

**FEDERAL BUREAU OF PRISONS  
CLINICAL PRACTICE GUIDELINES  
DETOXIFICATION OF CHEMICALLY DEPENDENT INMATES  
DECEMBER, 2000**

**PURPOSE**

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

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## **DEFINITIONS**

**Comprehensive Serum Chemistry Panel** includes at least 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 drug or substance thus avoiding the development of a withdrawal syndrome.

**Detoxification** is the management of the withdrawal syndrome associated with discontinuation of the intake of a substance upon which an individual is physiologically dependent.

**Physiological dependence** exists if a physiological withdrawal syndrome develops upon discontinuation of a medication, drug or other substance. Individuals may develop physiological dependence without developing pathological substance dependence, (i.e. taking benzodiazepines as prescribed for a psychiatric condition for a prolonged period can lead to physiological dependence without the development of other symptoms of substance dependence).

**Substance** refers to any chemical that is mood or mind-altering and can include street drugs, inhalants, medications-prescription and over-the-counter, 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-IV) in spite of serious social, financial, emotional, behavioral or physical consequences. Physiological dependence may or may not develop in individuals who are substance dependent. 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-IV).

**Withdrawal syndrome** is the characteristic group of signs and symptoms that typically develop after a rapid, marked decrease or discontinuation of a substance upon which an individual is dependent. The severity and duration of the withdrawal syndrome depends on several factors including the nature of the substance used, the half-life and duration of action of the substance, the length of time the substance has been used, the amount used, the use of other substances, the presence of other medical and psychiatric conditions and other individual biopsychosocial variables.

## INTRODUCTION

Substance use disorders are a significant and expensive public health problem that not only negatively affect the substance abuser and their families, but all of society through increases in crime, domestic violence, highway fatalities, rates of incarceration, and increases in associated health care costs. Any substance which alters perception, mood or cognition can be abused. Commonly identified substances of abuse include illicit drugs, alcohol, and certain prescription drugs that 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, such as tricyclic antidepressants, antiparkinsonian agents, low potency antipsychotics, antiemetics, and cold and allergy preparations.

The development of dependence depends on the nature of the substance used, its route of use, the amount and frequency of use, the presence of co-morbid psychiatric disorders and other biopsychosocial factors, as well as genetic and environmental factors. Approximately 15% of all regular users of substances develop substance dependence.

Substance abuse disorders are highly prevalent among inmate populations affecting an estimated 30% to 60% of inmates. Drug intoxication and withdrawal may be particularly evident at the time of incarceration. The Bureau of Justice Statistics reports that in 1998, an estimated 70% of all inmates in local jail facilities in the U.S. had committed a drug offense or used drugs regularly; and 35% of all inmates in local jails were under the influence of drugs at the time of the offense.

## PROCEDURES

### **1. GENERAL PRINCIPLES: 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 new inmate arrivals at their institutions.** A careful inmate history and clinical assessment are essential. Substance abusers are rarely accurate in their description of patterns of drug use and can either greatly underestimate or deny substance abuse as well as overstate the extent of abuse. Most individuals who abuse substances abuse multiple substances. Therefore, the possibility of more than one addiction must be

carefully considered, particularly since intoxication from multiple drugs will complicate treatment of the withdrawal syndrome. An overview of the clinical presentations of substance abusers is listed in Appendix 1, Signs and Symptoms of Drug Abuse.

- **NOTE: Not all substances of abuse produce clinically significant withdrawal syndromes.** Discontinuation of the substances upon which an individual is dependent, however, will always 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 reassessments by health care providers.**

- **The intensity of withdrawal cannot always be predicted accurately.** The addictive nature of a substance is dependent upon many factors including the physiology, psychology and neurochemistry of the individual using the substance as well as characteristics of the substance itself. Generally those substances which are high potency, quickly cross the blood-brain barrier, have a short half-life and produce a significant change in the neurochemistry of the brain are the most addictive substances. These very characteristics also tend to make a slow and safe withdrawal from the substance more difficult, especially if the substance of abuse is used as the treatment agent in the detoxification process. **Frequent clinical assessments along with indicated treatment adjustments (changes in medication doses and dosage frequencies) are imperative.**

- **Substances which produce dangerous withdrawal syndromes once physiological dependence develops include alcohol, sedative/hypnotics and anxiolytics.** Withdrawal from narcotics is not generally considered dangerous (except for pregnant women and the medically debilitated), but does entail significant suffering which can be markedly reduced with symptomatic treatment.

- **Whenever possible, clinicians should substitute a long-acting medication for short-acting drugs of addiction.** The principles of a safe withdrawal plan include, when feasible, the substitution of a long acting, cross-tolerant substance and the gradual tapering of that substance, no 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 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 before initiating withdrawal.

**- During detoxification, providers should control inmates' access to the prescribed medication regimen to the greatest extent possible.** Overdose with either the prescribed medication or other drugs is always a possibility. In addition to dispensing controlled medications at pill line, consideration should be given to dispensing ancillary medications used to control symptoms, such as clonidine, by direct observation. Inmates should be counseled on the harmful effects of supplementing their detoxification regimen 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 for the development of psychiatric symptoms such as depression, suicidal thinking and underlying psychosis. Inmates should be considered for follow-up psychologic support through group therapy, individual counseling, 12-step recovery meetings, or similar programs. These services provide alternative methods of coping with stresses that trigger alcohol or drug abuse. Psychology staff can also determine whether referrals to drug education, or nonresidential or residential drug treatment programs are indicated.

## **2. MANAGEMENT OF INMATES WITH COMPLICATING MEDICAL AND PSYCHIATRIC CONDITIONS**

Careful consideration should be given to inmates with co-morbid medical and psychiatric conditions, since they are at greater risk for severe withdrawal and associated 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. Patients with pre-existing seizure disorders will be more susceptible to seizures as 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 indicated for these inmates).

- **Liver and kidney disease:** Inmates with liver or renal disease may have slower metabolism of drugs and medications and so will require closer monitoring for drug toxicity and possible adjustments when tapering treatment regimens.

