

Detoxification of Chemically Dependent Inmates

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Table of Contents

1. Purpose	1
2. Introduction.....	1
3. Detection of Substance Abuse and Treatment of Withdrawal.....	1
4. Management of Inmates with Complicating Medical and Psychiatric Conditions.....	3
5. Placement of Inmates for Detoxification.....	5
6. Alcohol Withdrawal	5
7. Benzodiazepine Withdrawal	11
8. Barbiturate Withdrawal	14
9. Opiate Withdrawal	15
10. Cocaine/Stimulants.....	18
11. Inhalants.....	18
Definitions	19
References	20
Appendix 1. Detoxification Overview	22
Appendix 2. Alcohol Withdrawal Assessment and Treatment Flowsheet.....	23
Appendix 3: Symptoms and Signs of Drug Abuse	25
Appendix 4: Benzodiazepine Dose Equivalents	26
Appendix 5: Barbiturate Dose Equivalents	27
Appendix 6: Patient Information – Detoxification from Alcohol.....	28
Appendix 7: Patient Information – Detoxification from Benzodiazepines	29
Appendix 8: Patient Information – Detoxification from Barbiturates	30
Appendix 9: Patient Information – Detoxification from Opiates (Narcotics)	31
Tables	
Table 1. Overview of Treatment of Alcohol Withdrawal, Based on CIWA-Ar score.....	7
Table 2. Recommended Schedule for Lorazepam Treatment of Alcohol Withdrawal	9
Table 3. Symptoms of Benzodiazepine Withdrawal.....	12
Table 4. Symptoms of Barbiturate Withdrawal	14

1. Purpose

The Federal Bureau of Prisons (BOP) Clinical Practice Guidelines for *Detoxification of Chemically Dependent Inmates* provide recommended standards for the medical management of withdrawal from addictive substances for federal inmates.

2. Introduction

Substance use disorders pose a significant and expensive public health problem. Substance abuse affects not only the substance abusers and their families, but also society as a whole—through increases in crime, domestic violence, highway fatalities, incarceration, and health care costs.

Any substance that alters perception, mood, or cognition can be abused. Commonly identified substances of abuse include illicit drugs, alcohol, and certain prescription drugs—which act through their hallucinogenic, stimulant, sedative, hypnotic, anxiolytic, or narcotic effects. Other less commonly recognized substances of abuse 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, affecting an estimated 30–60% of inmates. Drug intoxication and withdrawal may be particularly evident at the time of incarceration. The Bureau of Justice Statistics reports that an estimated 70% of all inmates in local jail facilities in the U.S. had committed a drug offense or used drugs regularly, and an estimated 35% were under the influence of drugs at the time of the offense.

3. Detection of Substance Abuse and Treatment of Withdrawal

The safe and effective treatment of withdrawal syndromes requires that clinicians be alert to the possibility of substance dependence in all new inmate arrivals at their institutions. A concise overview of detoxification is provided in [Appendix 1](#).

→ **The DSM-5 criteria for abuse, intoxication, and withdrawal from selected substances are available at <http://www.dsm5.org/Pages/Default.aspx>.**

- **A careful inmate history and clinical assessment is essential.** Substance abusers are rarely accurate in their description of patterns of drug use; they can greatly underestimate or deny their substance abuse, as well as overstate the extent of it. Furthermore, because individuals who abuse substances are likely to be abusing multiple substances, the possibility of more than one addiction must be carefully considered; intoxication from multiple drugs will complicate treatment of the withdrawal syndrome. An overview of the clinical presentations of substance abuse is listed in [Appendix 3, Symptoms and Signs of Drug Abuse](#).

- **Not all substances of abuse 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.
- **The intensity of withdrawal cannot always be predicted.** 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. These same characteristics also tend to make a slow and safe withdrawal from the substance more difficult, especially if the substance being abused is used as treatment in the detoxification process. **Frequent clinical assessments, along with indicated treatment adjustments (in both dose and frequency) are imperative.**
- **Substances that produce dangerous withdrawal syndromes for individuals with physiological dependence include alcohol, sedative/hypnotics, and anxiolytics.** Withdrawal from narcotics is not generally considered dangerous, except in pregnant women and the medically debilitated; however, narcotic withdrawal does result in significant symptomatology, which can be markedly reduced with targeted therapies.
- **Whenever possible, the clinician should substitute a long-acting medication for short-acting drugs of addiction.** A safe withdrawal plan entails, when feasible, substituting a long-acting, cross-tolerant substance and gradually tapering that substance (not more rapidly than 10–20% per day—depending on the substance and the setting available for detoxification).
- **Every effort should be made to ameliorate the inmate’s signs and symptoms of alcohol or drug withdrawal.** Adequate doses of medication should be used, with frequent reassessment. Inmates experiencing withdrawal should also be kept as physically active as medically permissible.
- **Initiation of withdrawal should be individualized.** Substance abuse often leads to significant medical sequelae including liver disease, chronic infections, trauma, cognitive impairment, psychiatric disorders, nutritional deficiencies, and cardiac disease. Detoxification and withdrawal are stressors, and may exacerbate or precipitate medical or psychological decompensation. In some cases, medical stabilization may be preferred to resolve the immediate crisis prior to initiating withdrawal.
- **To the greatest extent possible during detoxification, the provider should control the inmate’s access to the prescribed medication regimen.** Overdose with either the prescribed medication or with other drugs is always a possibility. Administration of all controlled medications should be directly observed in a pill line. In addition, consider direct observation of ancillary medications (e.g., clonidine). Inmates should be counseled on the dangers of supplementing their detoxification regimens with over-the-counter medications, prescription medications diverted from other inmates, or illicit drugs and alcohol.

