continue despite harmful consequences. Addiction is a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and life experiences.

**COMPREHENSIVE SERUM CHEMISTRY PANEL** includes, at minimum: glucose, electrolytes, BUN, creatinine, albumin, bilirubin, AST, and ALT.

**CROSS-TOLERANCE** is the ability of one drug or substance to act as a physiologic substitute for another. Using a cross-tolerant substitute allows the dependent individual to “detox” without experiencing a withdrawal syndrome.

**DEPENDENCE** exists if a physiological withdrawal syndrome develops when a medication or other substance is discontinued. Individuals may develop physiological dependence without developing pathological substance dependence. For example, taking prescribed benzodiazepines for a psychiatric condition over a prolonged period can lead to physiological dependence, without other symptoms of substance use disorder developing.

**INTOXICATION** is the condition of having physical or mental control diminished by the effects of alcohol or drugs.

**KINDLING**, a phenomenon in which the severity of withdrawal symptoms increases after repeated withdrawal episodes, is experienced by many individuals with alcohol use disorder. This phenomenon suggests that even patients who experience only mild withdrawal should be treated aggressively to reduce the severity of withdrawal symptoms in subsequent episodes. Kindling also may contribute to a patient’s relapse risk and to alcohol-related brain damage and cognitive impairment.

**MISUSE** refers to the use of any substance in a manner that is different from legitimate medical purposes and prescribing. In order to reduce stigma and negative connotations, the term *substance abuse* is no longer preferred.

**SUBSTANCE** refers to any chemical that is mood- or mind-altering; it can include street drugs, inhalants, and prescription and over-the-counter medications, as well as nicotine, caffeine, and alcohol.

**SUBSTANCE USE DISORDER** is a “cluster of physiological, behavioral, and cognitive symptoms indicating that an individual continues to use a substance” (DSM-5), despite serious social, financial, emotional, behavioral, or physical consequences. Physiological dependence may or may not develop in individuals who are substance-dependent.

**TOLERANCE** is the “need for markedly increased amounts of the substance to achieve intoxication,” or a “markedly diminished effect when using the same amount.” (DSM-5).

**WERNICKE-KORSAKOFF SYNDROME** is caused by a deficiency in thiamine (vitamin B1), commonly depleted in people with alcohol use disorders due to altered gastrointestinal absorption or a diet lacking sufficient thiamine. Thiamine is critical for the prevention and treatment of Wernicke’s encephalopathy, a neurological disorder that manifests as ataxia, ophthalmoplegia, and confusion. If left untreated, this encephalopathy may progress to permanent cognitive impairment known as Korsakoff’s psychosis, for which there is no known treatment.

**WITHDRAWAL SYNDROME** is the characteristic group of symptoms and signs that typically develop after a rapid, marked decrease or discontinuation of a substance on which an individual is dependent. The severity and duration of the withdrawal syndrome is determined by a number of factors: the type of substance, as well as its half-life and duration of action; the length of time the substance has been used, the amount used, and whether other substances are also used; the presence of other medical and psychiatric conditions; and other individual biopsychosocial variables.

