

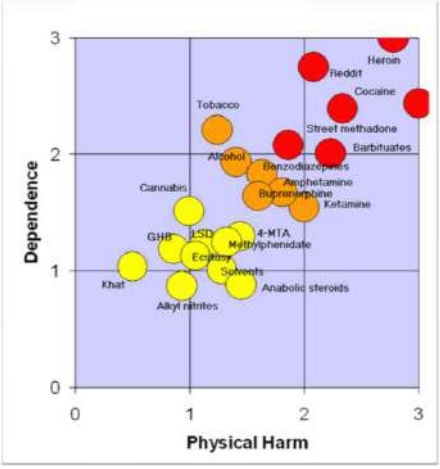
Thanks Justin. In this chapter, we will talk about the different drugs that have the potential to be abused by way of overdose and intoxication. There are many common opioids that are very addictive, and create a lot of damage to the human body. There are also certain drugs that are prescribed as pain killers, but an overdose of the same can be potentially dangerous. Let us discuss the possible ways to assess and manage them.

So, good studying!

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DRUGS OF ABUSE | INTRODUCTION

- Drugs of abuse do the following
  - ✓ Alter person's thinking and judgment
  - ✓ Increase chances for infectious diseases
  - ✓ Adverse effects on pregnancy
  - ✓ Drugged driving
- Narcotic, alcohol, hallucinogens, stimulants and sedatives



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So, what are drugs of abuse?

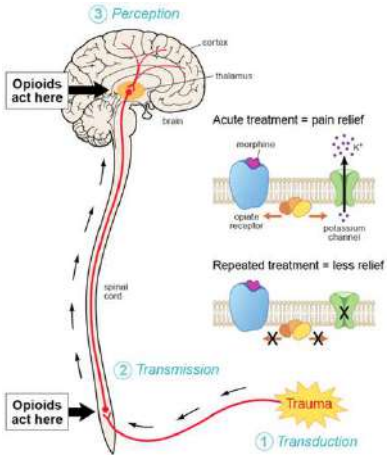
According to the National Institute on Drug Abuse, drugs of abuse are those drugs that can alter a person's thinking and judgment, and can lead to many health risks such as addiction, infectious diseases, drugged driving, and adverse effects on pregnancy.

Some of the drugs of abuse that we will be talking about include, narcotics, alcohol, cannabis, hallucinogens, stimulants, and sedatives.

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Opiates and Narcotics | Causative Agents

- Narcotics and opiates work with receptors in the central nervous system
- They suppress pain
- Opiates are from natural substances
- Narcotics include opiates and fully synthetic products
- Maybe prescribed for acute pain
- Abused for euphoria
- Prolonged use may lead to tolerance, addiction, or both



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Narcotics and opiates are a kind of drug that acts on specific receptors in the central nervous system to suppress pain. It's important to note that these drugs don't relieve pain by addressing the root cause, rather they suppress it, so the patient doesn't feel it.

Now, there is a slight difference between narcotics and opiates.