- **Detoxification alone is rarely adequate treatment for alcohol and other drug dependencies.** Inmate education regarding the detoxification process is a necessary component of a successful detoxification plan. In addition, clinicians should conduct periodic assessments to detect the development of any psychiatric symptoms such as depression, suicidal thinking, or underlying psychosis. Inmates should be considered for follow-up psychological support through group therapy, individual counseling, 12-step recovery meetings, or similar programs. These services provide alternative methods of coping with the stresses that trigger alcohol or drug abuse. Psychology staff can also determine whether referrals to drug education or to nonresidential or residential drug treatment programs are indicated.

- **Symptoms and signs of conditions that require immediate medical attention are listed in the table below:**

Symptoms and Signs of Conditions Requiring <i>Immediate</i> Medical Attention	
<ul style="list-style-type: none"> • Change in mental status • Increasing anxiety • Hallucinations • Temperature greater than 100.4°F (these patients should be considered potentially infectious) • Significant increases and/or decreases in blood pressure and heart rate • Insomnia 	<ul style="list-style-type: none"> • Abdominal pain • Upper and lower gastrointestinal bleeding • Changes in responsiveness of pupils • 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

4. Management of Inmates with Complicating Medical and Psychiatric Conditions

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 brain injuries of any type are more likely to suffer seizures and/or delirium during detoxification, and therefore require closer monitoring.
- **Co-morbid seizure disorder:** The presence of an underlying seizure disorder needs to be considered when tapering from benzodiazepines, barbiturates, and alcohol. Patients with pre-existing seizure disorders will be more susceptible to seizures as their medications are tapered; a slower taper is indicated for these inmates.
- **Cardiac disease:** Inmates with cardiac disease are more sensitive to sympathetic hyperactivity, so careful monitoring and control of symptoms is essential. A slower taper is also indicated for these inmates.

- **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 treatment regimens are tapered.
- **Psychiatric disorders:** Inmates with pre-existing psychiatric conditions may suffer an exacerbation of their illness during detoxification. 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 during detoxification, 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 inmate evaluation during detoxification.
- **Elderly inmates:** Elderly inmates are at increased risk of complications during detoxification. The elderly are less likely to show marked sympathetic hyperactivity during withdrawal, but they are just as likely to suffer a severe withdrawal syndrome. Detoxification in the elderly is further complicated by these factors: a greater need for prescription drugs and the potential for drug-drug interactions; a greater risk of drug toxicity from slower drug metabolism; and the higher incidence of complicating medical conditions such as heart disease and cognitive disorders. Careful monitoring, ongoing titration of medications, and inpatient hospitalization for complicated patients may be necessary.
- **Pregnancy:** Pregnancy significantly complicates detoxification efforts. Many medications cross the placenta and/or are secreted in breast milk. Careful consideration must be given to the known and unknown effects of medications on the fetus or infant, and these must be weighed against the risks of detoxification. Pregnant women generally should be maintained on their medications throughout their pregnancy, but each case is unique and should be managed in close consultation with an obstetrical specialist. Pregnant women on methadone ordinarily should not be detoxified, as this increases the risk of miscarriage and premature labor. Refer to the BOP Pharmacy Services Program Statement with regards to methadone. Pregnant women with alcohol dependence should be managed in an inpatient setting, due to the risk of miscarriage during detoxification.
- **Risk of suicide:** The frequency of suicide attempts is substantially higher among patients with a substance use disorder. Frequent and thorough patient assessments are indicated during the withdrawal period with particular attention to thoughts of self-harm.
- **Short-stay inmates:** Inmates with short sentences, or with lengths of stay that are thirty days or less, generally should not be detoxified off benzodiazepines or barbiturates if these agents are currently medically indicated. However, opiate detoxification can be completed safely in less than two weeks, and alcohol detoxification is a necessity for all inmates who present with alcohol dependence or withdrawal.

5. Placement of Inmates for Detoxification

Detoxification 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, and Special Housing Units, or when necessary as inpatients in a community hospital or Medical Referral Center (MRC). The specific housing placement should be 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 abuse, 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 detoxification, their medications, medical assessments, and ongoing monitoring must all be provided in a timely manner. If detoxification in a locked unit or Special Housing Unit cannot be accomplished with these assurances, strong consideration should be given to one of two options: *either* inpatient detoxification *or* medical stabilization and maintenance, with postponement of attempts at detoxification. Transferring patients from mainline facilities to MRCs for the management of withdrawal is not typically indicated or necessary.

All medications prescribed for the treatment of withdrawal should be administered via directly observed therapy at pill lines. Ideally, dosing should be three times a day or less, so as to accommodate pill lines at most institutions.

6. Alcohol Withdrawal

Diagnosis of Alcohol Use Disorders

Screening

As the initial step in diagnosing alcohol use disorders, 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. Despite the difficulty in obtaining an accurate history from an intoxicated inmate, a full assessment should be attempted.

Withdrawal Syndrome

The 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, although 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.

Uncomplicated alcohol withdrawal is generally completed within five days. Alcohol withdrawal symptoms can develop within a few hours of decreasing or discontinuing use. Symptoms

generally peak within 24–36 hours after abstinence begins. Early signs and symptoms 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 generally begin within 48 hours of the last drink. Withdrawal delirium, “delirium tremens,” usually 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.

Patient Evaluation

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

- An assessment should be made of the 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, signs and symptoms 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), and a pregnancy test for women.
 - The medical indications for other studies such as a chest radiograph, electrocardiogram, viral hepatitis serologies, and screening for sexually transmitted diseases should be based on the individual assessment.
 - 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.
- **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 over time 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](#).

