

Effects of Drugs on Mental Health

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ABSTRACT

People take drugs for many different reasons. You may begin out of curiosity, rebelliousness, or because your friends take them. You may enjoy taking them and want to repeat the experience. You may take drugs when you're unhappy, stressed or trying to cope with problems in your life. If you have a mental health diagnosis, you may use drugs to help you cope with the symptoms. Drugs can act as a temporary prop to get you through difficult times. However, drugs can make difficult feelings and emotions even worse. And in the long term, any feelings of relief won't last. You may find yourself using more and more drugs to deal with your problems and risk becoming dependent on them – which can create new problems for you. There are different ways drugs can affect your mental health. For some people, taking drugs can lead to long-term mental health problems. Regular cannabis use can increase your risk of anxiety or depression. There's also a link between using stronger cannabis and developing psychosis or schizophrenia. The Rethink website has more information on cannabis and mental health. Stimulant drugs can make you feel depressed, anxious and paranoid. Cocaine – a type of stimulant – can make previous mental health problems recur and trigger psychosis and schizophrenia. Ecstasy users can experience memory problems. Hallucinogenic drugs such as magic mushrooms can make any mental health issues worse. They can make you feel detached from your surroundings and cause flashbacks, which can be frightening or distressing. Mixing it with alcohol or drugs can be dangerous or even fatal if you take medication. Mind has more information about the possible effects of mixing different drugs. You may feel you're no longer in control of your drug use or need to take more of it to feel an effect. If so, you could be becoming addicted. Drug addiction is linked to mental health problems. Taking any drug can be dangerous.

KEYWORDS: *drugs, stimulants, hallucinogenic, mind, addiction, morphine, cocaine, opium, cannabis.*

Introduction

Generally, drug misuse or SUD refers to the use of psychoactive drugs, which are substances that affect the brain. The effects on the body depend Trusted Source on the type of substance a person uses and their health history.¹

Examples of common psychoactive drugs include:

- alcohol
- cannabis
- cocaine
- heroin
- hallucinogens
- inhalants
- prescription opioids

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- prescription stimulants
- methamphetamine
- tobacco or nicotine

Nicotine is a naturally produced alkaloid in the nightshade family of plants (most predominantly in tobacco and *Duboisia hopwoodii*)^[7] and is widely used recreationally as a stimulant and anxiolytic. As a pharmaceutical drug, it is used for smoking cessation to relieve withdrawal symptoms.^{[8][5][9][10]} Nicotine acts as a receptor agonist at most nicotinic acetylcholine receptors (nAChRs),^{[11][12][13]} except at two nicotinic receptor subunits (nAChR α 9 and nAChR α 10) where it acts as a receptor antagonist.

Psychoactive drugs are chemical compounds that affect the mind and body.

Taking different drugs may cause:

- changes in coordination
- blood pressure and heart rate changes
- feelings of being more awake or sleepy
- improved sociability
- pain relief
- changes in the appearance of a person's body²

When chronic substance use occurs over a long period, these short-term physical effects may cause long-term changes to a person's brain and body. The specific physical effects of substance use may vary among individuals and depend on the substance, dosage, delivery method, and length of use. Substance use can sometimes lead to serious health consequences, including Trusted Source overdose and death. Using any drug can cause short-term physical effects. The following are examples of common drugs, their short-term physical effects, and potential health risks due to SUD.³

- alcohol
- ✓ deficits in coordination
- ✓ a quickened heartbeat
- ✓ reddening of the skin or face
- ✓ dizziness
- ✓ nausea and vomiting
- ✓ potential hypothermia
- ✓ potential coma
- methamphetamines
- ✓ increased wakefulness and physical activity
- ✓ decreased appetite
- ✓ increased breathing
- ✓ increased or irregular heart rate
- ✓ increased blood pressure

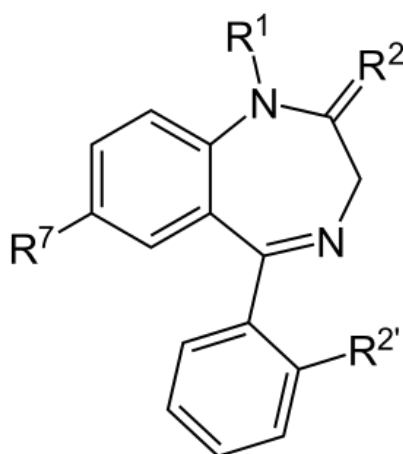
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- ✓ increased temperature⁴
- cocaine

