

3 The common drug groups

3.1 Cannabis/hallucinogens

Cannabis (marijuana, hash, grass, dope)

Lysergic acid diethylamide (LSD, acid)

Psilocybin (magic mushrooms)

Datura (angel's trumpet)

Anticholinergic drugs, (benztropine, benzhexol, orphenadrine)

Cannabis is by far the most commonly used hallucinogen. Cannabis is derived from the hemp plant and contains the active substrate tetrahydrocannabinol (THC). THC exerts its effects via the central nervous system producing a mixture of hallucinogenic, delusional and depressant effects along with other centrally-mediated peripheral autonomic effects.

The drug is often used in group settings as it enhances sociability and at low doses causes a high that includes feelings of relaxation and happiness. In larger doses (larger amounts, parts of the plant with higher concentration, more potent cultivars), cannabis may produce effects similar to LSD.

LSD is a hallucinogenic or psychedelic drug. LSD and regular cannabis use can trigger underlying mental disorders and produce delusions, paranoia and schizophrenia-like states, particularly in people with a family history. These substances can also produce extreme anxiety states or panic attacks, not only while the person is under the influence of the drug, but for some time after.

Psilocybin causes similar effects to LSD; however, these effects are not usually as intense or long lasting. Anticholinergic drugs, e.g. benztropine, benzhexol or orphenadrine may be prescribed to alleviate extrapyramidal symptoms in patients with psychosis. However, these drugs may themselves lead to hallucinations and are therefore sometimes sold for recreational use. Several psychotropic drugs have less marked anticholinergic effects, e.g. tricyclic antidepressants or thioridazine, and may interact with prescribed or illicit drugs to produce an anticholinergic psychosis.

Effects sought from the substance:

Cannabis: Relaxation, increased appetite (and antiemetic effects), feelings of happiness, analgesia, sleepiness as well as feelings of sharpened sensory awareness. *Hallucinogens (e.g. LSD and psilocybin):* Perceptual changes such as hallucinations.

Associated harms:

Cannabis: Hallucinations, anxiety, panic attacks, paranoia, nausea, impaired judgment and motor coordination, dependence, reduced motivation, persistent cognitive impairment while using the drug, acute and chronic lung problems.

Hallucinogens (e.g. LSD and psilocybin): Dissociation, disordered thought, flashbacks and frightening hallucinations and delusions which can lead to violence.

Overdose:

Cannabis: Risk is small.

Hallucinogens (e.g. LSD and psilocybin): LSD is not so much associated with overdose; however, a 'bad trip' may result in hallucinatory experiences which take on a menacing quality accompanied by paranoid delusions, often resulting in accidental or intentional self harm.

Withdrawal:

Cannabis: Unlikely although symptoms may include anorexia, disturbed sleep, irritability and moodiness.

Hallucinogens (e.g. LSD and psilocybin): There is little evidence of dependence, and therefore withdrawal, as drugs tend to be aversive rather than reinforcing.

Psychological presentations commonly associated with use (likely to resolve on cessation of substance use):

Cannabis: Depression⁽⁴⁻⁶⁾, anxiety⁽⁶⁻¹³⁾, precipitation of psychotic symptoms^(2, 14, 15).

LSD: Precipitation of schizophrenia.

3.2 Alcohol

Alcohol (ethanol) is one of the most commonly used and misused substances. It is a depressant drug that slows down body reactions and general brain function. Alcohol is readily available and its excessive consumption has become part of Australian culture.

In Australia, the 12 month prevalence of harmful use of alcohol is 3.0% while the prevalence of dependence is 3.5%. Men are twice as likely to experience dependence compared with women.

The secondary effects of alcohol make it dangerous with motor vehicle accidents, alcohol-related violence (including domestic violence) and liver disease which are all major causes of morbidity and mortality.

The depressive effects of alcohol make it a significant risk factor in the development of mental health problems, particularly depression.

Effects sought from the substance: Relaxation and reduced social inhibition.

Associated harms: Slurring of speech, reduced motor-coordination, reduced vision and consciousness, liver disease, gastrointestinal disease, anaemia, malnutrition (thiamine deficiency), central nervous system disturbances (from psychosis through to dementia) and heart disease.