Treatment of Alcohol Withdrawal

Inmates experiencing alcohol withdrawal should be counseled by a health care provider on the signs and symptoms of withdrawal, the anticipated treatment plan, and patient responsibilities. Educational information in [Appendix 6, Patient Information – Detoxification from Alcohol](#) should be used when appropriate. Specific treatment strategies for alcohol withdrawal should be determined by the condition of the individual inmate, and should be reviewed and approved by a physician. The following guidelines should be taken into consideration:

Thiamine Replacement

All inmates with suspected **alcohol use disorder** should be treated with thiamine (**vitamin B1**), 100 mg either orally or intramuscularly, daily for at least 10 days, **up to 4 weeks for those at high risk for malnutrition**. Due to the potential dire consequences of non-compliance, oral doses should be administered at pill line. **Thiamine replacement should always precede administering parenteral glucose to persons with alcohol intoxication**; otherwise, the glucose infusions can precipitate **Wernicke-Korsakoff syndrome** and the severe cardiovascular complications associated with thiamine deficiency:

- **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:** Characterized by impaired memory (particularly new memory formation), hallucinations, and confabulation. Korsakoff psychosis is associated with significant morbidity and a 15–20% fatality rate.

Benzodiazepine Therapy

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 ([Appendix 2](#)), in accordance with the guidelines shown in *Table 1* below. **Patients actively seizing as a result of alcohol withdrawal, or showing signs of delirium tremens, should be immediately treated with benzodiazepines.**

Table 1. Overview of Treatment of Alcohol Withdrawal, Based on CIWA-Ar score

CIWA-Ar Score	Level of Withdrawal	Recommended Treatment
<10	Mild	Supportive, non-pharmacologic therapy and close monitoring are indicated (unless patient has history of alcohol withdrawal seizures or co-morbid cardiovascular conditions).
10–15	Moderate	Medication (lorazepam) is indicated to reduce symptoms and the risk of major complications.
>15	Severe	Strong consideration should be given to hospitalizing 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 inmate populations. 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.
 - Another benefit of lorazepam is that it can be administered orally, intravenously, or intramuscularly—unlike diazepam and chlordiazepoxide, which should never be given intramuscularly because of erratic absorption.
 - Ambulatory alcohol detox is normally managed with oral benzodiazepines. For the most part, 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 2](#) on the next page 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 7, Benzodiazepine Withdrawal](#).

Carbamazepine

Carbamazepine may be used to treat alcohol withdrawal symptoms in patients who have a history of alcohol-related seizures. Carbamazepine dosing is generally started at 600 to 1,200 mg on the first day in divided doses and is generally tapered to 0 mg over 5 to 10 days. The following tapered dosing schedule can be used: day 1 (600–800 mg); day 2 (500 mg); day 3 (400 mg); day 4 (300 mg); and day 5 (200 mg).

Carbamazepine is just as effective as the benzodiazepines in generally healthy individuals with mild-to-moderate alcohol withdrawal. However, a limitation of carbamazepine is its interaction with multiple medications that undergo hepatic oxidative metabolism. Thus, carbamazepine may be less useful in older patients or in those with multiple medical problems.

Table 2. Recommended Schedule for Lorazepam Treatment of Alcohol Withdrawal

Treatment Schedule (based on CIWA-Ar)		
Mild Withdrawal (CIWA-Ar = 8–9)	Moderate Withdrawal (CIWA-Ar = 10–15)	Severe Withdrawal (CIWA-Ar >15)
<p>Note: All inmates with alcohol withdrawal should be treated with thiamine (100 mg orally or intramuscularly) daily for at least 10 days. Thiamine replacement must be completed before administration of parenteral glucose.</p>		
Most Inmates		
Repeat CIWA-Ar every 4–8 hours, until CIWA-Ar has remained less than 10 for 24 hours without medication.	<ol style="list-style-type: none"> Administer lorazepam every hour: 2–4 mg IM, PO, or IV. Repeat CIWA-Ar in one hour (90 minutes, if giving lorazepam orally). Repeat lorazepam 2–4 mg every 60–90 minutes until CIWA-Ar score is less than 10. Then, discontinue lorazepam. 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. 	<p>Hospitalization for inpatient detoxification and monitoring is strongly suggested.</p> <p>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.</p> <p>Lorazepam can be given up to 2–4 mg IV, as frequently as every 15–20 minutes.</p>
Inmates with History of Alcohol Withdrawal Seizures		
<p>Generally, inmates with a history of alcohol withdrawal seizures will present with signs and symptoms of moderate-to-severe withdrawal. Do not give anti-seizure medications unless the inmate also has an underlying seizure disorder. Carbamazepine may be useful in treating patients with a history of alcohol withdrawal seizures.</p>		
<p>Suggested initial regimen:*</p> <p>Days 1–2: Lorazepam 2 mg, 3x daily</p> <p>Days 3–4: Lorazepam 2 mg, 2x daily</p> <p>Day 5: Lorazepam 2 mg, single dose (AM or HS)</p> <p>Days 1–6: Monitor 3x daily with CIWA-Ar.**</p>	Same as above.	Same as above.
Inmates with Co-Morbid Cardiovascular Conditions		
<p>Conditions include: hypertension, angina, congestive heart failure, or history of myocardial infarction or stroke.</p>		
<p>Consider lorazepam treatment, even if only mild withdrawal symptoms.</p> <p>Suggested initial regimen:*</p> <p>Days 1–2: Lorazepam 1–2 mg, 3x daily</p> <p>Days 3–4: Lorazepam 1–2 mg, 2x daily</p> <p>Day 5: Lorazepam 1–2 mg, single dose (AM or HS)</p> <p>Days 1–6: Monitor 3x daily with CIWA-Ar.**</p>	Same as above.	Same as above.
<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 is greater than or equal to 10 at any time, follow the steps for “Moderate Withdrawal” or “Severe Withdrawal.”</p>		

