

## Common Drug types, their prevalence, use and effects.

Drug and drug class	Prevalence	Route of administration and onset and duration of action	Effects	Toxicological complications												
<b>Alcohol</b> Central Nervous System depressant	14.7 years was the mean age of initiation for first use of alcohol among 12–24 year olds in 2004 (AIHW, 2007). It is estimated that 10 – 23% of Australian teenagers drink in excess of the NHMRC recommended guidelines (binge drink) at least once a month (NHMRC, 2001). About 29% of boys aged 14 – 17 engage in high risk behaviour at least once a month while binge drinking (Yung and Cosgrave, 2006).	Oral There are 10 grams of alcohol in one standard drink = 1 middie/ pot of beer, 1 schooner of light beer, 3/4 bottle cider, 3/4 can of beer, 30ml of spirits, 100ml of wine. <b>NHMRC Guidelines:</b> <table style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="text-align: center;"><u>Men</u></td> <td style="text-align: center;"><u>Women</u></td> </tr> <tr> <td>Per day:</td> <td style="text-align: center;">Up to 4</td> <td style="text-align: center;">Up to 2</td> </tr> <tr> <td>Occasional Max:</td> <td style="text-align: center;">6 one day</td> <td style="text-align: center;">4 one day</td> </tr> <tr> <td>Max per week:</td> <td style="text-align: center;">28</td> <td style="text-align: center;">14</td> </tr> </table>		<u>Men</u>	<u>Women</u>	Per day:	Up to 4	Up to 2	Occasional Max:	6 one day	4 one day	Max per week:	28	14	<b>CNS Depressant drugs</b> work by promoting inhibitory physiological systems and tend to lower the rate of arousal, with a reduction in motor and cognitive activity and depression of cardio respiratory centres. In short they 'slow you down'.	Alcohol produces relaxant and euphoria at lower doses with increasing sedation and depression of cognitive and respiratory systems at higher doses.
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Per day:	Up to 4	Up to 2														
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<b>Cannabis</b> sits alone as a drug with a wide range of effects that vary between individuals, depending on dose, preparation and tolerance.	Cannabis was the illicit drug most commonly used by young people—5% of 12–15 year olds, 22% of 16–19 year olds and 27% of 20–24 year olds reported using it in the 12 months prior to the survey (AIHW 2004 National Drug Strategy Household Survey). In 2004, the mean age of initiation for first use of cannabis among 12–24 year olds was 15.7 years (AIHW, 2007).	Cannabis is most commonly smoked, often mixed (or 'mulled') with tobacco, using a variety of methods (rolled in a cigarette paper as a 'joint', or smoked in a pipe or bong (cones). It may also be consumed orally, either cooked ('hash cookie') or infused as a tea. <b>Onset and duration of action:</b> When smoked, the effects come on after 5-10 minutes, peaking at 30-60 minutes and last between 2-6 hours depending upon type, dose and tolerance. Orally, effects are delayed in onset, are prolonged and tend to be more unpredictable.	<b>Sought-after effects:</b> Sense of relaxation and euphoria accompanied by heightened sensory awareness and at higher doses sensory perceptual distortion. May be used to assist sleep and has analgesic properties. <b>Physical effects:</b> Elevated P, BP-postural drops, conjunctival suffusion and injection (red eyes) normal/ dilated pupils nausea. <b>Psychological effects:</b> Euphoria, relaxation, anxious, irritable, paranoia, short term memory loss, perceptual disturbance.	Cannabis ' <i>overdose</i> ' has never been reported however fatalities arise from behaviours presenting whilst under the influence - such as driving. Adverse effects such as nausea, headache, vomiting or anxiety are usually self-limiting. Sleep hygiene is a major consideration for treatment with insomnia and sleep disturbance and common problem for cannabis users.												