Overdose: Moderate risk of overdose. Alcohol becomes particularly dangerous when used in conjunction with other depressant substances (e.g. benzodiazepines).

Withdrawal: If dependence is established, then withdrawal effects include nausea and vomiting, agitation, tremor, sweating, hallucinations, and seizures. Withdrawal can be life threatening.

Psychological presentations commonly associated with use (likely to resolve on cessation of substance use): Depression^(16, 17) and anxiety^(10, 18-23).

3.3 Opioids

Heroin, codeine, morphine, oxycodone, hydromorphone, buprenorphine, pethidine, dextropropoxyphene, methadone, tramadol *

Opiates are analgesic drugs derived from the opium poppy. The term 'opioids' includes both opiates (based on naturally occurring compounds) and synthetic compounds that act on opiate receptors.

Opioids are generally taken to produce a sense of wellbeing and to reduce the effects of stress and pain.

Opioids are addictive and habit forming. Regular use quickly creates tolerance leading the user to seek increasingly larger doses of the drug to achieve the same effect. Physical withdrawal effects, while very unpleasant, are rarely life-threatening.

Opioids are frequently injected. Harmful chemical contaminants used as cutting agents may include talc, glucose, quinine and strychnine.

Effects sought from the substance: Sense of wellbeing, reduction in stress and pain relief.

Associated harms: Respiratory depression, clouded mental functioning, nausea, vomiting, sweating, itchy skin, constipation, and lung complications (due to aspiration in overdose).

Problems associated with injecting drug use include: scarred or collapsed veins, abscesses, bacterial infections, blood borne viruses (e.g. hepatitis B and C, Human Immunodeficiency Virus [HIV]), thrombophlebitis, intravascular sepsis, endocarditis, accidental arterial injection and peripheral ischaemia.

Long-term opioid use can result in gonadal suppression, reduced bone density and increased osteoporotic fracture risk.

Overdose: Opioids carry a high risk of lethal overdose. Overdose results in respiratory and cardiovascular depression and loss of consciousness which leads to death. Tolerance to opioids develops rapidly resulting in the use of increasing amounts of unknown drug purity, heightening the risk of accidental overdose.

Withdrawal: In the dependent person, withdrawal is uncomfortable, somewhat resembling influenza. Features include rhinorrhoea, lacrimation, shivers and sweats, pilo-erection, sleeplessness, restlessness and agitation, abdominal and general muscular pains, diarrhoea and nausea.

Psychological presentations commonly associated with use (likely to resolve on cessation of substance use): Depression⁽²⁴⁻²⁷⁾ and anxiety^(11, 25, 28, 29).

*atypical opioid with significant serotonergic effect

3.4 Stimulants (including methamphetamine)

Cocaine, dexamphetamine, methamphetamine (including crystal and ice), ecstasy (3,4 - methylenedioxymethamphetamine, MDMA), methylphenidate, ephedrine, pseudoephedrine (Sudafed)

Stimulants are drugs that are purported to enhance sociability, confidence and alertness while reducing inhibition. The sensation of euphoria and wellbeing associated with the use of stimulants makes it highly sought after. However, these effects are usually only short lasting.

Alcohol

Opioids

Stimulants
(including
metham-
phetamine)

The physiological effects of stimulants include increased heart rate, blood pressure and temperature. Amphetamines, in general, reduce coordination, increase risk taking and are associated with an increase in the incident of road accidents.

Effects sought by user: Euphoria, empathy, enhanced sociability, increased energy level and stamina, and appetite suppression.

Associated harms: Tachycardia, hypertension, seizures, arrhythmias, increased risk taking including sexual activity and dangerous driving, paranoia, fear reduction, hallucinations, tremor, mydriasis, dehydration, diaphoresis, hyponatremia, acute renal failure, hypothermia, nausea, muscle cramping, jaw clenching, jitteriness, racing thoughts followed by periods of depression and low energy, anxiety, depression, paranoia and risk of suicide.