- **Psychiatric disorders:** Inmates with pre-existing psychiatric conditions may suffer an exacerbation of their illness during detoxification. A collaborative treatment effort from psychology and psychiatry staff is warranted for management of these inmates. Inmates without pre-existing psychiatric illness may also experience significant symptoms of psychological distress during detoxification, including the development of suicidal ideation, plan, and intent. A careful assessment of the inmate's mental status with 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 are no less likely to suffer a severe withdrawal syndrome. Detoxification in the elderly is further complicated by the greater need for prescription drugs and the potential for drug-drug interactions, the greater risk of drug toxicity from slower drug metabolism, and the frequent presence 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 weighed against the risks of detoxification. Pregnant women on methadone should ordinarily not be detoxified as this increases the risk of miscarriage and premature labor. Pregnant women should generally be maintained on their medications throughout

their pregnancy, but should always be managed on a case by case basis in close consultation with an obstetrical specialist. Pregnant women with alcohol dependence should ordinarily be managed in an inpatient setting due to the risk of miscarriage with detoxification.

- **Short stay inmates:** Inmates with short sentences or lengths of stay thirty days or less should **not** generally be detoxified off of benzodiazepines or barbiturates. However, opiate detoxification can be safely completed in less than 2 weeks, and alcohol detoxification is always a necessity for inmates presenting with alcohol dependence or withdrawal.

### **3. PLACEMENT OF INMATES FOR DETOXIFICATION**

Detoxification can be safely and effectively accomplished while an inmate is in a variety of housing placements including locked jail units, general population, observation cells in the health services unit (if medically an outpatient), in a Special Housing Unit, or when necessary as an inpatient in a community hospital or Medical Referral Center. The specific housing placement should be determined on a case by case basis in accordance with BOP policy and through the multidisciplinary recommendations of 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 the timely provision of medications, the necessary medical assessments, and ongoing monitoring must be provided. 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: inpatient detoxification; or medical stabilization and maintenance with postponement of attempts at detoxification.

### **4. ALCOHOL WITHDRAWAL**

#### **Diagnosis (Alcohol Withdrawal)**

**Screening:** Screening all inmates for a history of alcohol abuse at admission to an institution is the initial step in the diagnosis of alcohol dependence. Inmates presenting with alcohol intoxication should be presumed to have alcohol dependence 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, 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, however a history of previous problems with withdrawal indicates a high probability of a similarly severe withdrawal syndrome in the future. Persons with a high blood alcohol level (>100 mg/dL) with concurrent signs of withdrawal are at particularly high risk for a severe withdrawal syndrome.

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. Mortality from *delirium tremens* is markedly reduced to 1% or less with appropriate, intensive treatment. Uncomplicated alcohol withdrawal is generally completed within 5 days.

**Patient evaluation:** A careful patient history and physical examination by a clinician is indicated for all inmates suspected of clinically significant alcohol use that includes the following:

- An assessment of 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 dependence is suspected, further inmate history should include in part: other substances used, signs and symptoms of gastritis or gastrointestinal hemorrhage, history of trauma, (especially head trauma), liver disease, pancreatitis, psychiatric illness, and suicidal ideation.
- Physical examination is necessary to evaluate the inmate for the aforementioned conditions as well as for assessment of vital signs, cardiac and lung disease, and review of neurologic and mental status.

- Laboratory evaluation should include a complete blood count, comprehensive serum chemistry panel, urine toxicology (for medical, not correctional reasons) 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 of this test should be obtained and assessed, since the information is clinically relevant.
- **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).**

#### **Treatment (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. Inmate information materials in Appendix 4, Inmate Patient Information: Detoxification from Alcohol, should be used when appropriate. Specific treatment strategies for alcohol withdrawal should be individualized based on the condition of the inmate and should be reviewed and approved by a physician while considering the following guidelines:

**Thiamine replacement:** All inmates with suspected alcohol dependence should be treated with thiamine, 100 mg orally or intramuscularly, daily for at least 10 days. Thiamine should always be administered to persons with alcohol intoxication prior to parenteral glucose, since glucose infusions given alone can precipitate Wernicke's disease and severe cardiovascular complications associated with thiamine deficiency. Wernicke's encephalopathy is characterized by ophthalmoplegia, ataxia and confusion, and is often undetected and under-diagnosed. Left untreated it can advance to Korsakoff's syndrome (alcohol amnestic syndrome) that is associated with significant morbidity and is fatal in 15-20% of cases.

**Benzodiazepine therapy:** The use of benzodiazepines is the mainstay of alcohol withdrawal treatment in the correctional setting. The use of symptom-triggered therapy in conjunction with validated assessment scales such as the Clinical Institute Withdrawal Assessment of Alcohol, revised (CIWA-Ar), (BP-S708.060) has been shown to result in the use of less medication with comparable outcomes to fixed dosing detoxification schedules.

Benzodiazepine treatment should be based on the CIWA-Ar score whenever feasible and in accordance with the following guidelines:

-CIWA-Ar score **less than 8-10 = Mild withdrawal:** Supportive, nonpharmacologic therapy and close monitoring are indicated.

-CIWA-Ar score of **10-15 = Moderate withdrawal:** Medication (lorazepam) is indicated to reduce symptoms and the risk of major complications.

-CIWA-Ar score of **15 or greater = Severe withdrawal:** For those inmates who exhibit severe symptoms, strong consideration should be given to hospitalization, as these patients are at increased risk for serious complications.

Lorazepam is the recommended medication for managing alcohol withdrawal in most inmates. Lorazepam does not require cytochrome oxidation for metabolism and so its clearance is not impaired by liver disease, a common co-morbidity for inmate populations. Other benzodiazepines such as chlordiazepoxide, diazepam, and clonazepam are metabolized in the liver and can accumulate in individuals who are slow metabolizers or have liver disease. Lorazepam can also be administered orally, intravenously, and intramuscularly, unlike diazepam and chlordiazepoxide which should never be given intramuscularly because of erratic absorption.

The recommended treatment schedule for alcohol withdrawal includes the following parameters:

**Mild withdrawal (CIWA-Ar 8 to 10):**

- If the CIWA-Ar is less than 8 to 10, repeat the assessment every 4 to 8 hours until the score has remained less than 8 to 10 for 24 hours without medication.