Cocaine (from French: *cocaïne*, from Spanish: *coca*, ultimately from Quechua: *kúka*)^[14] is a tropane alkaloid and central nervous system (CNS) stimulant. As an extract, it is mainly used recreationally, and often illegally for its euphoric and rewarding effects. It is also used in medicine by Indigenous South Americans for various purposes and rarely, but more formally as a local anaesthetic by medical practitioners in more developed countries. It is primarily obtained from the leaves of two Coca species native to South America; *Erythroxylum coca* and *E. novogranatense*.^{[15][16]} After extraction from the plant, and further processing into cocaine hydrochloride (powdered cocaine), the drug is administered by being either snorted, applied topically to the mouth, or dissolved and injected into a vein. It can also then be turned into free base form (typically crack cocaine), in which it can be heated until sublimated and then the vapours can be inhaled.^[12]

- ✓ narrowed blood vessels
- ✓ enlarged pupils
- ✓ increased body temperature, heart rate, and blood pressure
- ✓ headache
- ✓ abdominal pain and nausea
- ✓ erratic and violent behavior
- ✓ heart attack
- ✓ stroke
- ✓ seizure
- ✓ coma
- benzodiazepines⁵

Benzodiazepines (BZD, BDZ, BZs), colloquially called "**benzos**", are a class of depressant drugs whose core chemical structure is the fusion of a benzene ring and a diazepine ring. They are prescribed to treat conditions such as anxiety disorders, insomnia, and seizures. The first benzodiazepine, chlordiazepoxide (Librium), was discovered accidentally by Leo Sternbach in 1955 and was made available in 1960 by Hoffmann–La Roche, who soon followed with diazepam (Valium) in 1963.^[1] By 1977, benzodiazepines were the most prescribed medications globally; the introduction of selective serotonin reuptake inhibitors (SSRIs), among other factors, decreased rates of prescription, but they remain frequently used worldwide.^{[2][3]}

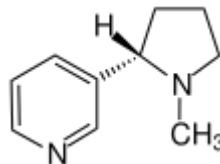


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- ✓ slurred speech
- ✓ dizziness
- ✓ problems with movement
- ✓ slowed breathing
- ✓ lowered blood pressure
- heroin and other opioids⁶

Bayer's original trade name of heroin is typically used in non-medical settings. It is used as a recreational drug for the euphoria it induces. Anthropologist Michael Agar once described heroin as "the perfect whatever drug."^[24] Tolerance develops quickly, and increased doses are needed in order to achieve the same effects. Its popularity with recreational drug users, compared to morphine, reportedly stems from its perceived different effects.^[25]

- ✓ dry mouth
- ✓ itching
- ✓ nausea
- ✓ vomiting
- ✓ slowed breathing and heart rate
- tobacco and nicotine⁷



- ✓ increased blood pressure
- ✓ increased breathing
- ✓ increased heart rate
- ✓ greatly increased risk of cancer — lung cancer due to smoking Trusted Source or oral cancer due to chewing
- ✓ chronic bronchitis
- ✓ emphysema
- ✓ heart disease
- ✓ leukemia
- ✓ cataracts
- ✓ pneumonia

Long-term physical effects

Using substances for an extended time may have long-term health consequences. These lasting effects depend on multiple factors, including the substance, the amount, and how long a person has used it. Examples of commonly used drugs and potential long-term physical effects of SUD include:⁸

- alcohol:

Alcohol is a depressant, which in low doses causes euphoria, reduces anxiety, and increases

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sociability. In higher doses, it causes drunkenness, stupor, unconsciousness, or death. Long-term use can lead to an alcohol use disorder, an increased risk of developing several types of cancer, cardiovascular disease, and physical dependence. As reported by WHO, alcohol is the highest risk-group carcinogen, and no quantity of its consumption can be considered safe; the temperance movement advocates against the consumption of alcoholic beverages and those who do not use alcoholic drinks are known as teetotalers.^{[4][5]}

- ✓ heart disease
- ✓ stroke
- ✓ liver disease and inflammation (alcoholic liver disease)
- ✓ pancreatitis
- ✓ digestive problems
- ✓ cancer of breast, mouth, throat, esophagus, voice box, liver, colon, and rectum
- ✓ weakened Trusted Source immune system
- ✓ alcohol use disorder or alcohol dependence⁹
- methamphetamines:

