

# Background information

## Drug and road safety information

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## General drug information

### 1. INTRODUCTION

The information contained in this section has been compiled for teachers to provide them with general drug information to support the early adolescent content for resilience and drug education. This information aims to increase teachers' knowledge and understanding of drug use and the context for drug using behaviour; as well as acknowledge the complexity of the issues that may surround drug using behaviour.

**Caution: this background information is not to be used as classroom material.**

Drug education programs are aligned within the broader context of student health and well-being issues. The *Safer Roads Middle Years resource* curriculum is one component of a range of strategies schools can implement to provide a comprehensive approach to drug education.

At times teachers may need to respond to students' and/or parents' concerns regarding alcohol or other drug use. Some of the information provided here may be useful to assist teachers in responding to these requests. The teacher's role does not expect them to respond to all drug-related queries or concerns. A referral approach to responding is recommended and some suggestions will be provided later in this section to support teachers in responding.

**However, teachers need to ensure that their response is consistent with their school's drug policy practices and procedures documents.**

Further professional development is recommended to support individual teachers to increase their confidence in this area.

The *Keeping in touch: Working with alcohol and other drug use (2006)* is a Western Australian initiative to support school staff to respond to drug use issues in schools and can be accessed through DET Health Promoting Schools NT.

### 2. THE NATIONAL SCHOOL DRUG EDUCATION STRATEGY

*The National School Drug Education Strategy (NSDES) 1999* is a guiding policy document which provides direction for the Northern Territory in working towards reducing drug related harm to individuals and school-communities. The NSDES operates from the guiding principle of harm minimisation, which encompasses the core functions of supply reduction, demand reduction and harm reduction.

Harm minimisation refers to those policies and programs aimed at reducing drug-related harm at all levels of society. Examples of harm-reduction strategies include: the promotion of safe limits for drinking; first aid education; laws restricting the sale of alcohol under certain circumstances; random breath testing (RBT); consumer information on labels of prescription drugs and medicines; smoke-free workplaces; and the provision of methadone maintenance treatment for people dependent on heroin.

### 3. DEFINITIONS AND TERMINOLOGY

The following are some of the key terms used when talking about drug use:

#### ► A drug

The term 'drug' is very broad. The World Health Organization (1982) refers to a drug as any substance (with the exception of food and water) which, when taken into the body, alters its function physically and/or psychologically.

#### ► Psychoactive drug

Psychoactive drugs are those which affect the user's Central Nervous System (CNS) and alter the user's mood, perceptions (thinking) and behaviour. Psychoactive drugs are often referred to as being mood or mind altering.

This resource also examines non-psychoactive drugs, for example, antibiotics alter the way the body functions, but they are not psychoactive.

#### ► Psychoactive drug classification

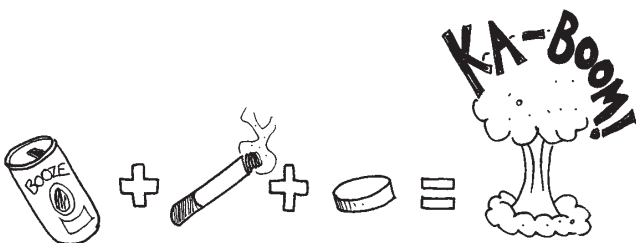
Psychoactive drugs can be categorised into four main groups according to their effect on the CNS:

- **Depressants** slow the activity of the brain and decrease its alertness. Examples of drugs in this category include alcohol, tranquillisers, heroin, opioid analgesics, cannabis in low doses, volatile substances in low doses and minor analgesics.
- **Stimulants** have the opposite effect to depressants by increasing the activity of the brain. Examples include caffeine, nicotine, amphetamines and cocaine.
- **Hallucinogens** may cause the user to experience perceptual and sensory distortions, and sometimes hallucinations. Examples include LSD, cannabis in high doses, volatile substances in high doses, 'magic mushrooms' and mescaline.
- **Others** include drugs that have more than one effect on the CNS. For example, cannabis can have both depressant and hallucinogenic effects; ecstasy can have both stimulant and hallucinogenic effects.

## ► Abuse or misuse

It is not considered appropriate to use the terms drug abuse or misuse as they are too subjective; what you may consider to be acceptable may well be determined abuse by another person. The World Health Organization (1982) recommends the use of the following terms:

- **Unsanctioned use** where use is not approved by a community or other group (e.g. heroin use in Australia or alcohol use in a Muslim community).
- **Hazardous use** where there is a probability that the use will result in harm of some description (e.g. tobacco smoking and the increased likelihood of health problems in the future).
- **Dysfunctional use** where the drug use is causing or contributing towards social or psychological problems (e.g. relationship problems or interfering with school attendance).
- **Harmful use** where the drug use is known to be causing physical or mental health problems (e.g. consuming alcohol at a level that is compromising liver function).