<b>Benzodiazepines</b> Central Nervous System depressants	Percentages of Australians aged 14 and over reported the illicit/non medical use of a range of substances: • 3.1% recently used pain-killers/analgesics • 1.1% recently used tranquillisers/sleeping pills (AIHW, 2002).	Oral however they may be crushed and snorted. When used illicitly benzos are commonly injected. <b>Duration of action:</b> Depends on half life and varies between 2-24 hours. Bioavailability following oral administration is almost complete, with peak plasma concentrations being reached after 30 - 90 minutes.	Benzodiazepines may be misused for their anxiolytic and sedative effects. They may cause euphoria and disinhibition, relieve discomfort from other drug withdrawal syndromes through effects on sleep, muscle relaxation, restlessness and anxiety. In high doses, they can lead to confusion and coma. Often used in combination with other drugs, they may potentiate the effect of other CNS depressants such as heroin and alcohol while countering/ balancing the stimulant effect of other drugs such as methamphetamine.	The injection of non-sterile particulate matter may result in injection related problems. Benzodiazepines rarely cause fatal overdose in isolation outside elderly populations.  In combination with other CNS depressants such as alcohol and opioids, they are VERY dangerous with high risk of overdose.												

<p><b>Over the counter (OTC) preparations</b></p>	<p>Examples of OTCs prone to misuse are:</p> <ul style="list-style-type: none"> <li>• Diphenhydramine</li> <li>• Promethazine</li> <li>• Doxamine</li> <li>• Cough medicine</li> <li>• Mersyndol</li> <li>• Melatonin</li> </ul>	<p><b>Onset of action:</b> rapid (within seconds) when injected, peaking at 30 - 120 minutes Slower when snorted (5 - 15 minutes) or orally (30 - 60 mins)</p>	<p>Sedation and relaxation can be obtained from many OTC medications especially those that contain opioids (codeine) and anti histamines.</p>	<p>Large consumption of paracetamol or aspirin-like drugs pose the greatest risks. Examples NSAIDS: gastrointestinal bleeding Paracetamol: hepatotoxicity Codeine: dependence</p>
<p><b>Amphetamine Type Substances and “Club drugs”</b></p> <p><b>Speed</b> CNS Stimulant</p> <p>Examples include amphetamine, cocaine, caffeine, MDMA or ‘ecstasy’.</p>	<p>18 years was the mean age of initiation for first meth/ amphetamine for 12- 24 y/o in 2004 (AIHW, 2007).</p> <p>In 2004, meth/amphetamine had been used by 6% of 16–19 year olds and 11% of 20–24 year olds.</p>	<p><b>Swallowed, snorted, smoked or injected.</b></p> <p><b>Onset of action:</b> rapid (within seconds) when smoked or injected, peaking at 30 - 120 minutes Slower when snorted (5 - 15 minutes) or orally (30 - 60 mins)</p> <p><b>Duration of action:</b> 2 - 24 hours depending upon type, tolerance and dose <i>Methamphetamine</i> is the most potent of the amphetamines and has the longest duration of action</p>	<p><b>Sought-after effects:</b> ATS elevate mood, induce euphoria and feelings of well-being, increase alertness, energy, self-confidence and motor activity while reducing inhibitions, fatigue and appetite. <b>Physical effects:</b> Elevated pulse, BP, temperature, increased respiratory rate/ sweating/dehydrated, dilated pupils, tremor/shakiness/dry mouth. <b>Psychological effects:</b> Euphoria, energised, anxious, irritable, rapid thoughts, paranoia, perceptual disturbance. <b>Behavioural effects:</b> Motor hyperactivity, restless, twitching, talkative-very, pressured speech, aggressive, hyper-alert, distractible, stereotyped movements.</p>	<p><b>Cardio:</b> Chest pain, palpitations, arrhythmias, ischaemia, hypertension, cardiomyopathy, endocarditis.</p> <p><b>Respiratory:</b> Wheezing, dyspnoea, barotrauma, pulmonary hypertension, haemoptysis, pulmonary oedema.</p> <p><b>CNS:</b> Seizures, psychosis, CVAs, vasculitis, vasospasm, choreoathetoid movements.</p> <p><b>Others</b> Septal perforation, weight loss, blood born viruses, abscess, infection.</p>