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## APPENDIX 1. SYMPTOMS AND SIGNS OF INTOXICATION AND WITHDRAWAL

SUBSTANCE	ACUTE INTOXICATION AND OVERDOSE*	WITHDRAWAL SYNDROME
<b>ALCOHOL</b>	<ul style="list-style-type: none"> <li>• Eyes: Nystagmus</li> <li>• Cardiovascular: Hypotension, tachycardia</li> <li>• Psychological: Disinhibited behavior, euphoria, mood variability</li> <li>• Other: Metabolic abnormalities including hypoglycemia, hypokalemia, hyperlactatemia, hypomagnesemia, hypocalcemia, hypophosphatemia; slurred speech, incoordination; unsteady gait; memory impairment, stupor; coma</li> </ul>	Refer to <a href="#">Appendix 2</a> .
<b>HALLUCINOGENS</b> <ul style="list-style-type: none"> <li>• LSD<sup>1</sup></li> <li>• psilocybin</li> <li>• mescaline</li> <li>• PCP<sup>2</sup></li> <li>• STP<sup>3</sup></li> <li>• MDMA<sup>4</sup></li> <li>• bromo-DMA<sup>5</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Eyes: Pupils dilated (normal or small with PCP)</li> <li>• Cardiovascular: Elevated BP and heart rate</li> <li>• Psychological: Euphoria, anxiety or panic; paranoid thought disorder; sensorium often clear; affect inappropriate; time/visual distortions; visual hallucinations; depersonalization</li> <li>• Other: Tendon reflexes hyperactive; temperature elevated; face flushed</li> <li>• With PCP: Drooling, blank stare, mutism, amnesia, analgesia, nystagmus (sometimes vertical), ataxia, muscle rigidity, impulsive/often violent behavior</li> </ul>	None
<b>CNS STIMULANTS</b> <ul style="list-style-type: none"> <li>• amphetamines</li> <li>• cocaine</li> <li>• methylphenidate</li> <li>• phenmetrazine</li> <li>• phenylpropanolamine</li> <li>• most anti-obesity drugs</li> </ul>	<ul style="list-style-type: none"> <li>• Eyes: Pupils dilated and reactive</li> <li>• Cardiovascular: Elevated BP and heart rate; cardiac arrhythmias</li> <li>• Psychological: Sensorium hyperacute or confused; paranoid ideation; hallucinations; impulsivity; stereotypy</li> <li>• Other: Tendon reflexes hyperactive; temperature elevated; respiration shallow; dry mouth; sweating; tremors; hyperactivity; convulsions; coma</li> </ul>	<ul style="list-style-type: none"> <li>• Physical: Muscular aches; abdominal pain; chills, tremors; voracious hunger; prolonged sleep; lack of energy</li> <li>• Psychological: Anxiety; profound psychological depression, sometimes suicidal; exhaustion</li> </ul>
<b>CANNABIS GROUP</b> <ul style="list-style-type: none"> <li>• marijuana</li> <li>• hashish</li> <li>• THC<sup>6</sup></li> <li>• hash oil</li> </ul>	<ul style="list-style-type: none"> <li>• Eyes: Pupils unchanged; conjunctiva injected;</li> <li>• Cardiovascular: BP decreased on standing; heart rate increased;</li> <li>• Psychological: Euphoria, anxiety; sensorium often clear; dreamy, fantasy state; time-space distortions; hallucinations rare</li> <li>• Other: Increased appetite</li> </ul>	<ul style="list-style-type: none"> <li>• Nonspecific symptoms including anorexia, nausea, insomnia, restlessness, irritability, anxiety</li> </ul>
<b>OPIOIDS</b> <ul style="list-style-type: none"> <li>• heroin</li> <li>• morphine</li> <li>• codeine</li> <li>• meperidine</li> <li>• methadone</li> <li>• hydromorphone</li> <li>• opium</li> <li>• pentazocine</li> <li>• propoxyphene</li> </ul>	<ul style="list-style-type: none"> <li>• Eyes: Pupils constricted (may be dilated with meperidine or extreme hypoxia)</li> <li>• Cardiovascular: Respirations depressed; BP decreased, sometimes shock; pulmonary edema</li> <li>• Other: Temperature decreased; reflexes diminished to absent; stupor or coma; constipation; convulsions with propoxyphene or meperidine</li> </ul>	<ul style="list-style-type: none"> <li>• Physical: Pupils dilated; pulse rapid; gooseflesh; abdominal cramps; muscle jerks; "flu" syndrome; vomiting, diarrhea; tremulousness; yawning;</li> <li>• Psychological: Anxiety</li> </ul>



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## APPENDIX 2. ALCOHOL WITHDRAWAL ASSESSMENT AND TREATMENT FLOWSHEET

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★ **The CIWA-AR SCALE is the most sensitive tool for assessing a patient who is experiencing alcohol withdrawal.**

**GUIDELINES** for using the CIWA-Ar Scale on the [Alcohol Withdrawal Assessment and Treatment Flowsheet](#) (next page):