## ► Polydrug use (mixing drugs)

The use of more than one drug either simultaneously or at different times is known as polydrug use. The combination of different drugs can increase or alter the effects of individual drugs and often results in unpredictable effects. It can alter the chemistry of each drug and alter the way the body and the CNS respond.

The reaction to combinations of drugs varies considerably among individuals. This unpredictability makes polydrug use potentially dangerous. For example, alcohol is often used in combination with a range of other drugs. When combined with other depressant drugs such as heroin or tranquillisers, the effect is particularly hazardous and increases the risk of overdose.

## ► Tolerance

Tolerance can occur when a person regularly uses a drug over a period of time. This means a person needs more of the drug to achieve the same effect.

The first time a person uses a drug they will be likely to have a very low tolerance to it and will be likely to feel the effects very strongly. Generally, as a person uses a drug regularly, their tolerance will increase and they will need larger amounts of the drug to achieve the same effect.

## ► Dependence

Dependence can be psychological or physical or both. Some experts believe that it is difficult to distinguish between physical and psychological dependence.

### *Psychological dependence*

People who are psychologically dependent on a type of drug find that using becomes far more important than other activities in their life. They crave the drug and will find it very difficult to stop using it.

### *Physical dependence*

Physical dependence occurs when a person's body adapts to the presence of the drug. The body gets used to functioning with the drug present.

## ► Withdrawal

This is a series of symptoms that may appear when a drug on which the user is physically dependent is stopped or reduced significantly. As the body has become accustomed to the drug for normal functioning, it has adapted (neuro-physiological adaptation). When the drug is taken away or the dose reduced, the body compensates for the loss of the drug effect and tries to counterbalance for the change, so producing withdrawal symptoms. The withdrawal symptoms vary depending on a range of factors including the type of drug and the level of dependence.

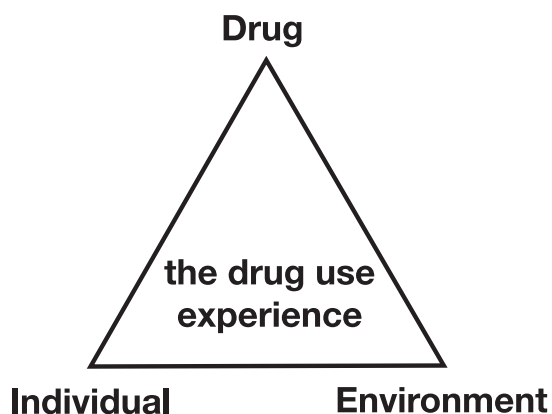
## 4. MODEL FOR UNDERSTANDING DRUG USE

### ► The Interaction Model

This model is derived from the Social Learning Theory and explains that the way a person (individual) experiences alcohol or other drugs does not depend only on the drug itself or factors to do with the drug. The experience will vary depending on the drug factors, individual factors and the factors in the environment. There are three sets of factors:

- **the drug** (what it does – effect, how much – dose, how often)
- **the individual** (gender, age, health, attitudes, values)
- **the environment** (when – time of day, where – place used, who with, how much – price, availability, culture, family laws).

# General drug information



*The Interaction Model (Zinberg 1984)*

For example, using the Interaction model, factors for **alcohol** can be discussed under the following headings:

**Factors to do with the drug (alcohol):**

- influence of friends; social, cultural and religious norms
- laws, availability and cost
- social setting or venue

**Factors to do with the individual:**

PHYSIOLOGICAL FACTORS	PSYCHOLOGICAL FACTORS
age	mood
gender	personality
body size	expectations
food in stomach	previous drug-using experience/s
personal metabolism	mental health
state of general health and well-being	

**Factors to do with the drinking environment:**

- amount consumed, strength
- type, for example, is it carbonated or not
- speed of drinking, use of other drugs

The model can be used to explain both the subjective drug using experience and drug taking behaviour and emphasises the importance of environmental factors (culture, price, availability, role models, legality).

The same person using the drug may have a different experience if the environment is different.

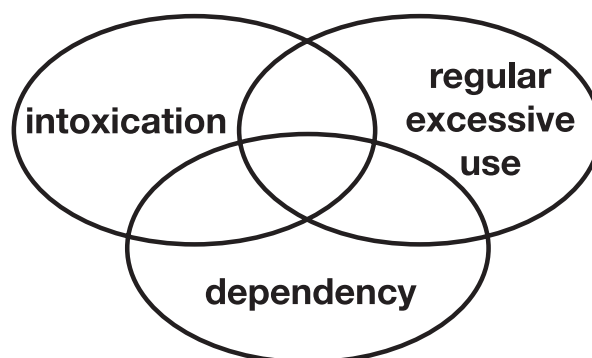
## 5. MODELS FOR WORKING WITH PROBLEM DRUG USE

► **Thorley's Model**

This model was presented by Thorley (1980) to show that problems may arise from a number of patterns of using drugs and not just because someone is dependent on a drug. A common misconception is to think that if someone has a drug problem then they must be dependent. Yet, they may have only been experimenting with that drug for a short time. Thorley's model explains that problems arise from intoxication, excessive regular use and dependency.