Adjunctive Treatments of Alcohol Withdrawal

- **Many of the symptoms of alcohol withdrawal are caused by increased sympathetic activity. Clonidine has been used successfully to attenuate these symptoms.** A variety of dosing schedules for clonidine have been used to suppress acute symptoms of alcohol withdrawal. Generally, a dose of 0.1 to 0.2 mg every 8 hours is adequate to control symptoms. The dose can generally be tapered over 3–5 days as symptoms subside. Decreased renal function may necessitate more frequent monitoring and lower doses.
 - ➔ Clonidine’s usual side effects include hypotension and somnolence. *Treatment with clonidine requires careful monitoring of vital signs, as well as increased vigilance for other withdrawal problems.*
 - ▶ **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.*
 - ▶ Patients in active substance withdrawal are at increased risk of suicide, and clonidine is fatal in overdose. Extra care is therefore warranted, including monitoring inmates for thoughts of self-harm and limiting its administration to pill line with direct observation. Consider administering crushed immediate-release tablets to prevent “tonguing” or “cheeking” of the medication.
 - ▶ **If a patient is taking clonidine concurrently with a beta-blocker, it is best to 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. Concurrent beta-blocker therapy may exacerbate an increase in blood pressure upon clonidine withdrawal.**
- **Anti-seizure medications may have a use in the treatment of alcohol withdrawal, especially in those individuals with underlying seizure disorders.** In such cases, anti-seizure medications should be given in therapeutic doses with careful attention to blood levels. Anti-seizure medications do not replace the need for benzodiazepines in the treatment of alcohol withdrawal and will not prevent the development of delirium tremens.
- **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.
- **Individuals with alcohol dependence frequently suffer from malnutrition.** Short-term supplementation with a daily multivitamin (containing folate) is advisable if malnutrition is suspected. Refer to BOP National Formulary non-formulary use criteria for multivitamins.
- **Hypomagnesemia may develop during alcohol withdrawal.** However, routine magnesium supplementation has not been proven to be medically necessary, and is not recommended.

7. Benzodiazepine Withdrawal

Diagnosis of Benzodiazepine Use Disorders

- Benzodiazepine withdrawal syndrome can begin within a few hours of last drug use (especially when using short-acting drugs), but may take several weeks to resolve. *Because of the high risk of delirium, seizures, and death, benzodiazepine withdrawal should always be treated.*
- 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 benzodiazepine dependence can occur even when the medication is taken only as prescribed and may not include any significant biopsychosocial consequences. Physiological dependence develops within 3–4 weeks of regular use.*
- Although recreational use and abuse of benzodiazepines does occur, most inmates who present with benzodiazepine dependence had been prescribed these medications previously to treat a psychiatric disorder. Previously treated psychiatric symptoms are likely to recur during detoxification from benzodiazepines. *Therefore, a full psychological or psychiatric evaluation is indicated for inmates who have developed drug dependence while taking prescribed benzodiazepines.* Subclinical signs of withdrawal (e.g., insomnia and anxiety) may take months or years to resolve and usually should be treated with a non-addictive medication before they dominate the clinical picture. It may be necessary to delay benzodiazepine detoxification 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. The fact that individuals with benzodiazepine dependence often concurrently abuse alcohol further complicates their withdrawal course.

Signs and Symptoms of 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), and a pregnancy test for women.

- ➔ No objective measure or scoring system has been validated to assess benzodiazepine withdrawal; however, the patient's symptoms usually indicate how far the withdrawal syndrome has progressed, as outlined in *Table 3* below. *Do not use the CIWA-Ar for assessing benzodiazepine withdrawal.*

Table 3. Symptoms of Benzodiazepine Withdrawal

Stage	Symptoms
Early Withdrawal	Increased pulse and blood pressure, anxiety, panic attacks, restlessness, and gastrointestinal upset.
Mid Withdrawal	In addition to the above, may progress to include tremor, fever, diaphoresis, insomnia, anorexia, and diarrhea.
Late Withdrawal	If left untreated, a delirium may develop with hallucinations, changes in consciousness, profound agitation, autonomic instability, seizures, and death. Patients showing signs of late (severe) withdrawal should be hospitalized.

Treatment of Benzodiazepine Withdrawal

The general principle of substituting a long-acting medication for a short-acting one is especially important in the treatment of benzodiazepine withdrawal. Many inmates will present with histories of chronic use of Xanax (alprazolam) or Ativan (lorazepam), both high-potency, short-acting substances. Attempts at tapering these substances for detoxification often lead to significant withdrawal symptoms and can be unsuccessful, resulting in a full-blown withdrawal syndrome.

Benzodiazepines with long half lives, such as clonazepam, are generally used for benzodiazepine detoxification. 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.

Inmates experiencing benzodiazepine withdrawal should be counseled by a health care provider on the signs and symptoms of withdrawal, the anticipated treatment plan, and patient responsibilities. Educational information in [Appendix 7, Patient Information – Detoxification from Benzodiazepines](#), should be used when appropriate. Specific treatment strategies for benzodiazepine withdrawal should be determined by the condition of the individual inmate, and should be reviewed and approved by a physician.