-Inmates with **co-morbid cardiovascular conditions** (hypertension, angina, congestive heart failure, history of myocardial infarction or stroke) should be considered for

medication with lorazepam even if they are exhibiting only mild symptoms of withdrawal. Suggested initial regimen:

Days 1 and 2: Lorazepam 1-2 mg three times daily

Days 3 and 4: Lorazepam 1-2 mg twice daily

Day 5: Lorazepam 1-2 mg, one dose only (AM or HS)

**-Inmates with co-morbid cardiovascular conditions should be assessed with the CIWA-Ar three times daily during the above regimen, and for 24 hours after the last dose. If the CIWA-Ar score exceeds 8 to 10 at any time, follow the steps outlined below under "Moderate withdrawal."**

-The dose of lorazepam may also need to be **decreased** if assessments reveal somnolence, ataxic gait, slurred speech or other signs of medication intoxication.

**Moderate withdrawal (CIWA-Ar 10 to 15):**

- Administer lorazepam every hour while the CIWA-Ar score is greater than 8 to 10 as follows:

1. Administer lorazepam 2 to 4 mg IM, PO or IV
2. Repeat the CIWA-Ar score in one hour (90 minutes if giving orally)
3. Repeat lorazepam 2-4 mg every 60 to 90 minutes until the CIWA-Ar score is less than 8 to 10, then discontinue lorazepam
4. Monitor the inmate every 4 to 8 hours using the CIWA-Ar until the score has remained less than 8 to 10 for 24 hours. If the score rises again within this 24 hour period, repeat steps 1 through 3.

**Severe withdrawal (CIWA-Ar greater than 15):**

-Hospitalization for inpatient detoxification and monitoring is strongly suggested. Lorazepam is administered according to the same schedule as above under "Moderate Withdrawal."

**History of alcohol withdrawal seizures:**

-Generally, these inmates will present with signs and symptoms of moderate to severe withdrawal and should be treated as outlined above, by following the CIWA-Ar score.

-If the CIWA-Ar score is less than 8 to 10 at the time of initial assessment, inmates who give a history of alcohol withdrawal seizures should be medicated with lorazepam using the following suggested regimen:

Days 1 and 2: Lorazepam 2 mg three times daily  
Days 3 and 4: Lorazepam 2 mg twice daily  
Day 5: Lorazepam 2 mg, one dose only (AM or HS)

**-Inmates should be assessed with the CIWA-Ar three times daily during the above regimen, and for 24 hours after the last dose. If the CIWA-Ar score exceeds 8 to 10 at any time, follow the steps outlined above under "Moderate withdrawal."**

-The dose of lorazepam may also need to be **decreased** if assessments reveal somnolence, ataxic gait, slurred speech or other signs of medication intoxication.

-Do not give anti-seizure medications unless the inmate also has an underlying seizure disorder.

#### **Adjunctive Treatments (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.

- 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. **The use of clonidine will mask the symptoms of withdrawal and artificially lower the CIWA-Ar score without decreasing the risk for seizures or delirium tremens.** In addition, clonidine is fatal in overdose, and patients in active substance withdrawal are at increased risk of suicide. Therefore extra care is warranted, including monitoring inmates for thoughts of self-harm, and limiting prescriptions to pill line with direct observation.

- Anti-seizure medications generally have no use in the treatment of alcohol withdrawal except in those individuals with underlying seizure disorders. In those 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 and electrolytes.

- Individuals with alcohol dependence frequently suffer from malnutrition. Supplementation with a daily multivitamin is advisable if malnutrition is suspected.

- Hypomagnesemia may develop during alcohol withdrawal, however, magnesium supplementation has not proven to be medically necessary, and therefore is not routinely recommended.

## **5. BENZODIAZEPINE WITHDRAWAL**

### **Diagnosis (Benzodiazepine Withdrawal)**

Benzodiazepine withdrawal syndrome can begin within a few hours of last drug use, especially in the context of use of 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 benzodiazepine dependence is diagnosed through a careful determination of type of medications used, length of time used, amount used, reasons for use, symptoms that occur when doses are missed or medication has been discontinued, and date and amount of drug last used. **Unlike alcohol dependence, benzodiazepine dependence can be a physiological phenomenon that occurs 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 have been previously prescribed these medications to treat an Axis I or Axis II diagnosis. Previously treated psychiatric symptoms are likely to recur during detoxification from benzodiazepines. Therefore, a full psychological or psychiatric evaluation is indicated when the inmate has developed drug dependence while taking prescribed benzodiazepines. Subclinical signs of withdrawal (e.g. insomnia and anxiety) may take months

to years to resolve. Treatment of these symptoms with a nonaddictive medication is usually advisable before the symptoms dominate the clinical picture. Delaying detoxification until the inmate has been on a therapeutic dose of an antidepressant or other appropriate medication for several weeks may be necessary.

The withdrawal syndrome from benzodiazepines is similar to that of alcohol and barbiturates. The time course varies depending on the half-life of the substance used. In addition, individuals with benzodiazepine dependence often concurrently abuse alcohol, thus complicating their withdrawal course.

### **Signs and Symptoms of Benzodiazepine Withdrawal**

No objective measure or scoring system has been validated to assess benzodiazepine withdrawal. Do **not** use the CIWA-Ar for assessing benzodiazepine withdrawal.

**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.**

Inmates with suspected benzodiazepine withdrawal should be evaluated by a clinician including 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, not correctional reasons) and a pregnancy test for women.

### **Treatment (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. They can accumulate and cause excessive sedation or intoxication, so careful monitoring, especially in the initial stages of changing the inmate to the longer acting medication, is necessary.

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. Inmate information materials in Appendix 5, Inmate Patient Information: Detoxification from Benzodiazepines, should be used when appropriate. Specific treatment strategies for benzodiazepine withdrawal should be individualized based on the condition of the inmate and should be reviewed and approved by a physician while considering the following guidelines:

- **Clonazepam treatment:** Clonazepam is a high potency medication with a half life of greater than 24 hours, and is well tolerated and easy to administer. Clonazepam can be substituted for other benzodiazepines, according to its dose equivalencies listed in Appendix 2, Benzodiazepine Dose Equivalents, and is generally begun on a three times a day schedule. Individuals will metabolize clonazepam at different rates, therefore the dose equivalencies will not hold for all inmates and must be individualized based on the inmate's response. As in alcohol withdrawal, sympathetic hyperactivity is an early sign of benzodiazepine withdrawal and control of these symptoms is accomplished with adequate dosing of the cross-tolerant medication.
  
