

# Detox and Withdrawal

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# To consider...

- “Every form of addiction is bad, no matter whether the narcotic be alcohol or morphine or idealism.”
- Carl Gustav Jung (1875-1961)
  - Swiss psychoanalyst, 1962

# What is Detox?

- Detox, short for detoxification, is the first step in rehabilitation and treatment of drug and/or alcohol dependence.
- The term “detox” refers to the detoxifying of the residual toxins left in the human body as a result of taking drug(s) and/or alcohol.
- Detox is the process of not only eradicating the body of those harmful toxins, but helping a person to get past the violent cravings experienced during withdrawal and finding a level of functionality based on no physical dependency of any sort for drugs or alcohol.



Why Detox?

# Substance Dependence

- Compulsive drug use characterized by continued substance use despite significant adverse biopsychosocial consequences coupled with the ingredients of physiological dependence – tolerance and withdrawal. Tolerance and withdrawal are neither necessary nor sufficient components to establish the presence of substance dependence.

# Physiologic Dependence

- The development of **tolerance** (the agent produces diminishing biological or behavioral effects such that higher doses are required to achieve the same effects as the individual experienced initially) and **withdrawal** (a predictable constellation of signs and symptoms that result from abrupt removal of the agent).

# Withdrawal Syndrome

- Withdrawal syndrome is the predictable constellation of signs and symptoms following abrupt discontinuation of, or rapid decrease in, intake of a substance that has been used consistently for a period of time. The signs and symptoms of withdrawal usually are the opposite of direct pharmacologic effects of a drug. Substances in a given pharmacologic class produce similar withdrawal syndromes; however, the onset, duration, and intensity are variable, depending on the particular agent used, the duration of use. Evidence for the cessation of or reduction in use of a substance may be obtained by history or toxicology.

# Medical Detoxification

- The process by which an individual who is physiologically dependent on a substance is withdrawn from the substance using medical interventions and supervision.
- Medical detoxification is not itself a treatment of Substance Dependence as it does not itself affect the course of the illness. It is merely the first of many interventions that the dependent individual will require to achieve and sustain abstinence.

# Goals of Detoxification

- To provide a safe withdrawal from alcohol or other drug (s) of dependence and enable to the patient to become free of non-prescribed medications in the least restrictive setting possible.
- To relieve the immediate symptoms of withdrawal, and treat any co-morbid medical or psychiatric conditions.
- To provide a withdrawal that is humane and that protects the patient's dignity; and
- To prepare the patient for ongoing treatment of his/her dependence

# General Management of Detox

- Accurate assessments (H&P, psychosocial, psych eval, nursing assessment, etc.)
- Pertinent laboratory tests (CBC, TB, etc.)
- Adequate fluid balance, correction of electrolyte deficiencies, and attendance to the patient's nutritional needs
- Supportive care from medical and clinical personnel for a comfortable detox and to facilitate continuing treatment

# Classes of Substances Leading to a Syndrome of Substance Dependence

- Alcohol
- Amphetamines
- Caffeine
- Cannabis
- Cocaine
- Hallucinogens
- Inhalants
- Nicotine
- Opioids
- Phencyclidine
- Sedative-hypnotics

Those in bold are associated with withdrawal phenomena and the two that are underlined are associated with potentially life threatening withdrawal syndromes. Only 5% of those with alcohol withdrawal will manifest life threatening seizures and/or delirium tremens. Grand mal seizures and delirium tremens occur more frequently in the case of sedative-hypnotic withdrawal (up to 30% of high-dose withdrawal cases).

# Alcohol Withdrawal

- Withdrawal signs & symptoms may appear within hours of the patient's last drink & generally peak 24 to 36 hours after cessation. Most individuals (95%) experience only mild to moderate withdrawal.
- *Alcohol withdrawal seizures* usually occur within 48 hours of cessation.
- *Delirium tremens* - A serious alcohol-withdrawal syndrome observed in persons who stop drinking alcohol following continuous and heavy consumption. It involves profound confusion, hallucinations, and severe nervous system over-activity, typically beginning between 48 and 96 hours after the last drink.