The following guidelines should be taken into consideration:

- **Clonazepam treatment:** Clonazepam is a high-potency medication with a half-life of greater than 24 hours; it is well-tolerated and easy to administer. Clonazepam can be substituted for other benzodiazepines, according to the dose equivalencies listed in [Appendix 4, Benzodiazepine Dose Equivalents](#). It is generally begun on a three-times-a-day schedule; however, because of the long half-life, some dosing schedules for tapering may be successfully accomplished through once-daily dosing. The frequency can be adjusted according to appropriate withdrawal symptom monitoring. 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. As in alcohol withdrawal, sympathetic hyperactivity is an early sign of benzodiazepine withdrawal. Control of these symptoms is accomplished with adequate dosing of the cross-tolerant medication.
- **Monitoring:** During the first three days of treatment, 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 the new medication. 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. *Outpatients* should not be tapered any more rapidly than by 10% every three to five days, or 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 after detoxification has been safely completed. Referral to psychological services for supportive care, as well as stress management, sleep hygiene, and relaxation training, may be helpful both during and after the detoxification process. Psychology or psychiatry staff should closely monitor the inmate during detoxification if a co-morbid psychiatric disorder is present.

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. Inmate education regarding the withdrawal process, expected symptoms, and possible recurrence of psychiatric symptoms is essential.
- **Beta-blockers (e.g., propranolol) and alpha-2 adrenergic 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 the cross-tolerant medication, 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 detoxification process.
- **SAMHSA recommends chlordiazepoxide as an alternative to clonazepam for substitution of a long-acting medication for a short-acting one, or switching to a long-acting barbiturate such as phenobarbital.**

8. Barbiturate Withdrawal

Diagnosis and Signs/Symptoms of Barbiturate Withdrawal

Barbiturates generally 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.** 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 4* below. *Due to the severity of barbiturate withdrawal, a low threshold should exist for admission to a local hospital if needed.*

Treatment of Barbiturate Withdrawal

The general principles and physical assessments used in benzodiazepine withdrawal also apply to the management of barbiturate withdrawal.

Table 4. Symptoms of Barbiturate Withdrawal

Stage	Symptoms
Early Withdrawal	Increased pulse and/or blood pressure, anxiety, panic attacks, restlessness, gastrointestinal distress.
Mid Withdrawal	Tremor, fever, diaphoresis, insomnia, anorexia, diarrhea.
Late Withdrawal	Changes in consciousness, profound agitation, hallucinations, autonomic instability, seizures. Any signs or symptoms of late withdrawal should prompt hospitalization.

Inmates experiencing barbiturate withdrawal should be counseled by a health care provider on the signs and symptoms of withdrawal, the anticipated treatment plan, and patient responsibilities. Educational information in [Appendix 8, Patient Information – Detoxification from Barbiturates](#) 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. The following guidelines should be taken into consideration:

- Substitute phenobarbital for the drug of abuse in equivalent doses as per [Appendix 5, 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.

- 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.
- 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.

Adjunctive Treatments for Barbiturate Withdrawal

- **Symptoms of anxiety and insomnia may continue for months after the safe completion of detoxification.** Inmate education is paramount. Referral to psychology services for stress management, relaxation training, and sleep hygiene may be indicated for certain inmates.
- **Beta-blockers and 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 detoxification process.

9. Opiate Withdrawal

Diagnosis of Opiate Use Disorders

The diagnosis of opiate dependence is made through a careful patient history and physical examination.

The history should focus in part 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 bloodborne 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 opiate 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, and a pregnancy test in women. Other studies such as hepatitis serologies, HIV testing, electrocardiogram, chest x-ray, and screening for sexually transmitted diseases could be conducted, depending on the individual historical findings and physical examination.

Medical detoxification is considered the standard of care for individuals with opiate dependence. Opiate withdrawal is rarely dangerous except in medically debilitated individuals and pregnant women. Pregnant women taking opiates should be treated with methadone or maintained on methadone, since detoxification increases the risk of miscarriage and premature labor. Symptoms of withdrawal from short-acting opiates such as heroin can develop a few hours after the last use, peak within 36–72 hours, and subside over 5–10 days. Longer-acting opiates 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 opiate withdrawal include: rhinorrhea, diaphoresis, lacrimation, yawning, dilated pupils, and increased temperature. Later signs include: anorexia, nausea, vomiting, diarrhea, tenesmus, goose flesh, weakness, increased blood pressure and pulse, agitation, restlessness, and severe muscle and bone pain.

Treatment of Opiate Withdrawal

Patients with opiate **use disorders** often express significant fear and anticipatory anxiety regarding detoxification. Inmates experiencing opiate withdrawal should be counseled by a health care provider on the signs and symptoms of withdrawal, the anticipated treatment plan, and patient responsibilities. Educational information in [Appendix 9, Patient Information – Detoxification from Opiates \(Narcotics\)](#) should be used when appropriate. Treatment is aimed at reducing the signs and symptoms of withdrawal, and may or may not include the use of a substitute narcotic such as methadone. Specific treatment should always be determined by the condition of the individual inmate, and should be reviewed and approved by a physician. The following guidelines should be taken into consideration:

Methadone Treatment

The federal Narcotic Addict Treatment Act of 1974 restricts the use of methadone in the treatment of opiate dependence to facilities that are appropriately licensed as a Narcotic Treatment Program for maintenance or detoxification with methadone. Methadone can be provided without an institutional 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.

In accordance with the above requirements, methadone can be substituted for any other opiate. Because methadone has a long half-life, accumulation can occur over the first few days while a steady state is reached, which can result in an iatrogenic overdose and death due to respiratory depression.

