

Substance Abuse Protracted Withdrawal

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Overview

1. Acute and Protracted Withdrawal
2. Withdrawal Potential
3. Recovery Reinforcers

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Addiction

- Addiction is a primary, chronic, neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations.
- It is characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving.



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Tolerance

- Higher or more frequent dosing to achieve the initial effects of the drug
- Neuroadaptation to continuously administered opioids
- Occurrence variable, not always linked with dependence
- Tolerance to non-analgesic effects beneficial
- Analgesic tolerance rarely the cause for dose escalation
- Dose escalation usually indicates disease change
- Tolerance does not imply addiction

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Dependence

- Chronic medical condition
- Tolerance
- Withdrawal
- Lack of control
- Narrowing of behavior
- Continued use despite problems
- Need all or most of these symptoms to be considered drug dependent

Physical Dependence

- A state of neuroadaptation manifested by a drug class-specific withdrawal syndrome
- Produced by abrupt cessation, rapid dose reduction, decreasing bio - availability, or use of antagonist.
- An expected occurrence in all individuals in the presence of continuous use of especially opioids for days or weeks.

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Physical Dependence or Addiction?

- Physical dependence is a normal physiologic response to the medical use of some prescriptions - especially opioids
- Addiction involves the non-medical use of medications
- Erroneous fear of addiction tragically promotes the under-treatment of pain



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Substance Addiction Rating

How easy to get hooked, how hard to stop ?

- Highest Addiction Potential
 - Nicotine, Ice (Meth), Cocaine (smoked or IV)
- Mid-range Addiction Potential
 - Alcohol, Valium, Seconal, Heroin
- Addictive
 - Caffeine, Marijuana, Ecstasy, Psychedelics

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Acute Withdrawal

- ASAM - *Acute withdrawal is usually referred to simply as "withdrawal."*
 - Withdrawal is "the onset of a predictable constellation of signs and symptoms following the abrupt discontinuation of, or rapid decrease in, dosage of a psychoactive substance."
 - Such signs and symptoms are generally the opposite of the intoxication effects of the particular substance.
 - For example, pupils constrict during opioid intoxication and dilate during acute withdrawal.
 - These signs and symptoms begin within hours or days after last use of the substance and gradually resolve.
 - The length of time symptoms last depends on the particular substance used.

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Acute Withdrawal Timeframes for Specific Substances

Substance	Acute Withdrawal Timeframe
Alcohol	5-7 days
Benzodiazepines	1-4 weeks; 3-5 weeks with tapering (i.e., reducing dosage gradually)
Cannabis	5 days
Nicotine	2-4 weeks
Opioids	4-10 days (methadone withdrawal may last 14-21 days)
Stimulants (e.g., amphetamines, methamphetamine, cocaine)	1-2 weeks

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Theory of Protracted Withdrawal

- Koob and colleagues have shown that brain adapts to repeated use of DA-releasing reinforcer by "turning down" the reinforcement/reward pathway so that when the addict abstains, "life is just less fun" unless they use their drug of choice.
- May be the reason for stress-induced relapse and dysphoria of early abstinence

Protracted Withdrawal

- Strictly Defined:** The presence of substance-specific signs and symptoms common to acute withdrawal but persisting beyond the generally expected acute withdrawal timeframes
- Broader Definition:** includes the experiencing of the above symptoms and of non-substance-specific signs and symptoms that persist, evolve, or appear well past the expected timeframe for acute withdrawal.
- Each psychoactive substance class has different effects on the brain.

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Other Terms.....

- Chronic withdrawal
- Extended withdrawal
- Late withdrawal
- Long-term withdrawal
- Persistent postuse symptoms
- Postacute withdrawal syndrome (PAWS)
- Postuse syndrome
- Protracted abstinence
- Sobriety-based symptoms
- Subacute withdrawal



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Symptoms of Protracted Withdrawal

- Anxiety
- Sleep difficulties
- Problems with short-term memory
- Persistent fatigue; irritability
- Difficulty focusing on tasks
- Difficulty concentrating and making decisions
- Alcohol or drug cravings
- Impaired executive control
- Anhedonia
- Dysphoria or depression
- Unexplained physical complaints
- Reduced interest in sex

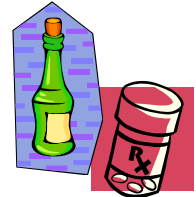
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Protracted Withdrawal Symptoms

- Chronic substance use causes molecular, cellular, and neurocircuitry changes to the brain that affect emotions and behavior and that persist after acute withdrawal has ended.
- Adaptive changes in the central nervous system may lead to affective changes that persist for many weeks or longer beyond acute withdrawal.
- Repeated use of a substance causes the brain to respond more readily to its effects but less readily to naturally rewarding activities such as listening to music - a state of decreased ability to experience pleasure known as *anhedonia*.

Protracted Withdrawal

- Abstinence syndrome
 - Anxiety
 - Muscle twitching
 - Low mood
 - Sweating
 - Headache
 - Derealization
- Rebound insomnia
 - Especially with short-acting benzodiazepines



Protracted Withdrawal Symptoms

- A variety of other symptoms have been attributed to protracted withdrawal, including :
 - alcohol or drug cravings, and impaired executive control
 - impulse control, solving problems also occur in some.