Injecting drug use is also associated with those risks described above for opioids. Problems associated with injecting drug use include: scarred or collapsed veins, abscesses, bacterial infections, blood borne viruses (e.g. hepatitis B and C, Human Immunodeficiency Virus [HIV]), thrombophlebitis, intravascular sepsis, endocarditis, accidental arterial injection and peripheral ischaemia.

Longer term structural brain changes result in memory problems, reduced problem solving ability, impaired concentration and personality change have been reported with heavy use.

Overdose: Low to medium risk of overdose for oral use. However, there is a high risk of overdose associated with smoking or injecting use.

Withdrawal: Depression, dysphoria, fatigue, exhaustion and somnolence and loss of appetite lasting up to two weeks.

Following prolonged use, insomnia, persistent craving, intense dreaming and irritability may ensue and last several weeks or months.

Psychological presentations commonly associated with use (likely to resolve on cessation of substance use): Psychosis⁽³⁰⁻³⁸⁾, depression⁽³⁹⁻⁵⁴⁾ and anxiety^(11, 29, 43, 46, 50, 53-56).

3.5 Benzodiazepines

Diazepam, temazepam, oxazepam, nitrazepam, alprazolam, flunitrazepam, lorazepam, clonazepam, midazolam

Benzodiazepines are sedative drugs that may be prescribed to reduce symptoms associated with anxiety, encourage sleep or act as a muscle relaxant. Both prescribed and non-prescribed use of these medications is extremely common. Short-acting or rapidly-absorbed varieties (for example, alprazolam) produce a more immediate feeling of intoxication, are the most sought after by doctor shoppers and can be sold or exchanged on the street.

Benzodiazepines are often used in combination with alcohol, other benzodiazepines or other illicit drugs. Dependence may occur when benzodiazepines are taken in an attempt to medicate (self-medicate) symptoms that are associated with an undiagnosed mental disorder such as anxiety.

Effects sought by user: Euphoria, anxiolysis, skeletal muscle relaxation and sedation.

Associated harms: Drowsiness, confusion, disinhibition, impaired coordination and increased driving risk, light and sound sensitivity, forgetfulness or memory impairment, nausea, depression, digestive problems, tachycardia, apnoea, ataxia, hypotension and seizures.

When injected intravenously vein damage is common along with those harms associated with injecting drug use mentioned earlier. Problems associated with injecting drug use include: scarred or collapsed veins, abscesses, bacterial infections, blood borne viruses (e.g. hepatitis B and C, Human Immunodeficiency Virus [HIV]), thrombophlebitis, intravascular sepsis, endocarditis, accidental arterial injection and peripheral ischaemia.

When accidentally injected arterially, benzodiazepines can result in peripheral ischaemia and gangrene.

Overdose: Risk is variable depending on the strength of particular formulations. However, taken in large amounts and/or in-conjunction with other benzodiazepines or other substances (usually alcohol), there is a high risk of overdose, particularly in people with a high suicide risk. Overdose results in prolonged periods of sleep combined with respiratory and cardiovascular depression which can be fatal when combined with alcohol.

Withdrawal: There is an established withdrawal effect associated with the use of benzodiazepines. Likelihood of withdrawal is higher for stronger, shorter-acting types that are used for a long period of time. Withdrawal effects include anxiety, depression, problems with sleeping, irritability, palpitations and sensory disturbances. Seizures can occur with sudden withdrawal from more than 40mg/day of diazepam or diazepam equivalents.

Psychological presentations commonly associated with use (likely to resolve on cessation of substance use): Depression and rebound anxiety⁽⁵⁷⁻⁵⁹⁾.

3.6 Inhalants/solvents

Inhalants and solvents are psychoactive drugs that are part of a class of volatile substances that give off gas or vapours at room temperature. They include a wide range of substances including petrol, spray paints and some glues as well as other chemicals such as butane.

The effects of inhalants or solvents vary greatly and depend on which substance is inhaled or sniffed. Most are absorbed rapidly and produce short-term effects similar to those of anaesthetics by depressing the central nervous system. When inhaled in sufficient concentrations, inhalants can cause intoxication and feelings of stimulation that are intense but usually only last a few minutes. This effect of intoxication can be extended for several hours by breathing in inhalants repeatedly. Repeated inhalations make users feel less inhibited and less in control. Users can lose consciousness with continued use.