- **Monitoring:** The inmate should be examined for withdrawal symptoms, and vital signs should be monitored at least every 8 hours during the first 3 days of treatment. If the inmate becomes over-sedated or intoxicated the dose can be lowered until the inmate is more alert, but vital signs should remain in the normal range. Stabilization may take 2 to 3 days on the new medication. Once stable, the clonazepam can be given in a twice daily dosing schedule and 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. Inpatients should continue to be evaluated for withdrawal symptoms every 8 hours throughout the tapering schedule. For outpatients, the medication should not be tapered more quickly than 10% every

three to five days. 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 due to the development of anxiety and insomnia. These symptoms can continue for many months after detoxification has been safely completed and referral to psychological services for supportive care as well as stress management, sleep hygiene and relaxation training may be helpful during or 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 (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 such as propranolol and alpha-2 adrenergic medications such as clonidine have sometimes been used to attenuate the sympathetic hyperactivity associated with benzodiazepine withdrawal. However, these drugs are not routinely recommended, since they will mask the very symptoms that signal inadequate dosage of the cross-tolerant medication, placing the inmate at increased risk for development of severe withdrawal. If the inmate is already on the medication for other medical conditions, such as hypertension, increased vigilance is necessary to prevent the development of severe withdrawal symptoms.

- Anti-seizure medications are not generally indicated to treat withdrawal from benzodiazepines. Carbamazepine has been shown to have some efficacy in treatment of benzodiazepine withdrawal, but has many drug-drug interactions, 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.

## **6. BARBITURATE WITHDRAWAL**

### **Diagnosis/Sign and Symptoms (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.

- **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.**

#### **Treatment (Barbiturate Withdrawal)**

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

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. Inmate information materials in Appendix 6, Inmate 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 individualized based on the condition of the inmate and be reviewed and approved by a physician while considering the following guidelines:

- Substitute phenobarbital for the drug of abuse in equivalent doses as per Appendix 3, Barbiturate Dose Equivalents.
- Administer phenobarbital on a four times a day schedule
- Stabilize the inmate on the baseline dose for 3 days, followed by tapering no faster than 10% every 3 to 5 days

- Assess the inmate's condition and vital signs at least every 8 hours during the first 3 days of treatment, then at least every day for the first week, then as the inmate's condition dictates
- Consider slowing the taper toward the end of the withdrawal schedule for outpatients
- Inpatients may be tapered as quickly as 10% of their drug dosage per day

Beta-blockers and clonidine will mask withdrawal symptoms and complicate management. Inmates with seizure disorders should have anti-seizure medications maintained in the therapeutic range and have blood levels checked frequently throughout the detoxification process.

### **Adjunctive Treatments (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.

## **7. OPIATE WITHDRAWAL**

### **Diagnosis/Signs and Symptoms (Opiate Withdrawal)**

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; and 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 should be based 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. Inmates with opiate dependence often express significant fear and anticipatory anxiety regarding detoxification. 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, severe muscle and bone pain.

### **Treatment (Opiate Withdrawal)**

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. Inmate information materials in Appendix 7, Inmate Patient Information: Detoxification from Opiates, 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 individualized based on the condition of the inmate, and should be reviewed and approved by a physician while considering the following guidelines:

**Methadone Treatment:** Federal and state laws restrict the use of methadone in the treatment of opiate dependence to facilities

that are licensed for short-term or long-term outpatient detoxification with methadone, or inpatient detoxification with other drugs. Methadone can be provided without an institutional license for up to three days while arranging for an appropriate referral to a licensed facility. If however, an inmate has other medical conditions that warrant chronic treatment with opiates, methadone can be provided without a methadone license.

Methadone can be substituted for any other opiate. Methadone has a long half-life so accumulation can occur over the first few days while a steady state is reached. Methadone detoxification should ordinarily be administered in accordance with the following guidelines:

- Methadone can be given in doses of 5 to 10 mgs orally every 4 to 6 hours as needed to control objective signs of withdrawal
- Frequent monitoring for respiratory depression and over sedation is necessary until the inmate is stabilized
- Once signs of withdrawal are controlled the inmate is stabilized over 2 to 3 days and the methadone is then tapered 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. Detoxification includes clonidine along with other medications for symptomatic relief. Clonidine will suppress many of the symptoms of withdrawal including sympathetic hyperactivity, nausea, vomiting, diarrhea, cramps and sweating, but has no effect on muscle or bone pain, insomnia or severe drug craving that accompanies withdrawal. Clonidine is ordinarily administered in accordance with the following guidelines:

- Clonidine can be given in doses of 0.1 to 0.2 mg orally four times daily. Directly observed therapy (pill line) is strongly encouraged
- Vital signs should be carefully monitored before each dose of clonidine
- Hold clonidine if the systolic blood pressure drops below 90 mmHg or if bradycardia develops

- Maintain baseline clonidine dosing for 2 to 3 days and then taper off over 5 to 10 days
- Note: **Clonidine can cause hypotension and somnolence (risk of injury increases) and is fatal in overdose.**

### **Adjunctive Treatments (Opiate Withdrawal)**

Symptomatic treatment for opiate withdrawal should be provided over 5 - 10 days using standard dosages of the following medications unless otherwise contraindicated:

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

Inmates with opiate dependence have often experienced multiple episodes of withdrawal prior to incarceration, and are typically highly anxious while withdrawing from opiates 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.