<p><b>Ecstasy (MDMA)</b> hallucinogenic amphetamine, the effects of hallucinogens such as LSD and the stimulant effects of speed.</p>	<p>18.4 years was the mean age of initiation for ecstasy in 12- 24 y/o in 2004 (AIHW, 2007). In 2004, ecstasy had been used by 6% of 16–19 year olds and 13% of 20–24 year olds.</p>	<p>Snorted or orally</p> <p><b>Onset of action:</b> snorted (5 - 15 minutes) or orally (30 - 60 mins)</p>	<p><b>Stimulant drugs:</b> work by increasing the activity of the parts of the sympathetic nervous system which support ‘fight and flight’ responses, associated with increase in alertness and elevations in pulse, blood pressure body temperature and sweating. They are associated with an increase in arousal, concentration and energy. In short they ‘speed you up’.</p>	<p>Due to the number and variety of drugs used as club drugs, it is not possible to list here the specific effects of each particular substance. The effects also vary from person to person. A number of factors influence the effect including age and physical characteristics (such as weight and general health), type and quantity and route of administration. In addition, the effects of some drugs, such as LSD, are particularly unpredictable</p>
<p><b>LSD</b> (lysergic acid diethylamide) is an hallucinogen, also known as a ‘psychedelic drug’, or ‘acid’</p>		<p>LSD is administered orally. In its pure state, LSD is a white, odourless powder, but usually comes in the form of a liquid, tablet, capsule or square of gelatine or blotting paper.</p>		
<p><b>GHB</b> (gamma-hydroxybutyrate) is also known as ‘fantasy’ and ‘grievous bodily harm’</p>		<p>Snorted or orally. GHB comes as a colourless, odourless liquid or as a crystal powder.</p>		
<p><b>Ketamine</b> also known as ‘Special K’, is a powerful anaesthetic</p>		<p>Ketamine comes as a liquid (for injecting), pill, powder for oral or administration and a formulation for smoking</p>	<p>Ketamine is a disassociative drug, which means that when used the mind seems to ‘leave’ the body..</p>	

<p>used in surgery.</p> <p><b>Hallucinogens</b> have a unique profile that to some extent overlap with stimulant drugs</p>	<p>In 2004, there were 18 deaths among young people aged 12–24 years from accidental poisoning by narcotics and hallucinogens (AIHW, 2007).</p>	<p>Hallucinogens are taken orally, varying in speed of onset and duration. Examples of hallucinogens include:</p> <ul style="list-style-type: none"> <li>• datura</li> <li>• ketamine or "K", "Special K"</li> <li>• LSD or "trips" "acid", "microdots"</li> <li>• magic mushrooms (psilocybin) or "gold tops", "mushies"</li> <li>• mescaline (peyote cactus)</li> </ul> <p>PCP or "angel dust"</p>	<p>Their defining characteristic is their ability to distort reality and markedly interfere with sensory and cognitive processing (psilocybin, LSD, ketamine).</p>	
<p><b>Inhalants</b> CNS depressants</p>	<p>Around 250 products available in Australian supermarkets, newsagencies and hardware stores have been identified as containing potentially intoxicating, inhalable solvents. These products include:</p> <ul style="list-style-type: none"> <li>• adhesives such as modelling glue, Superglue and rubber cement</li> <li>• aerosols such as hairsprays, spraypaints deodorants and non-stick sprays</li> <li>• volatile solvents such as nail polish remover, paint stripper, correction fluid and thinner, dry-cleaning, degreaser and petrol</li> <li>• gases such as fuel gas, lighter fluid, fire extinguishers and whipped cream bulbs</li> <li>• video head cleaners and "room odorisers"</li> </ul>	<p><b>Chroming</b> Inhalant use is often referred to as "chroming". The user sprays paint from an aerosol can into a plastic bag and then breathes in the vapours from the bag. The re-breathing of exhaled air in the bag causes anoxia (oxygen deficiency), which intensifies the effects.</p> <p><b>Spraying</b> Some users spray the substance into a balloon and then allow the balloon to implode inside their mouth. Others spray the substance directly into the mouth from the container—this method is very dangerous because it can paralyse the wind passages, freeze the throat and cause suffocation.</p> <p><b>Huffing</b> The user saturates a rag or cloth (or their sleeve) with the substance and holds it over the nose and mouth while inhaling.</p> <p><b>Other methods</b> Other methods of using inhalants include heating (for example, methylene chloride) and inhalation by filling a sink or bathtub in a closed room.</p> <p><b>Onset and duration</b> Small amounts of inhalants can affect the user quite quickly, due to their rapid entry into the bloodstream through the lungs (within 3 – 5 minutes).