- 1. USE THE ATTACHED FLOWSHEET TO DOCUMENT** the patient's vitals and CIWA-Ar scores, as well as the administration of PRN medications.
- 2. FOLLOW THE ASSESSMENT PROTOCOL** shown at the top of the flowsheet. Record the date, time, vitals, CIWA-Ar ratings, and Total CIWA-Ar Score **EACH TIME** the patient is assessed.
- 3. TO CALCULATE THE TOTAL CIWA-AR SCORE**, rate the patient according to each of the 10 CIWA-Ar criteria, and then add together the 10 ratings. Each criterion is rated on a scale from 0 to 7 (except for "Orientation and Clouding of Sensorium," rated from 0 to 4). The clinician can select any rating from 0 to 7 (or 0 to 4), even for criteria where not every number on the rating scale is defined (e.g., "Nausea/Vomiting" could be scored as a 2 or 3, even though these numbers are not defined).
- 4. EARLY INTERVENTION FOR A TOTAL CIWA-AR SCORE OF 8 OR GREATER** provides the best means of preventing the progression of withdrawal.

<b>Assessment Protocol</b> a. Assess vitals and CIWA-Ar. b. If total CIWA-Ar score $\geq$ 8, repeat every hour. Once the CIWA-Ar score $<$ 8, then repeat every 4–8 hours until score has remained $<$ 8 for 24 hours. c. If initial Total CIWA-Ar score $<$ 8, repeat CIWA every 4–8 for 24 hours. d. If indicated, administer PRN medications per BOP protocol.	<b>Date</b>								
	<b>Time</b>								
	<b>Pulse</b>								
	<b>RR</b>								
	<b>O<sub>2</sub> sat</b>								
	<b>BP</b>								

<b>Use the CIWA-Ar Scale to assess and rate each of the following 10 criteria.</b>									
<b>Nausea/Vomiting:</b> Rate on scale of 0–7. 0 - none; 1 - mild nausea, no vomiting; 4 - intermittent nausea; 7 - constant nausea, frequent dry heaves and vomiting									
<b>Tremors:</b> Have patient extend arms and spread fingers. Rate on scale of 0–7. 0 - no tremor; 1 - not visible, but can be felt fingertip-to-fingertip; 4 - moderate with arms extended; 7 - severe, even with arms not extended									
<b>Anxiety:</b> Rate on scale of 0–7. 0 - none, at ease; 1 - mildly anxious; 4 - moderately anxious or guarded, so anxiety is inferred; 7 - equivalent to acute panic states, as in severe delirium or acute schizophrenic reactions									
<b>Agitation:</b> Rate on scale of 0–7. 0 - normal activity; 1 - somewhat normal activity; 4 - moderately fidgety and restless; 7 - constantly paces or thrashes about									
<b>Paroxysmal Sweats:</b> Rate on scale of 0–7. 0 - no sweats; 1 - barely perceptible sweating, palms moist; 4 - beads of sweat obvious on forehead; 7 - drenching sweats									
<b>Orientation &amp; Clouding of Sensorium:</b> Ask, "What day is this? Where are you? Who am I?" Rate on scale of 0–4. 0 - oriented; 1 - cannot do serial additions, uncertain about date; 2 - disoriented to date by no more than 2 days; 3 - disoriented to date by $>$ 2 days; 4 - disoriented to place and/or person									
<b>Tactile Disturbances:</b> Ask, "Have you experienced any itching, pins and needles sensation, burning or numbness, or a feeling of bugs crawling on or under your skin?" Rate on scale of 0–7. 0 - none; 1 - very mild itch, P&N, burning, numbness; 2 - mild itch, P&N, burning, numbness; 3 - moderate itch, P&N, burning, numbness; 4 - moderate hallucinations; 5 - severe hallucinations; 6 - extremely severe hallucinations; 7 - continuous hallucinations									
<b>Auditory Disturbances:</b> Ask, "Are you more aware of sounds around you? Are they harsh? Do they startle you? Do you hear anything that disturbs you or that you know isn't there?" Rate on scale of 0–7. 0 - not present; 1 - very mild harshness or ability to startle; 2 - mild harshness or ability to startle; 3 - moderate harshness or ability to startle; 4 - moderate hallucinations; 5 - severe hallucinations; 6 - extremely severe hallucinations; 7 - continuous hallucinations									
<b>Visual Disturbances:</b> Ask, "Does the light appear to be too bright? Is its color different than normal? Does it hurt your eyes? Are you seeing anything that disturbs you or that you know isn't there?" Rate on scale of 0–7. 0 - not present; 1 - very mild sensitivity; 2 - mild sensitivity; 3 - moderate sensitivity; 4 - moderate hallucinations; 5 - severe hallucinations; 6 - extremely severe hallucinations; 7 - continuous hallucinations									
<b>Headache:</b> Ask, "Does your head feel different than usual? Does it feel like there is a band around your head?" Rate on scale of 0–7. Do not rate dizziness or lightheadedness. 0 - not present; 1 - very mild; 2 - mild; 3 - moderate; 4 - moderately severe; 5 - severe; 6 - very severe; 7 - extremely severe									
<b>Total CIWA-Ar Score:</b> (<10 = none to very mild withdrawal; 10-15 = mild withdrawal; 16-20 = moderate withdrawal; >20 = severe withdrawal)									