### **ATTACHMENTS**

- Appendix 1: Symptoms and Signs of Drug Abuse
- Appendix 2: Benzodiazepine Dose Equivalents
- Appendix 3: Barbiturate Dose Equivalents
- Appendix 4: Inmate Patient Information: Alcohol Detoxification
- Appendix 5: Inmate Patient Information: Benzodiazepine Detoxification
- Appendix 6: Inmate Patient Information: Barbiturate Detoxification
- Appendix 7: Inmate Patient Information: Opiate Detoxification
- Appendix 8: Provider Self-Assessment: Detoxification of Chemically Dependent Inmates

## Symptoms and Signs of Drug Abuse

Drug	Acute Intoxication and Overdose	Withdrawal Syndrome
<b>Hallucinogens</b> LSD <sup>①</sup> ; psilocybin; mescaline; PCP <sup>②</sup> ; STP <sup>③</sup> ; MDMA <sup>④</sup> ; Bromo-DMA <sup>⑤</sup>	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; with PCP: drooling, blank stare, mutism, amnesia, analgesia, nystagmus (sometimes vertical), ataxia, muscle rigidity, impulsive/often violent behavior	None
<b>CNS Stimulants</b> 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
<b>Cannabis Group</b> marijuana; hashish; THC <sup>⑥</sup> ; 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
<b>Opioids</b> heroin; morphine; codeine; meperidine; methadone; hydromorphone; opium; pentazocine; propoxyphene	Pupils constricted (may be dilated with meperidine or extreme hypoxia); respiration 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
<b>CNS Sedatives</b> 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 overdose; serious poisoning rare with benzodiazepines alone	Tremulousness; insomnia; sweating; fever; clonic blink reflex; anxiety; cardiovascular collapse; agitation; delirium; hallucinations; disorientation; convulsions; shock
<b>Anticholinergics</b> 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

\*Mixed intoxications produce complex combinations of signs and symptoms

①LSD (d-lysergic acid diethylamide)  
②PCP (phencyclidine)  
③STP (2,5-dimethoxy-4-methylamphetamine)

④MDMA (3,4 methylenedioxymethamphetamine)  
⑤Bromo-DMA (4-Bromo-2,5-dimethoxyamphetamine)  
⑥THC (delta-9-tetrahydrocannabinol)

### Benzodiazepine Dose Equivalents

Dose equivalencies are only estimates. Many individual factors affect the metabolism of benzodiazepines. For example, the presence of liver disease can decrease the metabolism and increase the accumulation of the benzodiazepine. The presence of active metabolites will also increase the half-life of the medication. Dosages may need to be adjusted based on clinical findings. Half-lives are also estimates as these vary widely from individual to individual. Generally the older the person, the slower the metabolism. For example, the half-life of flurazepam in an elderly individual may be as long as 200 hours.

Generic Name ( <i>Trade Name</i> )	Equivalent Dose (mg)	Half-life (Hours)
Alprazolam ( <i>Xanax</i> )	0.5	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	10-20
Oxazepam ( <i>Serax</i> )	15-30	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

Adapted from multiple sources including: Kasser C, et al, and The Physicians' Desk Reference, 2000

### 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 above doses needed to manage withdrawal symptoms. Long term use produces tolerance to the sedative and euphoric effects without concurrent development of tolerance to respiratory depression. Careful attention to vital signs, particularly respiratory status is imperative during withdrawal and detoxification. Phenobarbital is the drug of choice for detoxification from barbiturates and barbiturate-like medications. One exception may be meprobamate. Meprobamate itself can be used to detoxify inmates dependent on meprobamate.

Generic Name ( <i>Trade Name</i> )	Equivalent Dose in mgs.
Amobarbital ( <i>Amytal</i> , others)	100
Butabarbital (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
<b>Barbiturate-like Drugs</b>	
Chloral Hydrate (Many)	250-350
Ethchlorvynol ( <i>Placidyl</i> )	200-500
Glutethimide ( <i>Doriden</i> , others)	250
Meprobamate* ( <i>Miltown</i> , others)	400
Methaqualone ( <i>Quaalude</i> , others)	300

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\*See notation above regarding detoxification from meprobamate.

Adapted from multiple sources including Kasser C, et al, and the Physician Desk Reference, 2000.

## **Inmate Patient Information DETOXIFICATION FROM ALCOHOL**

Your medical team has determined that you require medical treatment for safe withdrawal from alcohol. Your treatment will be most effective with your active participation and cooperation. Achieving abstinence through detoxification is only the first step in developing a sober and healthy life style without alcohol. Psychology staff and/or drug treatment staff will work with you to develop a treatment plan for long term recovery from alcohol abuse and dependence. You may also seek out help through AA (Alcoholics Anonymous) or NA (Narcotics Anonymous) meetings which are available at your institution.

It is impossible to know what symptoms of alcohol withdrawal any one person will experience. If you have had problems when you have stopped drinking before, you are likely to experience 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.

Alcohol withdrawal can be safely managed with medical help. You will be given a vitamin supplement, thiamine, to take regularly for several days. It is very important to take this medication as prescribed to prevent permanent brain damage.

Sometimes medications, such as lorazepam (Ativan), will be used to prevent serious complications, such as high blood pressure, seizures, or confusion. Your medical team will be examining you regularly for signs of withdrawal to determine the correct dose of medication. Take your medication just as prescribed. It will be provided through pill line. If you miss a dose, let the medical staff know at once.

Other medications may be used to help with some of the symptoms. One of these, clonidine, is usually used to treat high blood pressure. It will help reduce your blood pressure and heart rate as well as help with tremor, anxiety and sleeplessness. If this medication is prescribed it is important to take it on schedule. It will be dispensed at pill line. If you miss a dose please notify medical staff as soon as possible.

## **Leaving alcohol behind, How you can help:**

1. Be honest about your use of alcohol and other substances. This will help assure the best treatment for you.
2. Report any unusual symptoms to your medical team, such as chest pain, hallucinations, fainting, seizures, or suicidal thinking immediately.
3. Take your medications on schedule and as prescribed. They can prevent serious complications.
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 assure as smooth a withdrawal as possible. It is likely that even with careful treatment you may still have some mild symptoms of withdrawal, such as trouble sleeping and nervousness. Sometimes these symptoms will continue for weeks or months. Seek help from medical and psychology staff if you find these troublesome.

**Inmate Patient Information**  
**DETOXIFICATION FROM BENZODIAZEPINES**

Your medical team has determined that you require medical treatment for safe withdrawal from benzodiazepines (tranquilizers). Your treatment will be most effective with your active participation and cooperation. Achieving abstinence through detoxification is only the first step in developing a healthy life style without benzodiazepines. If you have been prescribed benzodiazepines for a nervous condition, psychiatry and psychology staff will work with you to develop a safe and effective treatment plan 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 staff will work with you to develop a treatment plan for long term recovery from benzodiazepine abuse and dependence. You may also seek out help through AA (Alcoholics Anonymous) or NA (Narcotics Anonymous) meetings which are available at your institution.