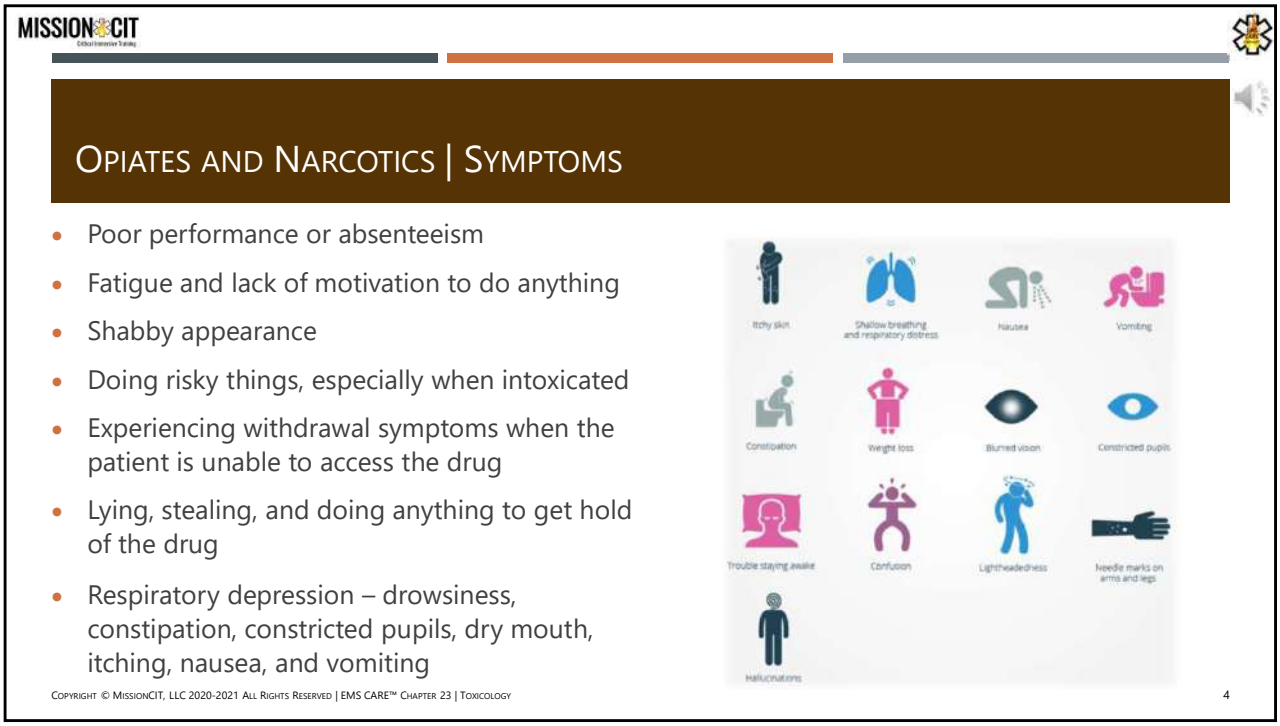
Opiates are the natural substances derived from the opium or cannabis plant. These include drugs like morphine, codeine, and thebaine. It can also include semi-synthetic compounds derived from these

natural substances.

Opioids or narcotics, on the other hand, are substances that act on the opioid receptors in the central nervous system. This includes both opiates and fully synthetic compounds that are made in laboratories.

It merits to note that the term opiate is becoming obsolete now, and all these compounds are being called opioids.

Since opioids decrease the perception of pain, they can be prescribed for acute pain, especially as a part of palliative care. But this is when it can be abused to get a sense of euphoria. Also, its prolonged use may lead to tolerance, addiction, or both.



Opioids, that comprise of both narcotics and opiates, are the most common group of drugs abused in the United States and many other parts of the world.

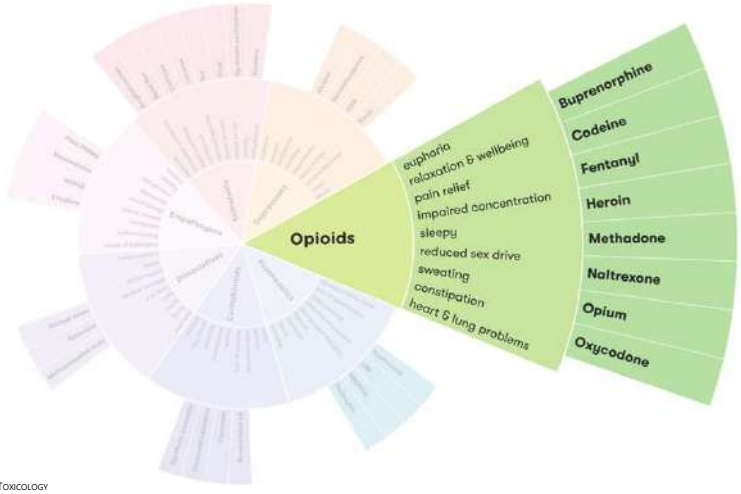
Some of the signs that indicate drug abuse is

- Poor performance or absenteeism in school and work
- Fatigue and lack of motivation to do anything
- Shabby appearance
- Doing risky things, especially when intoxicated
- Experiencing withdrawal symptoms when the patient is unable to access the drug

- Lying, stealing, and doing anything to get hold of the drug.
- Respiratory depression marked by drowsiness, constipation, constricted pupils, dry mouth, itching, nausea, and vomiting

Opiates and Narcotics | Common Opioids

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



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Here is a look at some of the common opioids that are abused.

