

A woman with red hair styled in a bun is shown in profile, looking out a window. The background is a blurred view of autumn foliage with vibrant red and orange leaves. A semi-transparent yellow banner is overlaid across the middle of the image, containing the title text.

Detox: Taking the First Step on the Road to Recovery

The logo for NOMA Recovery features the word "NOMA" in a large, black, sans-serif font. A stylized sunburst or starburst graphic is positioned between the 'O' and 'M'. Below "NOMA", the word "RECOVERY" is written in a smaller, black, sans-serif font.

NOMA
RECOVERY

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Detoxification



Detoxification is often the first step in an addiction treatment plan, especially for certain substances such as alcohol or heroin. Detoxification is the process by which the body rids itself of drugs or alcohol when someone discontinues substance abuse. Detox centers are available to help people get through this process safely and successfully, and a carefully planned approach to this process promotes overall addiction recovery.



Withdrawal

Withdrawal from drugs or alcohol can be a painful and stressful process. As a person develops a pattern of regular substance abuse, the chemistry of the brain is altered. Neurons and hormones are affected by substance abuse. Once the addictive substances are no longer present, the body's chemistry balance is thrown into confusion.

These alterations can progress to a point where receptors in the brain stop functioning correctly. The resulting neurochemical reactions that happen during withdrawal cause adverse physical symptoms. Effects can include hyperactivity, brain receptor alterations, elevated hormone levels and changes in the glutamate receptors. Blood pressure can rise rapidly or become unstable, and profuse sweating or tremor development can result. Severe nausea and physical pain is also common.



Medically Managed Withdrawal

The safest and healthiest way to stop taking drugs is detoxification with a medically managed withdrawal, generally considered the first phase of addiction treatment. Medications help alleviate withdrawal symptoms during detoxification.¹

Because detox produces unpleasant, painful and sometimes potentially fatal side effects from withdrawal, the process typically includes medications administered by a doctor in an inpatient or outpatient setting. One study of treatment facilities found that medications were used in almost 80 percent of detoxifications.² Prescription medications are used to decrease the side effects of withdrawal from alcohol, opioids, benzodiazepines and other sedatives.³

The safest and healthiest way to stop taking drugs is detoxification with a medically managed withdrawal.

Detoxification by itself is not treatment—it's only the first step in the process. Individuals who do not receive any further treatment after detoxification usually resume drug use.

Detoxification does not address the psychological, social and behavioral problems associated with addiction. If detox is not followed by therapy, it will not usually produce the long-lasting behavioral changes necessary for recovery.

Detoxification should be followed by a formal assessment and referral to some type of drug addiction treatment. Programs on a residential inpatient, intensive outpatient or supportive outpatient basis are most effective in helping people stay sober after detoxifying.

Maintenance medications may also be prescribed for individuals in addiction treatment, helping to relieve any long-term withdrawal symptoms, alleviate cravings and block the effects of alcohol and illicit drug use.



Since an abrupt cessation of alcohol and drugs can cause health complications, some of which can be fatal, replacement medications are used to keep people comfortable and safe during detox. The medications used during a detox are intended to help minimize cravings and decrease withdrawal symptoms.

One of the biggest barriers for people considering addiction treatment is the fear of experiencing painful and sometimes dangerous withdrawal symptoms. Choosing a medically supervised detox mitigates the dangers and enables as comfortable of a detox process as possible.



The Three Steps of Detoxification

The three steps of a medical detox process are evaluation, stabilization and guidance into treatment.⁴

Evaluation - The person is tested to see which substances are present in the body and in what quantities. The medical staff also examines the individual for any co-existing physical disorders and mental health issues.

Stabilization - The person goes through the process of detoxification, supervised by treatment center staff. Prescribed medications are used to keep the person comfortable and safe. The next steps of treatment are also introduced, providing an overview of what the recovery process involves.

Guidance into Treatment - The last step of detoxification is preparing the person to enter the addiction treatment process. The medical detox process only deals with the physical dependency and addiction to drugs; it doesn't address the psychological aspects of drug addiction. Drug rehabilitation programs are needed to deal with the psychological aspects.



The Dangers of a Home Detox

Once people are dependent on a substance, when they attempt to step away from alcohol or drugs, serious withdrawal symptoms will occur. Seizures, convulsions, tremors and agitation are all typically seen in heavy users. Hallucinations and delirium tremens are also known to develop in certain alcohol abuse cases and may cause coma or be lethal. Anger, aggression and suicidal thoughts are also a possibility.¹ Healthcare professionals, standing by and prepared to treat any symptoms, can quickly head off any serious and possibly fatal health complications.

Detoxing at home is a dangerous undertaking. Detoxing at home means there would be no healthcare professionals on hand in case of medical complications or emergencies, and no supportive medications would be available to help minimize the uncomfortable side effects of withdrawal. It is safer to experience a detox with medical staff available, rather than to depend on calling 911. Withdrawal symptoms can quickly become life-threatening.