**Indications for PRN Medication:** Please follow the protocol in BOP *Clinical Guidance for Treatment of Withdrawal for Inmates with Substance Use Disorders* for use of lorazepam and other medications for withdrawal. See [Table 3](#) and Section 7, [Alcohol Withdrawal](#).

<b>Medication administered?</b> (see Medication Administration Record) <b>Yes/No:</b>									
<b>Time of PRN medication administration:</b>									
<b>Assessment of response:</b> (CIWA-Ar Score 30–60 minutes after medication administered)									
<b>Provider initials:</b>									

Inmate Name \_\_\_\_\_  
 Reg No. \_\_\_\_\_  
 Date of Birth \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Institution \_\_\_\_\_

Signature/Title	Initials	Signature/Title	Initials

### APPENDIX 3. BENZODIAZEPINE DOSE EQUIVALENTS

The dose equivalencies and half-lives shown below are estimates only. Dosages may need to be adjusted based on clinical findings, as well as on other factors such as age that affect the metabolism of benzodiazepines. For example, liver disease can decrease metabolism and thereby increase the accumulation of the benzodiazepine. The presence of active metabolites will also increase the half-life of the medication. Generally, the older the person, the slower the metabolism and the longer the half-life. For example, the half-life of flurazepam in an elderly individual may be as long as 200 hours.

GENERIC NAME (Trade Name)	EQUIVALENT DOSE (mg)	HALF-LIFE (hours)
Alprazolam (Xanax®)	0.5–1	6–15
Chlordiazepoxide (Librium®)	25	24–48
Clonazepam (Klonopin®)	1–2	30–40
Clorazepate (Tranxene®)	7.5–15	30+
Diazepam (Valium®)	10	20–50
Estazolam (ProSom®)	1	10–24
Flurazepam (Dalmane®)	15–30	50–200
Lorazepam (Ativan®)	1–2	10–20
Oxazepam (Sera®)	10–30	5–10
Temazepam (Restoril®)	15–30	3–20
Triazolam (Halcion®)	0.25	1–5
Zolpidem (Ambien®)	10–20	2–5

**REFERENCE:**  
Park TW. Benzodiazepine use disorder: Epidemiology, pathogenesis, clinical manifestations, course, and diagnosis. In: UpToDate, Saitz R (Ed). Last updated September 26, 2017.

## APPENDIX 4. BARBITURATE DOSE EQUIVALENTS

Dose equivalencies are estimates, and dosages should be adjusted according to clinical response. Barbiturates have a narrow therapeutic window, such that toxicity can develop quickly at dosages above what is needed to manage withdrawal symptoms. Long-term use produces tolerance to the sedative and euphoric effects, but without a concurrent tolerance to respiratory depression. Careful attention to vital signs, particularly respiratory status, is imperative during withdrawal.

**NOTE: Phenobarbital is the drug of choice for treatment of withdrawal from barbiturates and barbiturate-like medications. One exception is meprobamate.** Meprobamate itself can be used to detoxify inmates dependent on meprobamate.