Heroin is a white, brown, or black powder that is made from morphine, natural compound found in the seedpod of the Asian poppy plant. It can be smoked, snorted, or injected after mixing it with water.

This substance is highly addictive and can cause miscarriages, heart infections, and even death due to overdose. It also increases the chances of contracting infectious diseases like H I V and hepatitis.

Next, we have Oxycodone and morphine. Both are powerful pain killers, and unfortunately, their abuse and overdose are common, and leads to addiction, and sometimes even death.

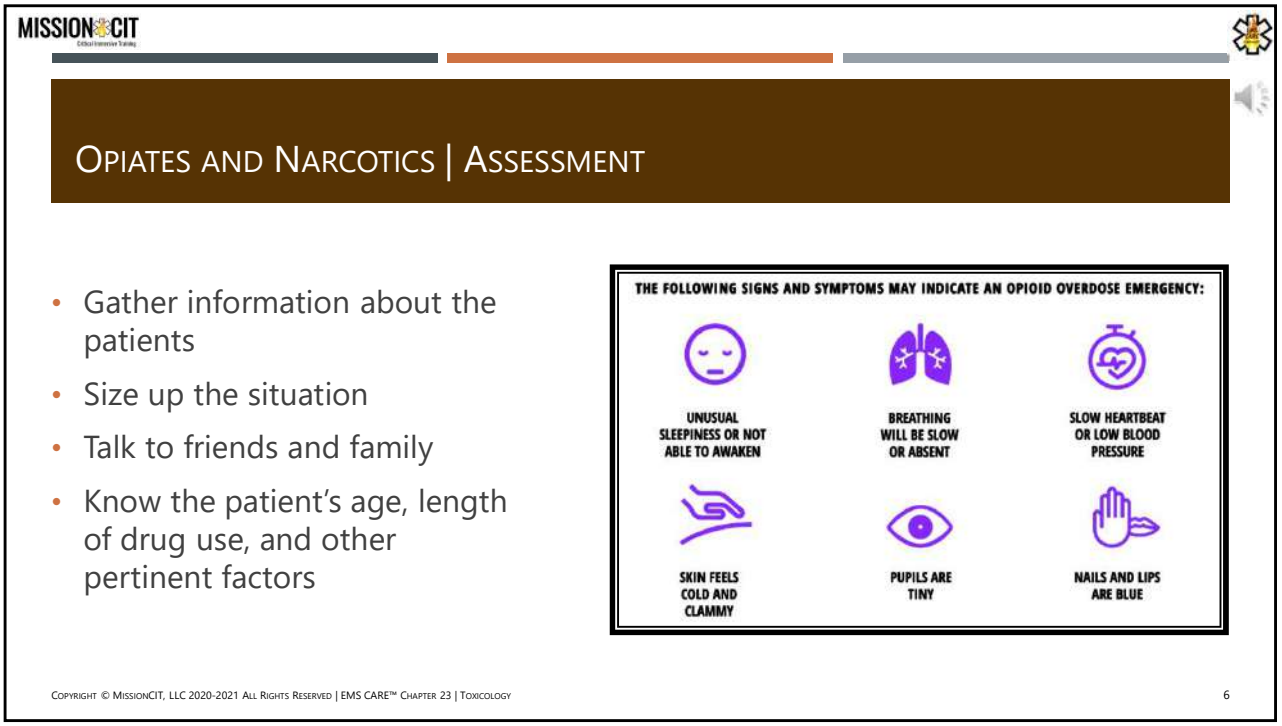
Codeine is another narcotic analgesics used to treat pain, and also has a chance to be abused.