It is impossible to know what symptoms of benzodiazepine withdrawal any one person will experience. If you have had problems when you have stopped the medication before, you are likely to experience at least some of those same symptoms again. It is generally **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 for the one you have been taking. 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 to determine the correct dose of medication. Your medication will be provided through pill line. If you miss a dose, let the medical staff know at once.

## **Leaving benzodiazepines behind, How you can help:**

1. Be honest about your use of benzodiazepines and other substances. This will help assure the best treatment for you.
2. Report any unusual symptoms to your medical team, such as chest pain, hallucinations, seizures, or suicidal thinking immediately.
3. Take your medications on schedule and as prescribed. They can prevent serious complications.
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 assure as smooth a withdrawal as possible. It is likely that even with careful treatment you may still have some mild symptoms of withdrawal, such as trouble sleeping and nervousness. Sometimes these symptoms will continue for weeks or months. Seek help from medical and psychology staff if you find these troublesome.

## **Inmate Patient Information DETOXIFICATION FROM BARBITURATES**

Your medical team has determined that you require medical treatment for safe withdrawal from barbiturates. Your treatment will be most effective with your active participation and cooperation. Achieving abstinence through detoxification is only the first step in developing a healthy life style without barbiturates. If you have been prescribed barbiturates for a nervous condition, psychiatry and psychology staff will work with you to develop a safe and effective treatment plan 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 staff will work with you to develop a treatment plan for long term recovery from barbiturate abuse and dependence. You may also seek out help through AA (Alcoholics Anonymous) or NA (Narcotics Anonymous) meetings which are available at your institution.

It is impossible to know what symptoms of barbiturate withdrawal any one person will experience. If you have had problems when you have stopped the medication before, you are likely to experience at least some of those same symptoms again. It is generally **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 for the one you have been taking. 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 to determine the correct dose of medication. Your medication will be provided through pill line. If you miss a dose, let the medical staff know at once.

## **Leaving barbiturates behind, How you can help:**

1. Be honest about your use of barbiturates and other substances. This will help assure the best treatment for you.
2. Report any unusual symptoms to your medical team, such as chest pain, hallucinations, seizures, or suicidal thinking immediately.
3. Take your medications on schedule and as prescribed. They can prevent serious complications.
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 assure as smooth a withdrawal as possible. It is likely that even with careful treatment you may still have some mild symptoms of withdrawal, such as trouble sleeping and nervousness. Sometimes these symptoms will continue for weeks or months. Seek help from medical and psychology staff if you find these troublesome.

**Inmate Patient Information**  
**DETOXIFICATION FROM OPIATES (NARCOTICS)**

Your medical team has determined that you require medical treatment for safe withdrawal from opiates. Your treatment will be most effective with your active participation and cooperation. Achieving abstinence through detoxification is only the first step in developing a healthy life style without opiates. If you have been prescribed opiates for a medical condition, your medical team will work with you to develop a safe and effective treatment plan 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 staff will work with you to develop a treatment plan for long term recovery from opiate abuse and dependence. You may also seek out help through AA (Alcoholics Anonymous) or NA (Narcotics Anonymous) meetings which are available at your institution.

It is impossible to know what symptoms of opiate withdrawal any one person will experience. If you have had problems when you have stopped opiates before, you are likely to experience at least some of those same symptoms again. The symptoms of opiate withdrawal can include: a runny nose, tearing of eyes, yawning, dilated pupils, fever, loss of appetite, nausea, vomiting, diarrhea, abdominal cramps, sweating, goose flesh, increased blood pressure, increased heart rate, nervousness, restlessness, muscle and bone pain.

Opiate withdrawal can be safely managed with medical help. Medications such as methadone or clonidine may be used to help with some of the symptoms. Clonidine, is usually used to treat high blood pressure. It will help reduce your blood pressure and heart rate as well as help with nausea, vomiting, diarrhea, cramps and sweating. It is important to take your medications on schedule. They will be dispensed at pill line. If you miss a dose, please notify medical staff as soon as possible.

Other medications may be given to help with bone and muscle pain, nausea, diarrhea and insomnia. Even with effective treatment you are likely to experience some withdrawal symptoms.

It is very important for you to take your medication just as prescribed to reduce the discomfort that opiate withdrawal often causes. Your medical team will be examining you regularly for signs of withdrawal to determine the correct dose and types of medication to use.

## **Leaving narcotics behind, How you can help:**

1. Be honest about your use of opiates and other substances. This will help assure the best treatment for you.
2. Report any unusual symptoms to your medical team, such as chest pain, fainting, severe diarrhea, vomiting or suicidal thinking immediately.
3. Take your medications on schedule and as prescribed. They can prevent severe discomfort.
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 assure as smooth a withdrawal as possible. It is likely that even with careful treatment you may still have some mild symptoms of withdrawal, such as trouble sleeping, nervousness, drug craving and physical discomfort. Sometimes anxiety and insomnia will continue for weeks or months. Seek help from medical and psychology staff if you find these troublesome.

**Provider Self-Assessment  
Detoxification of Chemically Dependent Inmates**

## Question #1

Which of the following substances does not cause a dangerous medical withdrawal syndrome upon abrupt discontinuation after regular use?

- A. Alcohol
- B. Valium
- C. Cocaine
- D. Seconal

## Question #2

Which of the following is true?

- A. Dependence on benzodiazepines does not develop when these medications are taken only as prescribed.
- B. The use of Dilantin in alcohol detoxification helps to prevent the development of seizures.
- C. Wernicke's encephalopathy is always reversible if treated aggressively with thiamine.
- D. Physiological dependence on benzodiazepines can develop in 3 weeks

## Question #3

Which one of the following medications does not require oxidation in the liver for its metabolism and hence is safest in individuals with possible impaired liver function?

- A. Diazepam
- B. Clonazepam
- C. Chlordiazepoxide
- D. Lorazepam

## Question #4

For which of the following individuals undergoing detoxification from alcohol would you consider inpatient management?