BARBITURATE DRUG DOSE CONVERSION (EQUIVALENT TO 180MG OF PHENOBARBITAL)		
Generic Name ( <i>Trade Name</i> )	Equivalent Dose (mg)	Phenobarbital (180mg) conversion factor
Butabarbital (many combinations)	600	0.3
Butalbital ( <i>Fiorinal</i> ®, others)	600	0.3
Pentobarbital ( <i>Nembutal</i> ®, others)	600	0.3
Secobarbital ( <i>Seconal</i> ®, others)	600	0.3
BARBITURATE-LIKE DRUGS		
Generic Name ( <i>Trade Name</i> )	Equivalent Dose (mg)	
Meprobamate ( <i>Miltown</i> ®, others) (see <i>NOTE</i> above)	2400	0.075
Methaqualone ( <i>Quaalude</i> ®, others)	1800	0.1
<b>REFERENCE:</b> Miller NS, Gold MS. Management of withdrawal syndromes and relapse prevention in drug and alcohol dependence. <i>Am Fam Physician</i> .1998;58(1):139–146.		

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## APPENDIX 5. PATIENT INFORMATION – ALCOHOL WITHDRAWAL

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Your medical team has determined that you will need medical care to help you safely withdraw from alcohol. By being an active partner in your own treatment, you can help the withdrawal process be more effective and more comfortable.

Treating your body's dependence on alcohol is only the first step towards a sober and healthy life style. Psychology staff and/or drug treatment counselors will work with you to develop a plan for long-term recovery. You may also find it helpful to attend AA (Alcoholics Anonymous) meetings at your institution.

### What kind of withdrawal symptoms will you get?

It is difficult to predict how alcohol withdrawal will affect any one person. So much depends on your own physical condition. If you had problems when you stopped drinking before, you are likely to have at least some of those same symptoms again.

The symptoms of alcohol withdrawal can include: stomach upset, anxiety, mood swings, increased blood pressure, increased heart rate, insomnia, tremor, fever, loss of appetite, heavy sweating, hallucinations, seizures, and, in very rare cases, death. *However, all of these symptoms can be safely managed with medical care.*

### What kind of medical care will you get?

You must take all of your medications just as prescribed. They will be provided through pill line. If you miss a dose, let the medical staff know *immediately*.

- You will be given *thiamine* (a vitamin) to take regularly for several days. It is very important that you take the thiamine as prescribed to prevent permanent brain damage. To determine what other medications you need, and how much, your medical team will be examining you regularly for signs of withdrawal.
- Sometimes, medications such as *lorazepam* are used to prevent serious complications like high blood pressure, seizures, or confusion.
- *Clonidine* is another medication that is often used to treat high blood pressure. It will reduce your blood pressure and heart rate, as well as help with tremor, anxiety, and sleeplessness. If clonidine is prescribed for you, it is important to take it on schedule.

### Help yourself leave alcohol behind:

1. **Be honest about your use of alcohol and other substances.** This will help ensure the best treatment for you.
2. **IMMEDIATELY report any serious symptoms to your medical team**—especially chest pain, hallucinations, fainting, seizures, or suicidal thinking.
3. **Take your medications on schedule and as prescribed.** They can prevent serious complications. If you miss a dose, let your medical team know as soon as possible.
4. **Stay busy and active during the day.** This will help keep your mind occupied and help you sleep better at night.
5. **Talk with psychology staff about other treatment options** such as residential and non-residential drug treatment programs, relaxation training, and stress management.