Methadone used for opiate detoxification should ordinarily be administered in accordance with the following guidelines:

- 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.**
- 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 two to three days, then begin tapering the methadone at a rate of 10% per day.**
- Clonidine is usually given in conjunction with the methadone to minimize withdrawal symptoms.

Clonidine Treatment

Clonidine is an acceptable alternative for opiate detoxification and should be considered if the institution does not have a methadone license or when otherwise medically indicated. Clonidine is usually used together with other medications for symptomatic relief during detoxification. Clonidine will suppress many of the symptoms of withdrawal, including sympathetic hyperactivity, nausea, vomiting, diarrhea, cramps, and sweating; however, it has no effect on muscle or bone pain, insomnia, or severe drug craving.

Clonidine is ordinarily administered in accordance with the following guidelines:

- **Clonidine can cause hypotension and somnolence (increasing risk of injury), and is fatal in overdose.**
- Clonidine can be given in doses of 0.1–0.2 mg orally, three to four times daily. Directly observed therapy (pill line) is strongly encouraged. Crushing of the tablets should also be considered.
- Clonidine patches can be utilized in mild withdrawal cases and are left on for seven days.
- Vital signs should be carefully monitored before each dose of clonidine.
- Withhold clonidine if systolic BP drops below 90 mm Hg or if bradycardia develops.
- Maintain baseline clonidine dosing for two to three days; then, taper off over five to ten days.

Buprenorphine Treatment

Buprenorphine is a mixed agonist-antagonist agent. It can be used for maintenance therapy for opioid dependent patients, or for helping opioid-dependent patients achieve abstinence from opioids. Detoxification of inmates who have been using buprenorphine as maintenance therapy can be accomplished in an outpatient setting over several days. Tapering the patient will be accomplished by other opioid agents. A special license is required to prescribe buprenorphine. This medication is not routinely used in the BOP. Refer to the National BOP Formulary for current non-formulary use criteria for buprenorphine.

Adjunctive Treatments for Opiate Withdrawal

Symptomatic treatment for opiate withdrawal should be provided over five to ten days, using standard doses of the following medications unless otherwise contraindicated:

- Nonsteroidal anti-inflammatory agents are used for pain and fever.
- Antidiarrheals and anti-emetics are used to control gastrointestinal symptoms.
- Benzodiazepines are used for insomnia and restlessness.
- 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.

Many inmates with opiate dependence have experienced multiple episodes of withdrawal prior to incarceration, and are typically highly anxious during opiate withdrawal, even when symptoms are well-controlled. 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.

10. Cocaine/Stimulants

Inmates with a dependency on cocaine or other stimulants generally do not require treatment in an inpatient setting. The cessation of this substance does not always cause specific withdrawal symptoms. However, symptoms may be severe enough to require clinical intervention. 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. Inmates are treated symptomatically.

→ SAMHSA recommends that patients withdrawing from stimulants should be monitored closely for depression/suicidality, as well as prolonged QTc intervals and seizures, which may be additional complications of stimulant withdrawal. An EKG is recommended during cocaine withdrawal to monitor for cardiac complications.

11. Inhalants

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. Treatment is generally supportive, but in the case of an overdose, emergency support may be necessary, as well as increased observation to monitor vital signs.

Definitions

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.

Detoxification is the medically managed withdrawal of individuals from a substance on which they are physiologically dependent.

Kindling, a phenomenon in which the severity of withdrawal symptoms increases after repeated withdrawal episodes, is experienced by many alcoholics. 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.

Physiological dependence exists if a physiological withdrawal syndrome develops when a medication, drug, 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 dependence developing.

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 dependence 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. The terms *substance dependence* and *addiction* are used interchangeably.

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. ***Thiamine is a cofactor in normal glucose metabolism and should be administered before the administration of glucose.*** 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 signs and symptoms 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. Detoxification Overview

This chart is designed to be used only as a quick reference guide. For complete information, see the indicated section in these guidelines.

Substance <i>(section in guidelines)</i>	Monitoring	Primary Treatment	Severity of Withdrawal	Hospitalization?
Alcohol (Section 6)	<i>CIWA-Ar Score:</i> as frequently as every hour	Lorazepam Thiamine	Low to high; can be fatal	As needed for moderate to severe withdrawal
Benzodiazepines (Section 7)	<i>Vital Signs:</i> three times a day for 3 days	Clonazepam	Low to high; can be fatal	As needed for late withdrawal
Barbiturates (Section 8)	<i>Vital Signs:</i> three times a day for 3 days	Phenobarbital	Low to high; can be fatal	As needed for late withdrawal
Opiates (Section 9)	<i>Vital Signs:</i> daily; more often if clonidine used	Methadone Clonidine Symptomatic	Low to high	Usually not necessary
Cocaine (Section 10)	<i>Vital Signs:</i> as needed	Symptomatic	Low to high	Usually not necessary

Appendix 2. Alcohol Withdrawal Assessment and Treatment Flowsheet

Guidelines for using the *Alcohol Withdrawal Assessment and Treatment Flowsheet*:

- 1.** The CIWA-Ar scale is the most sensitive tool for assessing a patient who is experiencing alcohol withdrawal. Early intervention for a **CIWA-Ar score of 8 or greater** provides the best means of preventing the progression of withdrawal.
- 2.** Use the attached *Alcohol Withdrawal Assessment and Treatment Flowsheet* to document the patient's vitals and CIWA-Ar scores, as well as the administration of PRN medications.
- 3.** Follow the **Assessment Protocol** shown at the top of the flowsheet. Record the date, time, vitals, and the CIWA-Ar ratings and Total Score each time the patient is assessed.
- 4.** 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," which is rated on a scale from 0 to 4). The clinician can select any rating from 0 to 7 (or 0 to 4, in the case of "Orientation"), even for criteria where not every number on the rating scale is defined.