Methamphetamine (contracted from *N-methylamphetamine*) is a potent central nervous system (CNS) stimulant that is mainly used as a recreational drug and less commonly as a second-line treatment for attention deficit hyperactivity disorder and obesity.^[17] Methamphetamine was discovered in 1893 and exists as two enantiomers: levo-methamphetamine and dextro-methamphetamine. *Methamphetamine* properly refers to a specific chemical substance, the racemic free base, which is an equal mixture of levomethamphetamine and dextromethamphetamine in their pure amine forms. It is rarely prescribed over concerns involving human neurotoxicity and potential for recreational use as an aphrodisiac and euphoriant, among other concerns, as well as the availability of safer substitute drugs with comparable treatment efficacy such as Adderall and Vyvanse. Dextroamphetamine is a stronger CNS stimulant than levomethamphetamine.¹⁰

- ✓ severe dental problems
- ✓ weight loss
- ✓ intense itching leading to skin sores
- ✓ risk of HIV, hepatitis, and other diseases from shared needles
- cocaine and heroin — when a person snorts them, these drugs may cause:
 - ✓ loss of sense of smell
 - ✓ nosebleeds
 - ✓ nasal damage and trouble swallowing
- other effects include:
 - ✓ infection and death of bowel tissue from decreased blood flow
 - ✓ inadequate nutrition and weight loss
 - ✓ collapsed veins
 - ✓ abscesses

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- ✓ infection of the lining and valves of the heart
- ✓ constipation and stomach cramps
- ✓ liver or kidney disease
- ✓ pneumonia
- ✓ fatal overdose¹¹
- tobacco or nicotine:
 - ✓ greatly increased risk of cancer — lung cancer due to smoking^{Trusted Source} or oral cancer due to chewing
- ✓ chronic bronchitis
- ✓ emphysema
- ✓ heart disease
- ✓ leukemia
- ✓ cataracts
- ✓ pneumonia¹²

Discussion

Mental effects of drug misuse

Long-term SUD may affect^{Trusted Source} a person's memory, behavior, learning, consciousness, and concentration. Substances, such as alcohol, cannabis, stimulants, and opioids, are psychoactive drugs that may change an individual's brain function and structure after chronic use. This can result^{Trusted Source} in cognitive and behavioral changes and deficits that may remain even after someone stops using. The exact mental or cognitive effects of SUD may vary depending on the type of drug and the duration of use. SUD may also exacerbate symptoms of other mental disorders, and early drug use is a strong risk factor for the later development of substance use disorders. It may also be a risk factor for developing other mental illnesses. For example, frequent cannabis use in adolescents can increase the risk of psychosis in adulthood in individuals who carry a particular gene variant.¹³

Short-term mental effects

Examples of common drugs and their short-term mental effects include:

- alcohol:
 - ✓ feelings of euphoria
 - ✓ reduced anxiety
 - ✓ easing of social interactions
 - ✓ irritability and anxiety upon withdrawal
- cannabis:

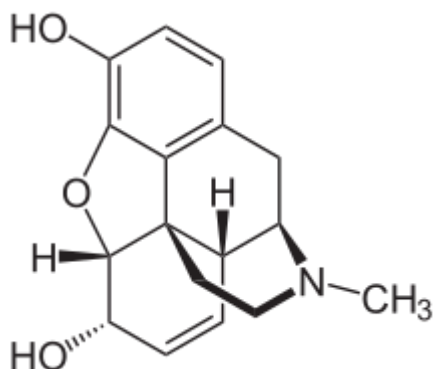


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- ✓ enhanced sensory perception
- ✓ feelings of euphoria and relaxation
- ✓ anxiety
- ✓ irritability upon withdrawal
- benzodiazepines:
 - ✓ drowsiness
 - ✓ concentration issues¹⁴
 - ✓ dizziness
 - ✓ reduced anxiety
 - ✓ problems with memory
- heroin:
 - ✓ feelings of euphoria
 - ✓ restlessness upon withdrawal
- prescription opioids:



- ✓ pain relief
- ✓ drowsiness
- ✓ feelings of euphoria
- methamphetamine:
- morphine¹⁵