*By working with your medical team, you can help your withdrawal go as smoothly as possible. However, no matter how carefully the process is managed, you are still likely to have some mild symptoms such as trouble with sleeping and nervousness. Sometimes, these symptoms can continue for weeks or perhaps months. Be sure to seek help from medical and psychology staff if you find your symptoms to be troublesome.*

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## APPENDIX 6. PATIENT INFORMATION – BENZODIAZEPINE WITHDRAWAL

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*Your medical team has determined that you will need medical care to help you safely withdraw from benzodiazepines (tranquilizers). By being an active partner in your own treatment, you can help the process be more effective and more comfortable.*

Treating your body's dependence on benzodiazepines is only the first step towards a healthy life style. If you have been prescribed benzodiazepines for a nervous condition, psychiatry and psychology staff will develop a new treatment plan for your condition that does not require the use of addictive medications. If you have been misusing benzodiazepines, psychology staff and/or drug treatment counselors will work with you to develop a plan for long-term recovery. You may also find it helpful to attend NA (Narcotics Anonymous) meetings at your institution.

### What kind of withdrawal symptoms will you get?

*It is difficult to predict how benzodiazepine withdrawal will affect any one person. So much depends on your own physical condition. If you had problems when you stopped taking the medication before, you are likely to have at least some of those same symptoms again. It is NOT safe to suddenly stop taking benzodiazepines.*

The symptoms of benzodiazepine withdrawal can include: stomach upset, anxiety, mood swings, increased blood pressure, increased heart rate, insomnia, tremor, fever, loss of appetite, heavy sweating, hallucinations, seizures, and, in very rare cases, death. *However, all of these symptoms can be safely managed with medical care.*

### What kind of medical care will you get?

You may be given the same medication that you have been taking, or the medical staff may determine that it is safer to substitute another benzodiazepine. *Either way, it is very important for you to take your medication just as prescribed (on schedule) to prevent serious complications such as high blood pressure, seizures, delirium, and even death.*

Your medical team will be examining you regularly for signs of withdrawal so they can determine the correct dose of your medication. Your medication will be provided through pill line. *If you miss a dose, let the medical staff know immediately.*

### Help yourself leave benzodiazepines behind:

- 1. Be honest about your use of benzodiazepines and other substances.** This will help ensure the best treatment for you.
- 2. IMMEDIATELY report any serious symptoms to your medical team—** especially chest pain, hallucinations, fainting, seizures, or suicidal thinking.
- 3. Take your medications on schedule and as prescribed.** They can prevent serious complications. If you miss a dose, let your medical team know as soon as possible.
- 4. Stay busy and active during the day.** This will help keep your mind occupied and help you sleep better at night.
- 5. Talk with psychology staff about other treatment options** such as residential and non-residential drug treatment programs, relaxation training, and stress management.

*By working with your medical team, you can help your withdrawal go as smoothly as possible. However, no matter how carefully the process is managed, you are still likely to have some mild symptoms such as trouble with sleeping and nervousness. Sometimes, these symptoms can continue for weeks or perhaps months. Be sure to seek help from medical and psychology staff if you find your symptoms to be troublesome.*

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## APPENDIX 7. PATIENT INFORMATION – BARBITURATE WITHDRAWAL

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*Your medical team has determined that you will need medical care to help you safely withdraw from barbiturates. By being an active partner in your own treatment, you can help the process be more effective and more comfortable.*

Treating your body's dependence on barbiturates is only the first step towards a healthy life style. If you have been prescribed barbiturates for a nervous condition, psychiatry and psychology staff will develop a new treatment plan for your condition that does not require the use of addictive medications. If you have been misusing barbiturates, psychology staff and/or drug treatment counselors will work with you to develop a treatment plan for long-term recovery. You may also find it helpful to attend NA (Narcotics Anonymous) meetings at your institution.

### What kind of withdrawal symptoms will you get?

*It is difficult to predict how barbiturate withdrawal will affect any one person. So much depends on your own physical condition. If you had problems when you stopped taking the medication before, you are likely to have at least some of those same symptoms again. It is NOT safe to suddenly stop taking barbiturates.*

The symptoms of barbiturate withdrawal can include: stomach upset, anxiety, mood swings, increased blood pressure, increased heart rate, insomnia, tremor, fever, loss of appetite, heavy sweating, hallucinations, seizures, and, in very rare cases, death. *However, all of these symptoms can be safely managed with medical care.*

### What kind of medical care will you get?

You may be given the same medication you have been taking, or the medical staff may determine that it is safer to substitute another barbiturate. *Either way, it is very important for you to take your medication just as prescribed (on schedule) to prevent serious complications such as high blood pressure, seizures, delirium, and even death.*