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Commonly Misused Rx Drugs

Classified in 3 classes

- **Opiates: pain-killers**
 - i.e. Vicodin, Oxycontin, Tylenol Codeine
- **CNS Depressants (Sedatives/Tranquilize treat anxiety and sleep disorders)**
 - i.e. Xanax, Ativan, Valium, Soma
- **Stimulants: ADHD, weight loss**
 - i.e. Aderall, Ritalin, Concerta, Dexedrine, Fastin (OTC Diet Pill)



Alcohol withdrawal syndrome

- Onset: 6-24 hours after last drink
- Duration: 2-10 days
- Symptoms:
 - Anxiety
 - Excess perspiration
 - Tremors
 - Dehydration
 - Increased heart rate, blood pressure
 - Insomnia
 - Nausea and vomiting
 - Diarrhea

Sleep Abnormalities - Alcohol

- Anecdotal literature and case studies going back several decades suggest that signs and symptoms may last 2 years or longer after the last use of alcohol.
- A review of seven sleep studies using polysomnograph recordings of the brain while people slept found evidence that sleep abnormalities can persist for 1 to 3 years after stopping alcohol consumption.
- These abnormalities include difficulty falling asleep, decreased total sleep time, and sleep apnea.

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Benzodiazepine withdrawal syndrome

- Short-acting benzodiazepines (insomnia):
 - Onset 1-2 days after last dose
 - Duration 2-4 weeks or longer
- Long-acting benzodiazepines (anxiety):
 - Onset 2-7 days after last dose
 - Duration 2-8 weeks or longer

The protracted withdrawal can be minimized in intensity and severity by a slow gradual reduction in dosage

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Benzodiazepines

- Benzodiazepine protracted withdrawal may be difficult to diagnose because of difficulty distinguishing it from *symptom rebound* or *symptom reemergence*
- Protracted withdrawal symptoms typically wax and wane in intensity and are new to the client (i.e., they do not indicate symptom reemergence).
- Clients also may have no symptoms for a time after stopping benzodiazepine use and then become extremely anxious.
- Psychological symptoms can mimic disorders such as agitated depression; generalized anxiety, panic, or obsessive-compulsive disorders; and schizophrenia. Fluctuating protracted withdrawal symptoms may last for months but gradually subside with prolonged abstinence.

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Opioid withdrawal syndrome

- Symptoms:
 - Nausea and vomiting
 - Anxiety
 - Insomnia
 - Hot and cold flushes
 - Perspiration
 - Muscle cramps
 - Watery discharge from eyes and nose
 - Diarrhea



Stimulant withdrawal syndrome

- Onset: within 24 hours of last use
- Duration: 3-5 days
- Symptoms:
 - Agitation and irritability
 - Depression
 - Increased sleeping and appetite
 - Muscle aches

Inhalant Withdrawal Syndrome

- Onset: anywhere from a few hours to a few days after ceasing use
- Duration: anywhere from 2 days to 2 weeks

Withdrawal Management for Cannabis Dependence

Cannabis withdrawal syndrome is poorly understood:

- Typically mild, yet difficulty coping with
- Symptoms last for 1-2 weeks
- Sleep difficulties and strange dreams can persist at least 45 days into abstinence (the longest duration of the studies)

CANNABINOIDS

- 10 hours after use
 - Tremor of the tongue and extremities
 - Insomnia
 - Sweats
 - Lateral gaze nystagmus (rhythmic oscillation of the eyeball on lateral gaze)
 - Exaggerated deep tendon reflexes

Helping Clients Through Protracted Withdrawal

- Clients affected by anhedonia and other symptoms of protracted withdrawal may want to alleviate those symptoms by returning to substance use at a time when they may have a weakened ability to resist such impulses.
- Treatment providers can improve their clients' chances for long-term recovery by educating clients about protracted withdrawal, offering support and understanding, monitoring them regularly, and intervening early with clients who seem headed for relapse.

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Educate clients about protracted withdrawal and help them develop realistic attitudes toward recovery.

- Remind clients that recovery is a process. Help clients understand that it is normal to feel not fully recovered within the first weeks and months of abstinence.
- Tell them about possible protracted withdrawal symptoms and reassure them that these symptoms will not last forever and can be managed.
- Advise clients on how to reduce or cope with symptoms and encourage them to focus on incremental improvements.
- Tell clients it takes time to undo the damage from substance use but in many cases, with long-term abstinence, substance-induced brain changes reverse.
- Celebrate each accomplishment - learning a new coping skill - and help clients not become discouraged if symptoms recur.

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Reassess During Recovery

The symptoms of protracted withdrawal can be similar to those of TBI and CODs.

- **Assess and reassess clients for suicide** as recovery proceeds, including for depression and suicidal tendencies. (TIP 42, TIP 48 and TIP 50 provide more information on CODs and suicide.
- **Discuss sleep problems** - determine if possible sleep problems stem from protracted withdrawal or are the result of other causes: e poor sleep habits retained from a substance-using lifestyle, CODs, relapse to substance use, stress, or side effects of medication (including medication to treat SUDs).
 - Educate clients about good sleep habits: adopting a regular sleep routine, exercising early in the day, minimizing caffeine intake, eating well, and avoiding late afternoon naps. Use pharmacological treatments with caution to avoid use problems.

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Recovery Advice

- **Advise clients to be active.** Encourage engagement in physical and mental exercises, which improve sleep, promote positive emotional states, reduce stress and nervousness,
- **Help clients avoid triggers,** and distract clients' attention from symptoms.
- **Advise Self Care and Patience** - Clients in early recovery may try to "make up for lost time" by overbooking and generally trying to do too much, increasing overall stress levels and possibly exacerbating symptoms
- **Prescribe medications** as needed to control symptoms past the acute withdrawal stage – discuss the use of medications, such as Acamprostate, might relieve some protracted withdrawal symptoms.

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Recovery Advice

- **Include interventions that help clients strengthen executive control functions.** Provide interventions such as cognitive-behavioral therapy to help clients manage problems with impulse control, solve problems, and make decisions.
- **Monitor clients for symptoms - and teach them the signs to be alert to triggers** - during continuing care and after. Provide clients guidance on such issues as lapses and relapses, stress, triggers, and activities to maintain abstinence.

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