# Alcohol Withdrawal Symptoms

- Mild to moderate symptoms include:
  - Slight or coarse tremors
  - Sweating
  - Increase in heart rate, blood pressure and respiration
  - Decreased appetite, vomiting, headaches
  - Agitation
  - Insomnia
  - Feelings of apprehension
  - Gastrointestinal tract distress

# Alcohol Withdrawal Symptoms

- Severe to acute symptoms include:
  - Marked or uncontrollable agitation
  - Tremors or gross tremulousness (shaking)
  - Elevated vital signs and autonomic activity
  - Severe autonomic activity (automatic reflex)
  - Alcoholic hallucinosis, seizures, insomnia
  - Sensory distortion, disorientation, delirium
  - Delirium tremens
  - Death

# Pharmacologic Management

- Sedative-hypnotics are the cornerstone of therapy for alcohol withdrawal. Benzodiazepines such as chlordiazepoxide (Librium), diazepam (Valium), and lorazepam (Ativan) are effective in ameliorating signs and symptoms of withdrawal and preventing seizures and delirium.
- Librium is the one used most often in the US
- Phenobarbital has also been used (currently less than 10% of detox programs in US do so)

# Treatment/Protocols with Benzos for Alcohol Withdrawal

- Fixed-schedule, tapering dosage method – Librium is given at specific times of the day with the dosage being decreased over time as the symptoms of alcohol withdrawal wane. For example, a MD may order 50mg of Librium to be given twice daily for 1 day, followed by 25 mg of Librium given three times daily for 2 days, followed by 25mg given twice daily for 1 or 2 days, and the last dosage of 25mg to be given on the morning of the 5<sup>th</sup> or 6<sup>th</sup> day. In addition, PRN dosages can be written.

# Treatment/Protocols with Benzos for Alcohol Withdrawal

- *Symptom-targeted method* – this is when the benzo is given only when symptoms warrant its administration (as determined by vital sign monitoring). In this method, significantly less medication is given over a significantly shorter time frame than in the tapering method.

# Opioid Withdrawal

- The most severe withdrawal symptoms from the opioid class of drugs include heroin, methadone, morphine, oxycodone, oxymorphone, and meperidine (Demerol).
- The severity of the symptoms depends on: the drug used, the total daily dose, the interval between doses, the duration of use, and the individual sensitivity.
- Although opiate withdrawal can be uncomfortable, it is generally not life threatening.

# Opioid Withdrawal Symptoms

- Stage 1 with onset within hours of last dose and peaking 36-72 hours: craving for drug, tearing, running nose, yawning, sweating and dysphoria (flu-like symptoms)
- Stage 2 with onset of 12 hours and peaking at 72 hours: mild to moderate sleep disturbances, dilated pupils, loss of appetite, piloerection, irritability, and tremor.

# Opioid Withdrawal Symptoms

- Stage 3 with onset about 24-36 hours and peaking at about 72 hours: Severe insomnia, violent yawning, weakness, nausea, vomiting, diarrhea, chills, fever, muscle spasms especially in lower extremities, flushing, spontaneous ejaculation and abdominal pain

# Pharmacologic Management

- Methadone tapering (same concept as Librium)
- Clonidine (lowers blood pressure) – the opioid is abruptly discontinued. As withdrawal symptoms emerge, they are dealt with by clonidine
- Clonidine/Naltrexone (aka Rapid Opioid Detoxification, or ROD). Similar to above except immediate withdrawal is initiated by naltrexone
- Anesthesia/Naltrexone (aka Ultra Rapid Opioid Detoxification, or UROD). Patient is anesthetized, and given naltrexone while unconscious. When awake, acute withdrawal process is complete.

# Pharmacologic Management

- Buprenorphine – partial opioid agonist which contains agents that are substituted for methadone or other opioids, a process that can be completed in as little as 3 days. Withdrawal is mild in nature and better tolerated than a full opioid agonist, like methadone.
- One of the principle rationales for introducing this drug was to enable qualified MD's to conduct opioid detox in their private offices. The intent was to increase access and availability of treatment to those who need it while decreasing stigma.

# Methadone Tapering and Opiate Detox

- Short-term (less than 30 days) – usually done inpatient (5-10 days), but can be done outpatient. Inpatient, individuals are usually given up to 40mg methadone a day and dosages are decreased by 5mg per day.
- Long-term (greater than 30, but less than 180 days)

# Sedative-Hypnotics (Benzodiazepine)

## Withdrawal

- Although this group of drugs includes barbiturates, benzodiazepines are the reason most people seek detox.
- Those associated with the most severe withdrawal syndromes include (in addition to alcohol) methaqualone (Quaalude), glutethimide (Doriden), phenobarbital, and short-acting benzos such as alprazolam (Xanax) and triazolam (Halcion).