Your medical team will be examining you regularly for signs of withdrawal so they can determine the correct dose of your medication. Your medication will be provided through pill line. *If you miss a dose, let the medical staff know immediately.*

### Help yourself leave barbiturates behind:

1. **Be honest about your use of barbiturates and other substances.** This will help ensure the best treatment for you.
2. **IMMEDIATELY report any serious symptoms to your medical team**—especially chest pain, hallucinations, fainting, seizures, or suicidal thinking.
3. **Take your medications on schedule and as prescribed.** They can prevent serious complications. If you miss a dose, let your medical team know as soon as possible.
4. **Stay busy and active during the day.** This will help keep your mind occupied and help you sleep better at night.
5. **Talk with psychology staff about other treatment options** such as residential and non-residential drug treatment programs, relaxation training, and stress management.

*By working with your medical team, you can help your withdrawal go as smoothly as possible. However, no matter how carefully the process is managed, you are still likely to have some mild symptoms such as trouble with sleeping and nervousness. Sometimes, these symptoms can continue for weeks or perhaps months. Be sure to seek help from medical and psychology staff if you find your symptoms to be troublesome.*

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## APPENDIX 8. PATIENT INFORMATION – OPIOID (NARCOTICS) WITHDRAWAL

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*Your medical team has determined that you will need medical care to help you safely withdraw from opioids. By being an active partner in your own treatment, you can help the process be more effective and more comfortable.*

Treating your body's dependence on opioids is only the first step towards a healthy life style. If you have been misusing opioids, psychology and medical staff will work with you to develop a treatment plan for long-term recovery. You may also find it helpful to attend NA (Narcotics Anonymous) meetings at your institution.

### What kind of withdrawal symptoms will you get?

*It is difficult to predict how opioid withdrawal will affect any one person. So much depends on your own physical condition. If you had problems when you stopped taking opioids before, you are likely to have at least some of those same symptoms again.*

The symptoms of opioid withdrawal can include a runny nose, tearing of the eyes, yawning, dilated pupils, fever, loss of appetite, nausea, vomiting, diarrhea, abdominal cramps, sweating, goose flesh, increased blood pressure, increased heart rate, nervousness, restlessness, and muscle and bone pain. *However, all of these symptoms can be safely managed with medical care.*

### What kind of medical care will you get?

To determine what medications you need, and how much, your medical team will be examining you regularly for signs of withdrawal.

- *You must take all of your medications just as prescribed in order to reduce the considerable discomfort caused by opioid withdrawal. Even with effective treatment, you are likely to experience some withdrawal symptoms.*
- Medications such as *clonidine* may be used to reduce your blood pressure and heart rate, as well as help with nausea, vomiting, diarrhea, cramps, and sweating. *If clonidine is prescribed for you, it is very important to take it on schedule.*
- You may be given other medications to help with bone and muscle pain, as well as nausea, diarrhea, and insomnia.
- Your medications will be provided through pill line. *If you miss a dose, let the medical staff know immediately.*

### Help yourself leave opioids behind:

1. **Be honest about your use of opioids and other substances.** This will help ensure the best treatment for you.
2. **IMMEDIATELY report any serious symptoms** to your medical team—especially chest pain, fainting, severe diarrhea, vomiting, or suicidal thinking.
3. **Take your medications on schedule and as prescribed.** They can prevent serious discomfort. If you miss a dose, let your medical team know as soon as possible.
4. **Stay busy and active during the day.** This will help keep your mind occupied and help you sleep better at night.
5. **Talk with psychology staff about other treatment options** such as residential and non-residential drug treatment programs, relaxation training, and stress management.

*By working with your medical team, you can help your withdrawal go as smoothly as possible. However, no matter how carefully the process is managed, you are still likely to have some mild symptoms, such as trouble with sleeping, nervousness, drug craving, and physical discomfort. Sometimes anxiety and insomnia can continue for weeks or months. Be sure to seek help from medical and psychology staff if you find your symptoms to be troublesome.*