Fentanyl is a synthetic opioid that is about 80 to 100 times stronger than morphine. Though it was originally used to manage the pain emanating from cancer treatment, it is also used as a recreational drug. In fact, it is often mixed with heroin or cocaine to have a rapid onset of euphoria.

Hydromorphone and Hydrocodone are another powerful pain killer that is used when all other medications fail to relieve pain. They are consumed in the form of tablets, and are known to be long acting.

Meperidine is a drug used to relieve mild to moderate pain. It is similar to local anesthetics, and may be used before or during a surgery.

Finally, we have methadone, a pain reliever, that is also one of the most commonly used drugs. Coincidentally, it is used to treat the long-term addiction of heroin.



When confronted with a possible opioid or narcotic overdose, first do a primary assessment, and look to remedy life-threatening conditions. Time is of the essence as the patient may have breathing difficulty or not be breathing at all.

Be sure to evaluate scene safety. Look for telltale signs of drug use, drug paraphernalia, or other risks to the patient or first responders.

The secondary assessment should focus on symptoms for opioid overdoses as this can lead to death from its effects on the part of the brain which regulates breathing. An opioid overdose may be identified by a

combination of three signs and symptoms:

1. pinpoint pupils;
2. unconsciousness; and
3. difficulties with breathing.

In addition, other opiate or narcotic symptoms may include:

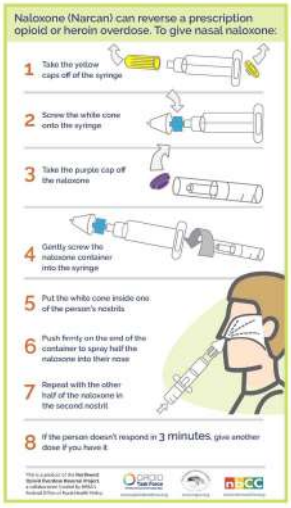
- Pupils will contract and appear small
- Muscles are slack and droopy
- The patient might “nod out”
- Scratching a lot due to itchy skin
- Speech may be slurred
- They might be out of it, but they will respond to outside stimuli like loud noise or a light shake from a concerned friend.

Note the specific symptoms, patient condition, and gather information from friends, family or bystanders to share with medical control as appropriate.

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OPIATES AND NARCOTICS | HANDLING EMERGENCIES

- Stabilize the patient
- Administer Naloxone or Narcan, but check local protocols
- Naloxone reverses respiratory depression
- Check if it was administered by other first responders
- Doesn't work with non-opioid drugs
- Contraindicated on neonates < 1 month and for those with known allergies
- Call poison control for pediatric poisonings



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So, when handling emergencies due to drug overdose, the first step is to stabilize the patient. Then depending on your assessment, be prepared to administer Naloxone or Narcan. But before you do, check the local protocols on its administration.

Naloxone is a popular opioid antagonist as it reverses respiratory depression caused by opioid overdose. It can be injected intranasally or through an auto-injector. However, check if bystanders have administered it before your arrival, as it can be given by the public or other first responders trained in its use.

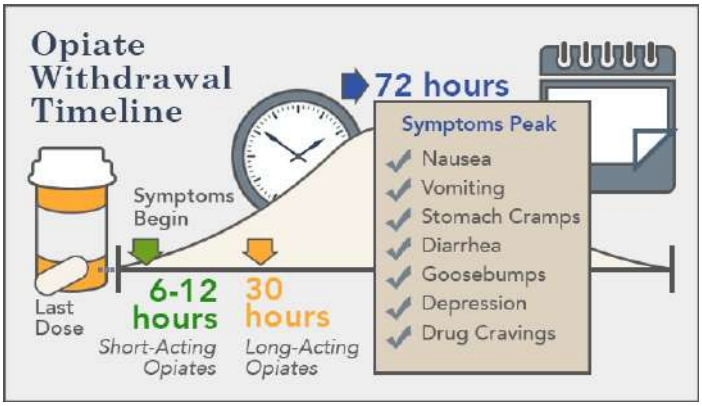
A couple of things to keep in mind here. Firstly, Naloxone does not work with non-opioid drug overdose. And it is contraindicated for neonates less than one month old.

And, If you’re handling a pediatric overdose, call the poison control as soon as practical.