# Sedative-Hypnotic Withdrawal Symptoms

- Low-dose withdrawal – occurs in people taking therapeutic dosages over extended periods of time. In those who develop symptoms, onset occurs between 1-7 days and include agitation, anxiety, tachycardia, palpitations, anorexia, blurred vision, insomnia, nightmares, confusion, muscle spasms, paresthesias (pins & needles), and in some cases, psychosis.

# Sedative-Hypnotic Withdrawal Symptoms

- High dose withdrawal – Occurs in people taking higher than therapeutic doses over a period of at least a month. Onset begins 1-2 days after discontinuation of a short-acting benzo, and 3 – 8 days after a long-acting benzo is discontinued. Symptoms can include anxiety, insomnia, nightmares, generalized seizures, psychosis, fever and death.

# Pharmacologic Management

- Generally a long-acting sedative-hypnotic (such as Librium, Valium, Klonopin or Phenobarbital) is substituted, then tapered after stabilization. Use of long-acting agents facilitates smooth and gradual withdrawal management.
- Once the patient is stabilized on a long-acting drug, the drug may be tapered by 10-20% daily, depending on patient response and the use of adjunctive medications, such as Tegretol.

# Pharmacologic Management

- Tegretol has been shown to diminish withdrawal symptoms and shorten the duration of management.
- Antidepressants may be used for patients with panic and anxiety and drugs like Elavil may help with sleep disturbances.
- Drugs such as Clonidine may alleviate autonomic mediated signs and symptoms of withdrawal, but have little effect on subjective symptoms.

# Cocaine/Crack Withdrawal

- Symptoms of cocaine withdrawal are related primarily to CNS changes. They include: agitation, marked dysphoria, fatigue, irritability, excessive sleep, increased appetite, anorexia, anhedonia
- Intense drug cravings can last for weeks
- Medical effects are relatively minor and can include nonspecific aches and pains, tremors, chills and involuntary motor movement. These rarely require specific medical treatment.

# General Management

- Most symptoms of cocaine withdrawal are best treated supportively by allowing the patient to sleep and eat as much as necessary.
- Risk of relapse is high during the early withdrawal period in part because the drug craving is easily triggered by encounters with or thinking of drug-associated stimuli.
- Psychosocial treatment, rather than meds

# Pharmacologic Management

- In NYS, unless a patient presents with another substance dependence syndrome like alcohol, opiates, or benzos, they will not be admitted to detox.
- Dopamine agonists like bromocriptine and amantadine may be used to treat cocaine withdrawal. Antidepressants to treat accompanying depression. Short-acting benzos to help certain patients who develop agitation or sleep disturbance.

# Cannabis Dependence

- There are no clinically significant marijuana withdrawal syndrome that has been reported, although individuals may have a mild increase in heart rate, blood pressure and body temperature.
- Some psychological manifestations of abrupt cessation include anxiety, depression, irritability, insomnia, tremors and chills. These may last for a few days.
- Psychosocial treatment, rather than meds

# CD Crisis Services in NYS (816)

- Medically monitored withdrawal service (Crisis Center - mild withdrawal)
- Medically supervised withdrawal service (inpatient, outpatient-detox or residential)
- Medically managed detoxification services (inpatient – short-term)

# Detoxification Facilities

- Detox can be done both on an outpatient basis (mental health center, addiction clinics or private clinics) or inpatient (hospital or residential treatment center).

# Inpatient Detoxification

- Inpatient detox allows the patient to be closely monitored, avoids exposure to the substance of abuse, and can speed up the process of detoxification.
- Patients at risk of moderate to severe withdrawal; patients with co-morbid medical or psychiatric conditions
- More costly than outpatient

# Outpatient Detoxification

- Less disruptive to the patient's life and less expensive
- May work for those with mild to moderate withdrawal symptoms
- They must receive supportive care and counseling, in-house or through referral to a CD recovery program and 12 step meetings.