- A. A 34 y/o male admitted to your institution 2 days ago, appeared intoxicated upon arrival and now has developed visual hallucinations, agitation and a BP of 180/110 with a pulse of 140.
- B. A 53 y/o male with history of hypertension, poorly controlled diabetes, and possible heart attack was admitted to your institution. He is on clonidine for his BP which has been in the 150/95 range since admission. He has now developed insomnia, restlessness and has had a seizure. When seen by medical staff he

was mildly disoriented and is repeatedly scratching his arms.

- C. A 42 y/o female who is HIV positive, and has hepatitis B and C is being admitted to your institution. At screening she reports consumption of up to 1 pint of alcohol/day in addition to regular use of crack cocaine. She is 3 months pregnant.
- D. All of the above.

Question #5

(True or False) The risk for suicide is increased during intoxicated states and during detoxification from substances of abuse.

Question #6

Which of the following statements is false?

- A. The shorter the half-life of the addictive substance, the easier it will be to detoxify the patient.
- B. Phenobarbital, benzodiazepines and alcohol show cross-tolerance.
- C. Clonidine is an alpha-2 agonist medication that has inhibitory action on the adrenergic system.
- D. Opiate withdrawal is generally not life-threatening and can be managed symptomatically in most cases.

Question #7

Which of the following is true?

- A. Patients usually report an accurate history of their drug and alcohol use.
- B. A careful history of drug and alcohol abuse is the best way to detect possible dependence.
- C. Dependence upon multiple classes of addictive substances is rare.
- D. Thiamine should always be given parenterally.

Question #8

(True or False) Benzodiazepines and barbiturates can be safely tapered by 10% every 3-5 days in outpatients.

Question #9

Which of the following is false?

- A. An early sign of withdrawal from alcohol, benzodiazepines and barbiturates is autonomic hyperactivity.
- B. Complaints of anxiety in opiate dependent patients undergoing withdrawal is usually a form of drug-seeking behavior.
- C. Elderly patients can show less signs of early withdrawal, but are at higher risk for complications during detoxification.
- D. Patients with a history of brain injury are more likely to suffer

delirium and seizure during detoxification.

Question #10

(True or False) Patients without underlying psychiatric illness will not develop any significant psychiatric symptoms during detoxification.

Question #11

All of the following are potential drugs of abuse except:

- A. Elavil (amitriptyline)
- B. Benadryl (diphenhydramine)
- C. Motrin (ibuprofen)
- D. Phenergan (promethazine)

Question #12

(True or false) Clonazepam is a long acting benzodiazepine that is routinely indicated for managing benzodiazepine withdrawal.

## **Answers to Self-Assessment Quiz Detoxification of Chemically Dependent Inmates**

### **Question #1, Answer is C**

Alcohol, Valium (a benzodiazepine), cocaine and Seconal (a barbiturate) can all produce a syndrome of substance dependence in susceptible individuals. Abrupt withdrawal of cocaine can produce lethargy, depression, suicidal ideation, insomnia or hypersomnia, but does not produce a recognizable physiological withdrawal syndrome. Psychological assessment and support during the withdrawal process is important, especially to address the risk of suicide. However no medications have been shown to consistently relieve the signs and symptoms of cocaine withdrawal.

### **Question #2, Answer is D**

Physiological and psychological dependence can develop on benzodiazepines in as little as 3 weeks of regular use, even when used as prescribed. While such short term dependence is not likely to produce a dangerous withdrawal syndrome with discontinuation, it would be expected to result in some symptoms of anxiety, increased autonomic activity, insomnia, depression and agitation. Individuals using benzodiazepines not infrequently are also dependent upon alcohol. This polysubstance dependence can complicate the medical management of the detoxification process and increase the risk associated with it.

Dilantin has no role in alcohol detoxification except for the individual with an underlying seizure disorder. Controlling seizures does not necessarily reduce the risk of future delirium tremens.

Wernicke's encephalopathy is greatly underdiagnosed, and is associated with significant morbidity and mortality. Left untreated it can develop into Korsakoff's syndrome with permanent cognitive impairment or even can progress to death in 15-20% of cases. Even aggressive treatment with thiamine cannot reverse Wernicke's in up to 40% of cases.

### **Question #3, Answer is D**

Lorazepam is not oxidized through the liver's cytochrome system and hence its metabolism is unaffected by the presence of liver disease. Diazepam, clonazepam and chlordiazepoxide all require oxidation. These drugs are very likely to accumulate in individuals who are slow metabolizers, are elderly or have pre-existing liver disease. Metabolism of diazepam and chlordiazepoxide results in active metabolites as well, thus greatly extending the half-life and increasing the likelihood of significant accumulation of active compounds. Lorazepam can be given orally or parenterally-IV or IM. Diazepam and chlordiazepoxide should never be given IM due to erratic, unpredictable absorption.

**Question #4, Answer D**

All of the patients described are at high risk for serious complications during detoxification. Patients A and B have already begun to develop early signs of delirium and will need extremely close medical monitoring and aggressive treatment, probably including IV fluids, glucose and electrolytes. Patient B has significant risk factors for cardiac disease and is at increased risk for a cardiac event during detoxification. Patient A arrived intoxicated and this should have alerted staff to the need for close medical monitoring and the increased likelihood that he will need medications to manage his detoxification. Early intervention with lorazepam may have prevented the development of delirium in this otherwise healthy individual.

Patient C is already a high risk pregnancy (assuming pregnancy has been confirmed) due to her underlying medical problems and history of substance abuse. Her crack cocaine use does not complicate the detoxification process, however medical management is complicated by her liver disease, pregnancy, HIV status, and polysubstance abuse. Due to her heavy alcohol use, multiple medical problems, and risk for miscarriage, inpatient management is indicated.

**Question #5, Answer is True**

Intoxication greatly reduces inhibitions and increases the likelihood of impulsive behavior, especially acts of violence towards self or others. Detoxification, even when carefully managed, almost always produces some psychological distress and is a time of increased risk for suicide. This is especially true for individuals with other concurrent stressors such as separation from family and friends, legal and financial problems and incarceration. Careful psychological assessment and ongoing psychological support is an important aspect of the detoxification process.