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OPIATES AND NARCOTICS | TREATMENT AND MANAGEMENT

- Detoxification
- Medications
- Cognitive behavioral therapy



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There are many ways to treat and manage opioid abuse. The exact treatment would depend on the drug that is abused and the patient's age. Broadly speaking, there are three prominent management strategies. They are:

- Detoxification, where the patient stops taking the drugs, and over time, the drugs and their effects leave the body. Though this is a necessary treatment, it may not be easy as the patient may experience withdrawal symptoms, and would require constant medical supervision
- Medications can control the cravings, and can provide relief for the withdrawal symptoms. For drug abuse, many healthcare providers tend to use Methadone, buprenorphine and naltrexone, as they are FDA-approved.
- Cognitive behavioral therapy and talk therapy can help the patient to deal with the root cause of addiction.

During this time, the patient needs a lot of mental and physical support. More importantly, the cause of addiction must be addressed to ensure there is no relapse.

Alcohol | Symptoms

- Alcohol Abuse and Alcoholism
- Symptoms
  - ✓ Slurred speech slow reflex
  - ✓ Difficulty in concentrating
  - ✓ Poor decision-making
  - ✓ Risky behaviour
  - ✓ Blackouts
  - ✓ Breathing problems, coma, or even death in extreme cases



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Drinking too much alcohol and too often can have a detrimental effect on the human body. There are two broad issues that come up with alcohol consumption and they are, alcohol abuse, and alcoholism. Though these two terms are used interchangeably, they are actually very different. The key difference is that in alcohol abuse, people tend to drink a lot on certain occasions that could lead to risky behavior. Alcoholism, on the other hand, is when people are dependent on alcohol, and need at all times, even to do basic activities and to get through their day. Some of the symptoms common

to both the conditions are slurred speech, slow reflex, difficulty in concentrating, poor decision-making, risky behavior, and sometimes even a blackout where a person is conscious, but has no memories of their words and actions. If a person has consumed extremely high levels of alcohol, it can cause breathing problems, coma, or even death. Some other signs to watch for include problems with family and friends, driving under influence, neglecting responsibilities, and legal problems due to alcohol consumption. Many times, these people grapple with mental problems like loneliness, depression, and emotional stress.

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ALCOHOL | ASSESSMENT

- Stabilize the patient
- Screening tests
- Unwilling to cooperate
- Call for help



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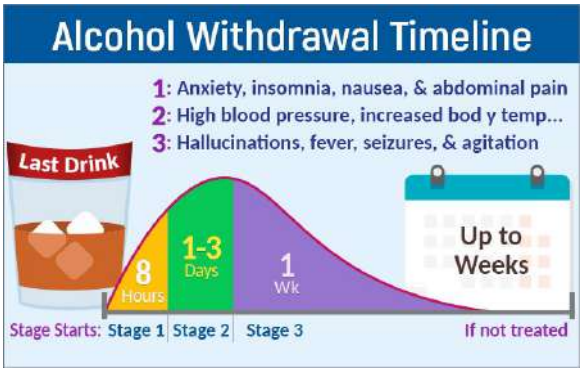
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There are many screen tests available to assess if a person has alcohol abuse or alcoholism, and you can choose the one recommended by your local authorities.

A common test used for assessment is called the Alcohol Use Disorders Identification Test or AUDIT, in short. This test has a few questionnaires on the age and frequency of alcohol consumption and the ability of a patient to go without drinking alcohol for extended periods.
That said, be aware of the patient's condition, as many patients may not be able to, or willing to answer these questions. Be ready to call for help if you have to.
Also, be ready to stabilize the patient and provide the necessary treatment before the patient is ready to answer questions.