**Addiction Research Foundation Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar)**

Patient \_\_\_\_\_ Date |\_\_|\_|\_|\_|\_| Time \_\_\_\_\_!  
y m d (24 hour clock, midnight = 00:00)

Pulse or heart rate, taken for one minute: \_\_\_\_\_ Blood pressure: \_\_\_\_\_/\_\_\_\_\_

**NAUSEA AND VOMITING**—Ask “Do you feel sick to your stomach? Have you vomited?” Observation.  
0 no nausea and no vomiting  
1 mild nausea with no vomiting  
2  
3  
4 intermittent nausea with dry heaves  
5  
6  
7 constant nausea, frequent dry heaves and vomiting

**TREMER**—Arms extended and fingers spread apart. Observation.  
0 no tremor  
1 not visible, but can be felt fingertip to fingertip  
2  
3  
4 moderate, with patient's arms extended  
5  
6  
7 severe, even with arms not extended

**PAROXYSMAL SWEATS**—Observation.  
0 no sweat visible  
1 barely perceptible sweating, palms moist  
2  
3  
4 beads of sweat obvious on forehead  
5  
6  
7 drenching sweats

**ANXIETY**—Ask “Do you feel nervous?” Observation.  
0 no anxiety, at ease  
1 mildly anxious  
2  
3  
4 moderately anxious, or guarded, so anxiety is inferred  
5  
6  
7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

**AGITATION**—Observation.  
0 normal activity  
1 somewhat more than normal activity  
2  
3  
4 moderately fidgety and restless  
5  
6  
7 paces back and forth during most of the interview, or constantly thrashes about

**TACTILE DISTURBANCES**—Ask “Have you any itching, pins and needles sensations, any burning, any numbness or do you feel bugs crawling on or under your skin?” Observation.  
0 none  
1 very mild itching, pins and needles, burning or numbness  
2 mild itching, pins and needles, burning or numbness  
3 moderate itching, pins and needles, burning or numbness  
4 moderately severe 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 frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?” Observation.  
0 not present  
1 very mild harshness or ability to frighten  
2 mild harshness or ability to frighten  
3 moderate harshness or ability to frighten  
4 moderately severe 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? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?” Observation.  
0 not present  
1 very mild sensitivity  
2 mild sensitivity  
3 moderate sensitivity  
4 moderately severe hallucinations  
5 severe hallucinations  
6 extremely severe hallucinations  
7 continuous hallucinations

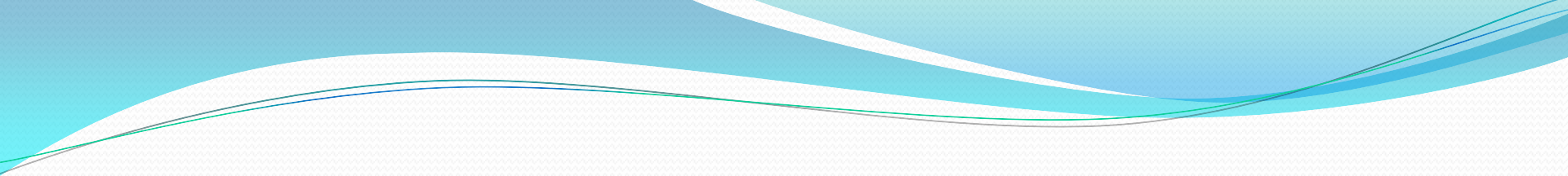
**HEADACHE, FULLNESS IN HEAD**—Ask “Does your head feel different? Does it feel like there is a band around your head?” Do not rate for dizziness or lightheadedness. Otherwise, rate severity.  
0 not present  
1 very mild  
2 mild  
3 moderate  
4 moderately severe  
5 severe  
6 very severe  
7 extremely severe

**ORIENTATION AND CLOUDING OF SENSORIUM**—Ask “What day is this? Where are you? Who am I?”  
0 oriented and can do serial additions  
1 cannot do serial additions or is uncertain about date  
2 disoriented for date by no more than 2 calendar days  
3 disoriented for date by more than 2 calendar days  
4 disoriented for place and/or person

Total CIWA-A Score \_\_\_\_\_  
Rater's Initials \_\_\_\_\_  
Maximum Possible Score 67

This scale is not copyrighted and may be used freely.

**Figure 1** The Clinical Institute Withdrawal Assessment for Alcohol, revised (CIWA-Ar) (Sullivan et al. 1989; Foy et al. 1988). This instrument rates 10 withdrawal features, takes only a few minutes to administer, and can be repeated easily when necessary. A total score of 15 or more points indicates that the patient is at increased risk for severe withdrawal effects, such as confusion and seizures.



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