</p>	<p><u>Some of the immediate and short term effects include:</u>  <b>intoxication:</b> within 3–5 minutes of using inhalants, the person may feel intoxicated, happy and less inhibited; a sustained "high" may be achieved by repeated use  <b>mood change:</b> can vary from mild excitement to euphoria; sometimes the person may become agitated or uneasy  <b>drowsiness:</b> sometimes the initial excitement is followed by drowsiness  <b>flu-like symptoms:</b> inhalants may cause sneezing, coughing, glazed eyes or a runny nose, like having a cold or the "flu"  <b>sickness:</b> inhalants can make the user feel sick and have diarrhea. Other effects include unpleasant breath, nosebleeds, bloodshot eyes and sores around the nose and mouth.</p> <p><u>Heavy and frequent users may experience long-term effects:</u>  <b>health problems:</b> long-term users may appear pale, have tremors, lose weight, feel tired and be unusually thirsty. They may also have anaemia, because some inhalants affect the production of blood. Inhalants (chroming in particular) can cause eye problems—blood vessels can burst in the eyes, making them completely red and eventually leading to blindness.  <b>brain damage:</b> a build-up of chemicals (such as the lead in petrol) in the body can</p>	<p><b>Permanent effects</b> Most long-term effects are not necessarily permanent, and can be reversed if inhalant use is stopped. However, inhalation of cleaning products, correction fluid and aerosol sprays can cause permanent brain damage.</p> <p><b>Withdrawal</b> Abruptly stopping use can cause withdrawal symptoms such as depression, anxiety, loss of appetite, irritation, aggressive behaviour, dizziness, tremors and nausea.</p> <p><b>Danger/death</b> A small number of people have died from using inhalants. The main danger comes from accidents when intoxicated, such as suffocation by the plastic bags used to inhale, choking on vomit when unconscious, and reckless behaviours such as driving and thrill seeking.</p>

			<p>cause damage to the brain, nervous system, kidneys and liver, and can irritate the lining of the stomach and intestines. Prolonged and heavy use can cause stupor or coma, breathing problems, irregular heart beat and seizures.</p> <p><b>impaired thinking:</b> the user may become forgetful and be less able to think clearly</p> <p><b>psychological impairment:</b> the user may become irritable, hostile, depressed or paranoid</p>	
<p><b>Opioids / Heroin CNS Depressant</b></p>	<p>Percentages of Australians aged 14 and over reported the illicit/non medical use of a range of substances:</p> <ul style="list-style-type: none"> <li>• 3.1% recently used pain-killers/analgesics</li> <li>• 0.1% recently used methadone</li> <li>• 0.3% recently used other opiates (AIHW, 2002).</li> </ul>	<p><i>Heroin may be smoked (chasing the dragon), snorted or injected. Smoking heroin is probably the most common route of self-administration world-wide, and for many is the first route of use. However many heroin users subsequently climb the ladder of routes, from snorting or smoking to intravenous use, as these yield increasing bioavailability and speed of onset of effect.</i></p> <p><i>Onset and duration of action. Heroin is rapidly broken down to morphine, which has a half life of about 4 hours. It is used by injection (2-4 days in most users).</i></p>	<p><u>Opioids induce a sense of profound emotional contentment-characterised by relaxation, euphoria, emotional numbness and sedation. They can also cause imbalance, nausea and itching.</u></p> <p><u>Physical Effects: Analgesia, drowsiness and sleep mood change euphoria, intense pleasure, respiratory depression, cough reflex suppression, sensitisation of the labyrinth with nausea and vomiting, decreased sympathetic outflow (bradycardia and hypotension) lowering of body temperature, pupillary constriction.</u></p>	<p><b>CNS Depressant drugs produces relaxant and euphoria at lower doses with increasing sedation and depression of cognitive and respiratory systems responsible for overdoses at higher doses.</b></p> <ul style="list-style-type: none"> <li>• <b>Injection-related infection:</b> Hepatitis and HIV bacterial endocarditis, septicaemia, pneumonia and TB, skin abscesses, cellulitis, phlebitis, osteomyelitis.</li> <li>• <b>Cardio/respiratory:</b> Pulmonary oedema, pulmonary emboli, cardiomyopathy, aspiration, pneumothorax, cardiac arrhythmia, respiratory depression.</li> <li>• <b>Renal:</b> Rhabdomyolysis, membranous nephropathy, nephrotic syndrome.</li> <li>• <b>Neurological:</b> Peripheral neuropathy, transverse myelitis, brain abscesses, myopathy, local nerve damage-direct trauma and compression.</li> </ul>