Assessment Protocol 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.	Date								
	Time								
	Pulse								
	RR								
	O ₂ sat								
	BP								

Use the CIWA-Ar Scale to assess and rate each of the following 10 criteria.

Nausea/Vomiting: Rate on scale of 0–7. 0 - none; 1 - mild nausea, no vomiting; 4 - intermittent nausea; 7 - constant nausea, frequent dry heaves and vomiting									
Tremors: 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									
Anxiety: 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									
Agitation: Rate on scale of 0–7. 0 - normal activity; 1 - somewhat normal activity; 4 - moderately fidgety and restless; 7 - constantly paces or thrashes about									
Paroxysmal Sweats: 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									
Orientation & Clouding of Sensorium: 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									
Tactile Disturbances: 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									
Auditory Disturbances: 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									
Visual Disturbances: 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									
Headache: 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									
Total CIWA-Ar Score: (8–9 = mild withdrawal; 10–15 = moderate withdrawal; >15 = severe withdrawal)									

Indications for PRN Medication: Please follow the protocol in BOP *Clinical Practice Guidelines for Detoxification of Chemically Dependent Inmates* for use of lorazepam and other medications for withdrawal. See [Table 2](#) and Section 6 on [Alcohol Withdrawal](#).

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

Inmate Name _____
 Reg No. _____
 Date of Birth ____/____/____
 Institution _____

Signature/Title	Initials	Signature/Title	Initials

Appendix 3: Symptoms and Signs of Drug Abuse*

Drug	Acute Intoxication and Overdose	Withdrawal Syndrome
Hallucinogens LSD ¹ ; psilocybin; mescaline; PCP ² ; STP ³ ; MDMA ⁴ ; Bromo- DMA ⁵	Pupils dilated (normal or small with PCP); BP elevated, heart rate increased, tendon reflexes hyperactive; temperature elevated; face flushed; euphoria, anxiety or panic; paranoid thought disorder; sensorium often clear; affect inappropriate; time/visual distortions; visual hallucinations; depersonalization <i>With PCP:</i> drooling, blank stare, mutism, amnesia, analgesia, nystagmus (sometimes vertical), ataxia, muscle rigidity, impulsive/often violent behavior.	None
CNS Stimulants amphetamines; cocaine; methylphenidate; phenmetrazine; phenylpropanolamine; most anti-obesity drugs	Pupils dilated and reactive; respiration shallow; BP elevated; heart rate increased; tendon reflexes hyperactive; temperature elevated; cardiac arrhythmias; dry mouth; sweating; tremors; sensorium hyperacute or confused; paranoid ideation; hallucinations; impulsivity; hyperactivity; stereotypy; convulsions; coma	Muscular aches; abdominal pain; chills, tremors; voracious hunger; anxiety; prolonged sleep; lack of energy; profound psychological depression, sometimes suicidal; exhaustion
Cannabis Group marijuana; hashish; THC ⁶ ; hash oil	Pupils unchanged; conjunctiva injected; BP decreased on standing; heart rate increased; increased appetite; euphoria, anxiety; sensorium often clear; dreamy, fantasy state; time-space distortions; hallucinations rare	Nonspecific symptoms including anorexia, nausea, insomnia, restlessness, irritability, anxiety
Opioids heroin; morphine; codeine; meperidine; methadone; hydromorphone; opium; pentazocine; propoxyphene	Pupils constricted (may be dilated with meperidine or extreme hypoxia); respirations depressed; BP decreased, sometimes shock; temperature decreased; reflexes diminished to absent; stupor or coma; pulmonary edema; constipation; convulsions with propoxyphene or meperidine	Pupils dilated; pulse rapid; gooseflesh; abdominal cramps; muscle jerks; "flu" syndrome; vomiting, diarrhea; tremulousness; yawning; anxiety
CNS Sedatives barbiturates; benzodiazepines; glutethimide; meprobamate; methaqualone	Pupils in mid position and fixed (but dilated with glutethimide or in severe poisoning); BP decreased, sometimes shock; respiration depressed; tendon reflexes depressed; drowsiness or coma; nystagmus; confusion; ataxia, slurred speech; delirium; convulsions or hyper-irritability with methaqualone overdosage; serious poisoning rare with benzodiazepines alone	Tremulousness; insomnia; sweating; fever; clonic blink reflex; anxiety; cardiovascular collapse; agitation; delirium; hallucinations; disorientation; convulsions; shock
Anticholinergics atropine; belladonna; henbane; scopolamine; trihexyphenidyl; benztropine mesylate; procyclidine; propantheline bromide	Pupils dilated and fixed; heart rate increased; temperature elevated; decreased bowel sounds; drowsiness or coma; flushed, dry skin and mucous membranes, sensorium clouded; amnesia; disorientation, visual hallucinations; body image alterations; confusion	Gastrointestinal and musculoskeletal symptoms
¹ LSD = d-lysergic acid diethylamide ² PCP = phencyclidine ³ STP = 2,5-dimethoxy-4-methylamphetamine	⁴ MDMA = 3,4 methylenedioxymethamphetamine ⁵ Bromo-DMA = 4-Bromo-2,5-dimethoxyamphetamine ⁶ THC = delta-9-tetrahydrocannabinol	
<p>*Mixed intoxications produce complex combinations of signs and symptoms.</p>		

