



SUBSTANCE USE DISORDERS

The **SUBSTANCE** involved are naturally a member of the 10 classes of drugs that typically cause substance-related disorders namely:

- Alcohol
- Antianxiety and sedative drugs
- Caffeine
- Cannabis (including marijuana and synthetic cannabinoids)
- Hallucinogens (including LSD, phencyclidine, and psilocybin)
- Inhalants (such as paint thinner and certain glues)
- Opioids (including fentanyl, morphine, and oxycodone)
- Stimulants (including amphetamines and cocaine)
- Tobacco
- Other (including anabolic steroids and other commonly abused substances)

These substances all **directly activate the brain reward system and produce feelings of pleasure**. The activation may be so intense that patients intensely crave the substance and neglect normal activities to obtain and use it.

People **USE** drugs for a variety of reasons:

- To alter or enhance **mood**
- As part of religious **ceremonies**
- To obtain spiritual enlightenment
- To enhance **performance**

Substance use **DISORDERS** are a type of substance-related disorder that involve a pathologic pattern of behaviour in which patients **continue to use a substance despite experiencing significant problems related to its use**. There may also be physiologic manifestations, including changes in brain circuitry.

PROGRESSION DEPENDS ON THE INTERACTION BETWEEN THE DRUG, THE USER AND THE SETTING

People with a substance use disorder usually progress from experimentation to occasional use and then to heavy use and sometimes a substance use disorder.

DRUG - The likelihood for a drug to cause a substance use disorder depends upon a combination of factors including:

- Route of administration
- Rate at which the drug crosses the blood-brain barrier and stimulates the reward pathway
- Time to onset of effect
- Ability to induce tolerance and/or withdrawal symptoms

In addition, substances that are legally and/or readily **available** (eg, alcohol, tobacco) are more likely to be used initially and thus risk progression to problematic use.



USER - Predisposing factors include:

- Physical/**genetic** factors
- Personal characteristics - are not clearly a strong factor, although people with **low levels of self-control** (impulsivity) or **high levels of risk-taking** and novelty-seeking may have an increased risk of developing substance use disorder.
- Circumstances and coexisting disorders appear to increase risk. For example, people who are sad, **emotionally distressed**, or **socially alienated** may find these feelings are temporarily relieved by a drug; this can lead to increased use.

Patients with **chronic pain** (eg, back pain, pain due to sickle cell disease, neuropathic pain, fibromyalgia) often require opioid drugs for relief; many subsequently develop a substance use disorder. However, in many of these patients, non-opioid drugs and other treatments can adequately relieve pain and suffering.

SETTING - Cultural and social factors are very **important in initiating and maintaining (or relapsing to)** substance use. **Observing** family members (eg, parents, older siblings) and peers using substances increases risk that people will begin using substances. People who are trying to stop using a substance find it much more difficult if they are **around others who use** that substance.

Physicians may inadvertently contribute to harmful use of psychoactive drugs by overzealously prescribing them to **relieve stress**. Many social factors, including mass media, contribute to patients' expectation that drugs should be used to relieve all distress.