Alcohol Withdrawal | Symptoms

- Brain and central nervous system are used to alcohol
- Lack of alcohol causes mental and physical problems
- Mild symptoms: anxiety, shaking hands, headache, sweating, insomnia, vomiting, and nausea
- Serious symptoms: hallucinations, delusions, confusion, fever, high blood pressure, and a racing heart



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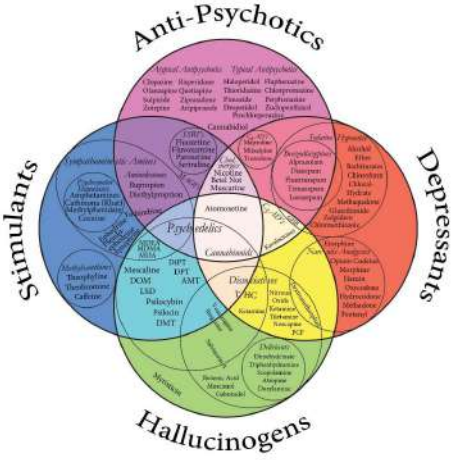
When a patient has been drinking alcohol for weeks, months, or years, the brain and the body are used to it. What essentially happens is that the brain slows down and the nerves change the way messages are sent back and forth. Overall, the central nervous system adjusts to having alcohol at all times, and the body is forced to work hard to keep the brain awake, and to make the nerves talk to each other. Suddenly when the patient stops consuming alcohol, it leads to physical and mental problems because it can take some time for the brain and the body to get used to not having alcohol. These are

called alcohol withdrawal symptoms. These can range from mild to severe.
The mild symptoms include anxiety, shaking hands, headache, sweating, insomnia, vomiting, and nausea, while the more serious symptoms include hallucinations, delusions, confusion, fever, high blood pressure, and a racing heart.

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OTHER CAUSATIVE AGENTS

- Cannabis – A drug from the cannabis plants
- Hallucinogens – Alters a patient's awareness
- Stimulants – Large doses are dangerous
- Barbiturates/sedatives/ hypnotics – Puts the patient to sleep



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So far, we have seen the effects, symptoms, assessment, and management of narcotics and alcohol, including the withdrawal symptoms that may come as a part of the detox treatment.

Now, we will briefly touch on other causative agents that have a possibility of abuse. These agents also have a detrimental effect on the body and brain, and the patient may require help to recover from it.

Some of these causative agents are cannabis, hallucinogens, stimulants, and sedatives. First off, Cannabis is a drug that comes from plants such as

Cannabis sativa and Cannabis Indica. This is a depressant drug that can slow down the central nervous system and the messages between the body and the brain, thereby reducing your reflex and decision-making abilities.

Next, hallucinogens, as the name suggests, is a drug that alters a patient's awareness of the surroundings and one's emotions and feelings. They cause hallucinations or images that seem real to the patient, but in reality, they are not. There are two types of hallucinogens and they are classic hallucinogens and dissociative hallucinogens. A key difference is that dissociative hallucinogens create an additional disconnect from the body, and this can make the patient feel out of control of everything.

The third causative agent is stimulants. These are a class of drugs that increase the rate of communication between the nerves and the brain. This makes a person feel more awake, aware, and energetic. However, large doses can lead to overstimulation, resulting in anxiety, panic, seizures, and headaches. Finally, we have sedatives or hypnotics that are a kind of drug used to reduce tension and anxiety among patients. These drugs provide a calming effect when consumed in small doses, and a sleep-inducing effect in large doses. It is important to note that a hypnotic drug is slightly different from a

sedative as it puts the patient at a stage of sleep from where the recipient can be aroused easily.



The symptoms can vary greatly between the different causative agents, but some of the common ones include depression, anxiety, agitation, increased heart palpitations, feelings of guilt, anger, mood swings, reduced self-esteem, insomnia, shabby appearance, difficulty concentrating, poor performance, and memory problems.

Other Causative Agents | Assessment and Management

- Detox
- Medication, if needed
- Supportive and positive environment



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As with drug abuse, the treatment includes detox, medication if needed, and above everything, a supportive and positive environment that would help a patient to recover mentally and physically.

Regular talk therapy sessions can help in identifying the cause of the problem and reducing the chances for the patient to get back to it again.

Group therapy sessions go a long way as it helps patients who have gone through bouts of drug abuse to come together and support each other in the process.

With this, we come to the end of this lesson, and Justin will take you through the next lesson on poisonings and exposures.