Appendix 4: 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 (<i>Xanax</i>)	0.5–1	6–15
Chlordiazepoxide (<i>Librium</i>)	25	24–48
Clonazepam (<i>Klonopin</i>)	1–2	30–40
Clorazepate (<i>Tranxene</i>)	7.5–15	30+
Diazepam (<i>Valium</i>)	10	20–50
Estazolam (<i>ProSom</i>)	1	10–24
Flurazepam (<i>Dalmane</i>)	15–30	50–200
Lorazepam (<i>Ativan</i>)	1–2	10–20
Oxazepam (<i>Serax</i>)	10–30	5–10
Temazepam (<i>Restoril</i>)	15–30	3–20
Triazolam (<i>Halcion</i>)	0.25	1–5
Zolpidem (<i>Ambien</i>)	10–20	2–5

Reference: Weaver MF. Treatment of sedative-hypnotic drug abuse in adults. *UpToDate*. 2009;17.1.

Appendix 5: 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 and detoxification.

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

Generic Name (Trade Name)	Equivalent Dose (mg)
Barbiturates	
Amobarbital (<i>Amytal</i> , others)	100
Butobarbital (many combinations)	100
Butalbital (<i>Fiorinal</i> , others)	100
Pentobarbital (<i>Nembutal</i> , others)	100
Phenobarbital (<i>Donnatal</i> , others)	30
Secobarbital (<i>Seconal</i> , others)	100
Barbiturate-Like Drugs	
Chloral Hydrate (many)	250–500
Ethchlorvynol (<i>Placidyl</i>)	200–500
Glutethimide (<i>Doriden</i> , others)	250
Meprobamate (<i>Miltown</i> , others) (see note above)	400
Methaqualone (<i>Quaalude</i> , others)	300

Reference: Weaver MF. Treatment of sedative-hypnotic drug abuse in adults. *UpToDate*. 2009;17.1.

Appendix 6: Patient Information – Detoxification from Alcohol

Your medical team has determined that you will need medical care in order to 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 impossible to know what symptoms of alcohol withdrawal any one person will experience. 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 rare cases, death.

What kind of medical care will you get?

Alcohol withdrawal can be safely managed with medical help. 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 (Ativan) 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 very important to take it on schedule. In fact, 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.

Help yourself leave alcohol behind:

- 1. Be honest about your use of alcohol and other substances.** This will help assure the best treatment for you.
- 2. Immediately report any unusual symptoms** to your medical team, such as 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. Meet with psychology staff about other treatment options** such as drug treatment, 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 will continue for weeks or perhaps months. Be sure to seek help from medical and psychology staff if you find your symptoms to be troublesome.

Appendix 7: Patient Information – Detoxification from Benzodiazepines

Your medical team has determined that you will need medical care in order to 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 taking benzodiazepines in an abusive pattern, 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 impossible to know what symptoms of benzodiazepine withdrawal any one person will experience. 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 rare cases, death.

Benzodiazepine withdrawal can be safely managed with medical help. You may be given the same medication 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 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 assure the best treatment for you.
- 2. Immediately report any unusual symptoms** to your medical team, such as 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. Meet with psychology staff about other treatment options** such as drug treatment, 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 will continue for weeks or perhaps months. Be sure to seek help from medical and psychology staff if you find your symptoms to be troublesome.

Appendix 8: Patient Information – Detoxification from Barbiturates

Your medical team has determined that you will need medical care in order to 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 taking barbiturates in an abusive pattern, 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 impossible to know what symptoms of barbiturate withdrawal any one person will experience. 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 rare cases, death.

Barbiturate withdrawal can be safely managed with medical help. 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 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 assure the best treatment for you.
- 2. Immediately report any unusual symptoms** to your medical team, such as 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. Meet with psychology staff about other treatment options** such as drug treatment, 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 will continue for weeks or perhaps months. Be sure to seek help from medical and psychology staff if you find your symptoms to be troublesome.

Appendix 9: Patient Information – Detoxification from Opiates (Narcotics)

Your medical team has determined that you will need medical care in order to safely withdraw from opiates. 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 opiates is only the first step towards a healthy life style. If you have been prescribed opiates for a medical condition, your medical team will develop a new treatment plan for your condition that does not require the use of addictive medications. If you have been taking opiates in an abusive pattern, 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 impossible to know what symptoms of opiate withdrawal any one person will experience. So much depends on your own physical condition. If you had problems when you stopped taking opiates before, you are likely to have at least some of those same symptoms again. The symptoms of opiate 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.

Opiate withdrawal can be safely managed with medical help. To determine what medications you need, and how much, your medical team will be examining you regularly for signs of withdrawal. Medications such as methadone or clonidine may be used to help with some of the symptoms. Clonidine is usually used to reduce your blood pressure and heart rate, as well as help with nausea, vomiting, diarrhea, cramps, and sweating. You may be given other medications to help with bone and muscle pain, nausea, diarrhea, and insomnia.

If clonidine is prescribed for you, it is *very* important to take it on schedule. In fact, you must take all of your medications just as prescribed in order to reduce the considerable discomfort caused by opiate withdrawal. Even with effective treatment you are likely to experience some withdrawal symptoms. Your medications will be provided through pill line. If you miss a dose, let the medical staff know immediately.

Help yourself leave narcotics behind:

- 1. Be honest about your use of opiates and other substances.** This will help assure the best treatment for you.
- 2. Immediately report any unusual symptoms** to your medical team, such as 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. Meet with psychology staff about other treatment options** such as drug treatment, 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 will continue for weeks or months. Be sure to seek help from medical and psychology staff if you find your symptoms to be troublesome.