Alcohol Detoxification

Alcohol Dependence and Withdrawal

Alcohol dependence is the condition where a person is physically or psychologically dependent upon alcohol. Alcohol dependence is characterized by the presence of tolerance and withdrawal. Tolerance means a person needs more alcohol to gain the same effects previously felt from drinking. Withdrawal means when a person cuts down on drinking or stops drinking, withdrawal symptoms appear.

Symptoms of Alcohol Withdrawal

The severity of withdrawal from alcohol depends on the duration and level of drinking. In as little as two hours after the last drink, withdrawal symptoms can start. It's important to have medical supervision pre-planned and scheduled for this reason.

As the withdrawal progresses, the following symptoms are possible:

- 6-12 hours: Tremors, headache, profuse sweating, anxiety, nausea, vomiting
- 12-24 hours: Confusion, hallucinations, the shakes, agitation
- 24-48 hours: Seizures, possible continuation of all prior withdrawal symptoms
- After 48 hours: Most symptoms begin to subside. In severe cases, symptoms can progress to the level of delirium tremens, known as the DTs. The DTs can last from four to 12 days and involve hallucinations, severe disorientation, seizures, high blood pressure and fever.

Treatment and Maintenance Medications for Alcohol Withdrawal

Detox Treatment Medications

- Chlordiazepoxide is used for alcohol withdrawal to control agitation, tremors or changes in vital signs.
- Diazepam is used to prevent seizures.
- Magnesium sulfate is administered to prevent post-withdrawal seizures.
- Multivitamins containing thiamine and folic acid are given to prevent alcohol withdrawal from progressing into Wernicke-Korsakoff syndrome, which causes psychosis and encephalopathy.

Maintenance Medications

- Antabuse is available as a maintenance medication, and it causes hangover effects quickly and severely if alcohol is consumed.
- Naltrexone supports abstinence, prevents relapse and decreases alcohol consumption by preventing the pleasurable effects of alcohol consumption.
- Bupropion is given to relieve depression, which is a common symptom of detoxification.



Opiate Detoxification

Opiate and Opioid Dependence and Withdrawal

In 2014, about 435,000 people in the United States used heroin, which is an opiate. That same year, 4.3 million people abused opioid pain relievers, which are synthetic opiates.⁵ Narcotic medications with high rates of abuse include:

- Codeine
- Fentanyl
- Hydrocodone
- Hydromorphone
- Methadone
- Meperidine
- Morphine
- Oxycodone

Withdrawal symptoms develop when a person stops taking heroin or opioids. The brain's chemistry has adapted to the presence of opioids or opiates, and when the substance is withheld, the receptors malfunction. Prescription medications given in a detox replace illicit substances by binding with the brain's opioid receptors, which relieves withdrawal symptoms.



Symptoms of Opiate & Opioid Withdrawal

Withdrawal symptoms may include:

- Perspiration
- Anxiety
- Abdominal cramping
- Nausea
- Panic
- Agitation
- Diarrhea
- Vomiting
- Death

Treatment Medications for Opiate and Opioid Withdrawal

Treatment Medications for Opiate and Opioid Addiction

Clonidine is used to treat opioid withdrawal by relieving many of the withdrawal symptoms. It doesn't provide any euphoric feelings, so it doesn't reinforce the sensation of being high. It also has a low potential for abuse.

Buprenorphine is an opioid agonist. It comes in an injectable form as a detoxification agent. It's also used for opioid maintenance treatment.

Maintenance Medications for Opiate and Opioid Addiction

Maintenance medications for opiate or opioid addiction may include methadone. The most common form of methadone is a liquid. Methadone is typically administered in a clinic under supervision, which eliminates the risk of overdose and abuse. Methadone can also be used to prevent withdrawal symptoms from opiate drug addiction.

Naltrexone, in the form of a pill, an injectable, or an implant helps people addicted to opiates stay sober.⁶ The drug blocks the effects of opiates if consumed, removing the temptation to use again. The implant under the skin is especially effective, as a person can't skip a dose with the intention of using.

Buprenorphine is a drug that's also used for opioid maintenance treatment. Due to its agonist component, it has a low overdose potential. Buprenorphine, in an oral form, is used for individuals starting treatment for drug dependence. Suboxone, another oral form of buprenorphine, contains both buprenorphine and naloxone. Suboxone is typically prescribed for individuals dependent on opioids who have already started and are continuing medication therapy.⁷

A woman with long brown hair is sitting on a bed, looking down with a sad expression. Her right hand is resting on her head. She is wearing a grey t-shirt and pink and white striped pajamas. The background shows a window with curtains and a wooden floor.