**Question #6, Answer is A**

The shorter the half-life of a substance, the more difficult detoxification becomes due to the more rapid onset of a withdrawal syndrome and the presence of rebound symptoms between doses of the medication or substance. Psychological distress is also greater and more drug-seeking behavior will be present. A cross-tolerant medication with a longer half-life is recommended whenever feasible to detoxify the patient. During this changeover it may take a few days to stabilize the patient on the new medication before tapering can begin.

The barbiturates, alcohol and benzodiazepines are all sedatives that act through the GABA system in the brain. They are all cross-tolerant and can theoretically be used interchangeably. Phenobarbital is very effective in alcohol detoxification, however due to its narrow therapeutic margin and risk of respiratory depression, close monitoring is necessary. Persons dependent on barbiturates and/or benzodiazepines are frequently dependent upon alcohol as well.

Clonidine acts as an agonist at the alpha-2 neurons. Alpha-2 neurons have inhibitory action on the alpha-1 adrenergic neurons thus reducing their sympathetic activity. Clonidine lowers blood pressure through this process. Clonidine can be an important adjunct in detoxification from barbiturates, benzodiazepines, alcohol and opiates. However, it does mask many of the signs and symptoms of the withdrawal syndrome and does not reduce the risk for development of seizures, delirium or death. Very careful assessment of the inmate is necessary throughout the detoxification process if clonidine is being used. In addition, clonidine is fatal in overdose and patients undergoing detoxification are at increased risk of suicide.

Opiate withdrawal is not life threatening except in rare instances, such as in the case of a medically debilitated patient or a pregnant woman who is at increased risk for miscarriage or premature labor during detoxification. Withdrawal from opiates is extremely painful however, and most of the symptoms associated with it can be effectively managed with medications such as clonidine, NSAIDs, and benzodiazepines.

**Question #7, Answer is B**

Although patients are almost never completely accurate in their drug and alcohol histories, a careful history is still the best way to detect and diagnose substance dependence. A nonjudgmental attitude coupled with healthy skepticism can be helpful in uncovering the signs and symptoms of substance abuse. Phrasing the same question in a different way will sometimes elicit additional information. Physical examination can also reveal stigmata of chronic substance abuse, such as telangiectasias in liver disease from alcohol dependence, subcutaneous atrophy from injection drug use, etc.

Dependence on multiple substances is common. A careful history is the best way to determine this and then appropriately plan for management of detoxification.

Thiamine should always be given whenever alcohol dependence is suspected. Thiamine is inexpensive, administered orally or parenterally, and can prevent serious and permanent morbidity or mortality from Wernicke's encephalopathy. Some experts recommend that the first dose should be given IM in the acute setting of altered mental status combined with suspected alcohol dependence.

**Question #8, Answer is True**

Benzodiazepine and barbiturate detoxification can be safely managed in the outpatient setting in most cases. Ongoing, regular clinical assessment is necessary to assure that the tapering schedule is being well tolerated and no unexpected complications have arisen. Tapering more rapidly than 10% every 3-5 days accomplishes little, but does increase the risk of complications. Psychological assessment and

support throughout the process is an important adjunct to the medical management of the patient. If an underlying psychiatric illness is present careful assessment for signs and symptoms should continue throughout detoxification and afterwards. Recurrence of symptoms of anxiety disorders is extremely common and can be debilitating and dangerous, since patients with anxiety disorders are at increased risk for suicide.

**Question #9, Answer is B**

Anxiety is a real and frequent psychological symptom associated with detoxification from all substances, especially opiates. While the inmate may request increased medication during this time, interpreting this as purely drug seeking behavior will result in unnecessary suffering and a loss of rapport. Anxiety can be treated by carefully managing the detoxification process, providing psychological support and education, and if necessary short term use of benzodiazepines may be beneficial.

Autonomic hyperactivity with increased pulse, blood pressure, and/or temperature is an early indication of the development of a withdrawal syndrome. Adequate treatment with a cross-tolerant medication brings vital signs under control and into the normal range. Use of beta-blockers or clonidine can mask the early signs of substance withdrawal.

Managing detoxification in the elderly presents some different challenges. Diagnosis may be more difficult as the elderly often have more shame associated with their substance dependence and may deny use. In addition, they are less likely to show as vigorous sympathetic activity during early withdrawal from alcohol and sedatives as their younger counterparts. Further, they are more likely to have multiple medical problems, and multiple medications, making safe management of detoxification more difficult. Finally subtle cognitive impairments places the patient at higher risk for the development of a delirium during the detoxification process. The elderly typically metabolize drugs more slowly than younger patients and have less drug bound to protein. Thus, treatment with cross-tolerant medications may result in accumulation of drug resulting in intoxication, ataxia, confusion and increase the risk for falls.

Patients with any form of brain dysfunction, including a history of brain injury, early dementia, and others are more likely to have detoxification complicated by the development of a delirium.

**Question #10, Answer is False**

Patients with psychiatric illnesses have a higher than normal rate of co-morbid substance dependence. Substance dependence in and of itself can produce symptoms identical to many psychiatric syndromes such as anxiety disorders, depression, mania, and psychosis. Detoxification can create significant psychological distress and can result in the

development of symptoms of anxiety, depression, mood swings, and sleep disturbances even when adequately managed. Patients undergoing detoxification are at increased risk for suicide as well. In addition, complicated withdrawal can result in the onset of psychotic symptoms such as hallucinations and delusions. These symptoms abate as the associated delirium resolves. Psychological assessment and support throughout detoxification is necessary to reduce psychiatric morbidity and to help identify those symptoms in need of specific psychiatric treatment.

**Question #11, Answer is C**

Any substance which alters perception, mood or cognition can be abused. In an environment where access to more common substances of abuse is limited, individuals may turn to drugs acquired through medical services or commissary to produce a mind-altering experience. Drugs with anticholinergic, antihistaminic or stimulant activity are most likely to be abused. Elavil, other tricyclic antidepressants, Benadryl, Phenergan, Compazine, Thorazine, and cold preparations are all medications not uncommonly abused in the prison setting.

**Question #12, Answer is True**

Benzodiazepine withdrawal is ordinarily best managed by treatment and tapering with a long acting benzodiazepine such as clonazepam. The use of short acting benzodiazepines to manage withdrawal is difficult and potentially unsafe.