- ✓ increased wakefulness
- ✓ anxiety upon withdrawal

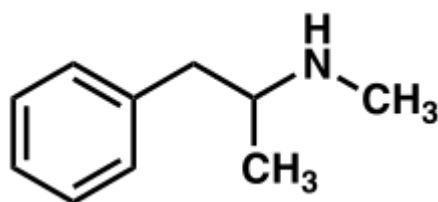
Long-term mental effects

Examples of common drugs and mental effects associated with long-term SUD [include:](#)

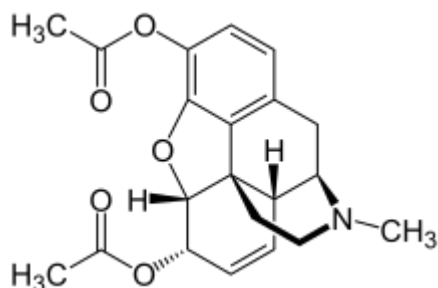
- alcohol:
 - ✓ depression

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- ✓ anxiety
- ✓ learning and memory problems
- ✓ social problems
- prescription opioids:
- ✓ increased risk of overdose
- methamphetamines:¹⁶



- ✓ anxiety
- ✓ confusion
- ✓ insomnia
- ✓ mood problems
- ✓ violent behavior
- ✓ paranoia
- ✓ hallucinations
- ✓ delusions
- heroin:



- ✓ risk of overdose
- tobacco and nicotine:
- ✓ in teens, they can affect the development of brain circuits that control attention and learning
- ✓ irritability, attention and sleep problems, and depression upon withdrawal
- cannabis:¹⁷
- ✓ mental health problems
- ✓ irritability, trouble sleeping, anxiety upon withdrawal

Results

To get a diagnosis of SUD, a person has to qualify for 11 criteria that the DSM-5 outlines (**The Diagnostic and Statistical Manual of Mental Disorders**).¹⁸

These include:

- ✓ using more of a substance than a person intends or using it for longer than they mean to

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- ✓ trying to cut down or stop using the substance but being unable to
- ✓ experiencing intense cravings or urges to use the substance
- ✓ needing more of the substance to get the desired effects (tolerance)
- ✓ developing withdrawal symptoms when not using the substance
- ✓ spending more time getting and using drugs and recovering from substance misuse
- ✓ continuing to use even when it causes relationship problems
- ✓ giving up important or desirable social and recreational activities due to substance use
- ✓ using substances in potentially harmful settings that put a person in danger
- ✓ continuing to use despite the substance causing problems to physical and mental health¹⁹

SUD (substance use disorder) prevalence

Government data shows that SUD tends to be more common among Black people than Hispanics, Asians, and people who are white. SUD is more common in males among people who are white, Black or African Americans, American Indians or Alaska Natives, and those who identify as two or more races. However, it is difficult to determine the accuracy of data on racial disparities. In the United States, ²¹historically, the “war on drugs” has meant that Black Americans are 6–10 times more likely to be incarcerated for drug offenses even though they are not necessarily more likely to use illegal drugs. ²⁴This imbalance may impact prevalence data. In addition, SUD from illegal opioids is a large public health problem in the U.S. that can lead to overdose and death. In some cases, SUD can result from prescription opioids, but the bulk of the crisis stems from illegal or “street” drugs. More than 760,000 people have died since 1999 from opioid overdoses. In 2018, two out of three overdoses had links to opioid use.²⁰

Conclusions

Drugs can trigger a ‘psychosis’ or ‘psychotic episode’ in some people. This means a person experiences hallucinations (seeing, hearing and feeling things that are not there), delusions (an unshakeable belief in something untrue), they have confused and disturbed thoughts and lack of insight of themselves. Psychosis is the most severe form of mental disorder and most cases are nothing to do with drug use. ²² A psychosis could be a direct cause of a certain substance, due to lack of sleep, triggered by an existing condition or be experienced as part of withdrawal from a substance. A drug induced psychosis could be a difficult experience for you and those around you. Drugs can have very unpredictable effects on mood and also make people more impulsive. ²³This can cause some people feel suicidal in the short or the long term. The effects of some drugs could make existing feelings or conditions even worse. Some people may find the days after they use drugs difficult as part of a ‘come down’ or for some, external factors such as drug debt could cause them difficulty.²⁵

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