Benzodiazepine Detoxification

Benzodiazepines are primarily used to treat anxiety and insomnia. These types of drugs are also used in alcohol withdrawal to alleviate the agitation seen during detox and withdrawal. While the exact mechanism is not known, this class of drugs is thought to affect the neurotransmitters in the brain, suppressing nerve activity, which in turn relieves the symptoms of anxiety and other psychological disorders.⁸

Commonly prescribed benzodiazepines include:

- Alprazolam (Xanax)
- Clorazepate (Tranxene)
- Clonazepam (Klonopin)
- Clorazepate (Tranxene)
- Chlordiazepoxide (Librium)
- Diazepam (Valium)
- Flurazepam (Dalmane)
- Lorazepam (Ativan)
- Midazolam (Versed)
- Oxazepam (Serax)
- Triazolam (Halcion)
- Temazepam (Restoril)

Benzodiazepine Dependence and Withdrawal

Two serious concerns of prescribing benzodiazepines are the potential for abuse and the development of physical dependence. Most people don't seek out benzodiazepines as a drug of choice to abuse, but those with a history of drug abuse are at a greater risk for seeking benzodiazepines to get high.

Benzodiazepines are typically not the only drug abused. Substance abusers frequently combine benzodiazepines with other drugs to increase their effects, and this is called polysubstance abuse. For example, benzodiazepines are combined with opioid pain relievers to enhance the euphoric effects.

For many, benzodiazepines taken for a short period of time don't cause addiction, tolerance or withdrawal. When benzodiazepines are taken for several months or more, significant increases in the risks for addiction, tolerance and withdrawal symptoms are seen when the doses are reduced or stopped.⁹



Symptoms of Benzodiazepine Withdrawal

When benzodiazepine treatment is stopped abruptly, individuals may develop withdrawal symptoms. Also, withdrawal symptoms typically happen sooner with benzodiazepines that are quickly eliminated from the body.

Common symptoms of benzodiazepine withdrawal include:

- Anxiety
- Insomnia
- Restlessness
- Muscle tightness
- Irritability
- Nausea
- Blurry vision
- Perspiration
- Night terrors
- Depression
- Clumsiness
- Tremors
- Muscle twitches
- Hallucinations
- Delusions
- Seizures

Without a medically supervised detox, the risk of withdrawal seizures—which can become fatal—is greater when a person takes high doses of benzodiazepines, has been taking one of these drugs for a long time or has been using other medications that can make one more vulnerable to seizures. It's important to have medical supervision during benzodiazepine withdrawal as seizures can be fatal.

Treatment Medications for Benzodiazepine Withdrawal

Benzodiazepine withdrawal is treated with intravenous benzodiazepines such as diazepam, which work to control withdrawal symptoms for longer periods of time. Anticonvulsants and sedating antidepressant medications are used in benzodiazepine detoxes to relieve withdrawal symptoms.⁹



Polysubstance Detoxification

In 2015, the Centers for Disease Control and Prevention published a report showing substance abuse involving opioid pain relievers, benzodiazepines and alcohol in the United States has increased. The report describes opioid misuse and abuse as an epidemic, with the use of opioid pain relievers greater than illicit drugs. Alcohol has also been a persistent problem, tied to many deaths independent of other substances.¹⁰

The use of these drugs in combination creates a polysubstance effect with increased central nervous system suppression and a heightened risk of overdose. The study found that combining opioid pain relievers, benzodiazepines and alcohol heightens their effects for users, but also exposes them to significant additional risk of adverse effects, even when prescribed drugs were taken as directed.

Polysubstance Dependence and Withdrawal

Polysubstance addiction develops in individuals who use or abuse more than one substance on a regular basis. This type of substance abuse makes people prone to withdrawal from more than one of these substances, which necessitates a highly complex set of detox protocols. The detox protocol is highly individualized and can be conducted by combining the protocols described above.



Getting Help

Once the body has rid itself of addictive substances, then counseling, therapy, nutrition and aftercare services help achieve sustained sobriety for the long-term.



Medical detoxification isn't a stand-alone treatment for addiction, and appropriate follow-up therapy is needed to maintain sobriety. Relying on detox alone will likely result in an eventual relapse. Once the body has rid itself of addictive substances, then counseling, therapy, nutrition and aftercare services help achieve sustained sobriety for the long-term.

Residential treatment after detox is the safest and most effective choice to remain substance-free. In a residential treatment program, the individual resides at the center during treatment. This is the most effective option because, at first, the psychological cravings and resistance to sobriety will be at their greatest levels. Residential treatment allows for monitoring around the clock where medications and therapies can be administered to relieve any anxiety and agitation.

Long-term residential treatment is a daily schedule of therapy and medications to stabilize an individual. This increases the odds of maintaining sobriety without relapsing. Aftercare services assist in the transition from residential treatment to daily living with the help of outpatient rehab. Using a comprehensive course of treatment that includes detox, inpatient services, outpatient and aftercare programs gives people the tools they need to live rewarding and sober lives.

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Treating Addiction at its Core

Therapy should treat more than just your symptoms. Addiction is a deeply rooted disease—one that can't simply be removed—and the emotions, history and attitudes behind your behaviors need to be resolved in order to heal your mind and body.

Balance creates strength. It is vital that your treatment includes various methodologies to create a solid foundation on which to build your recovery. Our fluid, individualized process completely focuses on your growth and leads you to long-lasting recovery.

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