Young people may use inhalants as they are cheaper and more easily accessible than alcohol. Long-term chronic inhalant users become difficult to treat due to cognitive impairment combined with multiple social and psychological issues.

Effects sought by user: Excitement, dizziness, exhilaration and feelings of self confidence.

Associated harms: Visual and auditory hallucinations, nausea, dullness, disorientation, loss of self control, blurred vision, drowsiness, lack of muscle coordination and slurring, red and watery eyes, cough, runny nose, short-term memory loss, mental confusion, thinking and learning problems, irritability, hostility, extreme tiredness, trembling, loss of control of fine movements, slowed reaction time, dizziness, chronic headaches, sinusitis and nosebleeds, spots/rash around the mouth and nose, indigestion and stomach ulcers, liver and kidney damage and hearing loss.

Permanent brain injury can occur from the use of solvents.

Overdose: More likely to occur with high concentration substances such as butane and occurs after repeated sniffing/inhalations in a single session. Tachyarrhythmias, heart failure and death can be directly induced within minutes of a session of repeated inhalation.

Delirium, fever, hallucinations, restlessness, seizures, confusion and unconsciousness can all occur with repeated sniffing. Death from hypoxia can occur through the displacement of oxygen in the lungs or by effects on haemoglobin oxygen binding.

Withdrawal: Headache, nausea, stomach and other muscle cramps, fatigue, tremors, hallucinations and visual disturbances, anxiety, depression, loss of appetite, irritation, aggressive behaviour and dizziness.

Psychological presentations commonly associated with use (likely to resolve on cessation of substance use): Paranoia and psychosis⁽⁶⁰⁻⁶²⁾ and depression^(63, 64).

For further information please consult:

National Directions on Inhalant Abuse Final Report⁽⁶⁵⁾.

http://www.health.vic.gov.au/drugservices/downloads/niat_report.pdf

3.7 Tobacco

Tobacco comes from the dried leaves of the tobacco plant with the majority of tobacco consumption in Australia being via cigarettes. After drying, the tobacco leaves are treated with a vast array of chemicals before being made into cigarettes. Many of the chemicals used to treat the tobacco leaves are carcinogenic.

Tobacco smoking is the leading preventable cause of premature death in Australia and causes more sickness and disease than any other drug, contributing to the death of over 15,000 Australians each year.

Nicotine is the pharmacologically active ingredient in tobacco. It is responsible for the addictiveness of cigarettes and other tobacco products and is highly toxic. Smoking tobacco delivers nicotine rapidly to the brain, contributing to its addictiveness. Its absorption causes nervous system stimulation, increased heart rate, raised blood pressure and constriction of small blood vessels.

Effects sought by user: Reduction of anxiety and tension and increased alertness.

Associated harms: Nausea, increased heart rate and blood pressure, cancer (especially lung, mouth and throat cancer), hypertension, ischaemic heart disease, chronic bronchitis, stroke and blindness.

Smoking harms nearly every organ in the body causing a wide range of diseases, many of which can result in the premature death of the smoker.

Overdose: Unlikely.

Withdrawal: Nicotine is highly addictive and produces a withdrawal syndrome characterised by craving, irritability, restlessness and anxiety, impaired performance of psychomotor tasks as well as difficulty concentrating, aggressiveness, frustration, sleep disturbances, depressed mood, decreased heart rate, increased appetite or weight gain.

Smokers claim they smoke to relax, reduce stress, increase alertness and concentration, regulate mood and control/lower body weight. However, it is difficult to separate these reported positive effects from the relief of nicotine withdrawal symptoms.

Withdrawal symptoms can last for two to three weeks; however, cravings may persist for months but at reduced frequency and intensity.

Psychological presentations commonly associated with use (likely to resolve on cessation of substance use): Not currently described.

For further information please consult:

Smoking cessation guidelines for Australian general practice⁽⁶⁶⁾.

http://www.quitsa.org.au/cms_resources/documents/AustralianGeneralPracticeGuidelineHandbook.pdf