Thorley's model has three parts:

- problems from getting drunk/stoned (**intoxication**)
- problems from using drugs regularly (**regular excessive use**)
- problems from not being able to stop using drugs (**dependence**).



*Model of drug problems from patterns of use (Thorley 1980)*

## Problems of intoxication

Problems from getting drunk/stoned usually come from the short-term effects of the drug. These problems people see most often, are the most disturbing, visible and are usually social (e.g. drunk driving, violence, family violence, regrettable behaviours, accidents).

HEALTH	FAMILY, FRIENDS	LAW
Hangover	Arguments	Being drunk in a public place
Feeling sick/vomiting	Fighting	Doing damage to things
Stomach pains/problems	Neglecting children	Drink driving
Head injuries from falls	Violence at home	Assaulting people physically or sexually
Other accidents/injuries	Sexual assault	Accidental killing
Drowning	Child abuse	
Accidental overdose		

## Problems of regular excessive use

Problems from using drugs regularly (excessive regular use) come from continued use over a period of time. This may not allow the person's body to recover completely from the last time they used, so each time their health may get a little worse. Money problems may develop because of regular spending on the drug. Some problems of excessive regular use are:

HEALTH	FAMILY, FRIENDS	LAW
Brain damage	Family problems	Drug possession offences
Mouth/throat cancer	Marriage problems	Drink driving offences
Heart disease	Work problems	Not paying bills
Diabetes	Neglected children	Criminal activities:
Pancreas disease	No food in the house	• prostitution
Nerve damage		• drug dealing

## Problems of dependency





Problems from not being able to stop using drugs may happen when a person spends more and more time getting and using drugs to avoid drug withdrawals. This means that they spend less and less time doing other things. Some people find it harder to stop than others, so their dependence can be more severe.

Many people are likely to have had some negative effects from their drug use at some time, but only a small number will have problems in all three areas of the Thorley's model.

### ► Four L's Model

This model describes a person's life and divides it into four areas where harm from drug use may happen: Liver, Lover, Livelihood, Law (the four L's). It is a useful model when working with a person to identify the level of harm arising from their drug use.

For example:

<p><b>LIVER</b></p> <p>Physical, psychological and emotional health problems</p> 	<p><b>LOVER</b></p> <p>Relationship problems with partners, family, friends, peers</p> 
<p><b>LIVELIHOOD</b></p> <p>Work, school, money, recreation, lifestyle problems</p> 	<p><b>LAW</b></p> <p>Legal problems</p> 

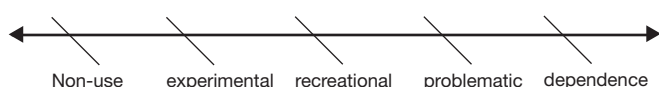
# General drug information

## ► Process of dependency model

This model illustrates that substance use can be considered as a continuum from non-use to dependent use. The arrows point in both directions in the model to outline that drug use can move in either direction along the continuum. For example, an individual may move from experimenting with a drug to recreational use of that drug, and may later return to non-use of that substance. Drug use is not necessarily progressive.

This model can be used to explore the different problems that exist with using drugs in any of the four of the five identified patterns. If occurring, drug use by school aged children will generally be in the experimental and recreational categories.

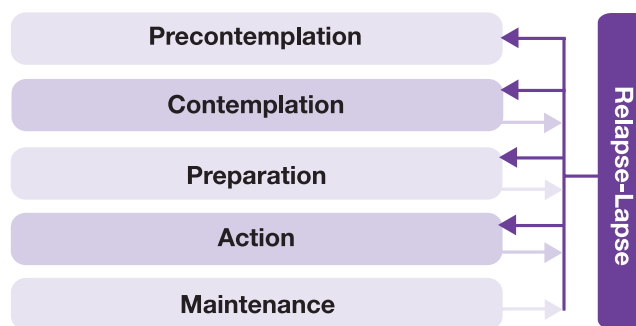
- **Non-use**  
An individual makes a choice not to use a substance.
- **Experimental**  
One-off or short-term use of a substance which may be motivated by curiosity, availability and opportunity.
- **Recreational**  
A choice is made to use a particular substance in specific recreational circumstances – often in the company of friends. Use may be infrequent or it may be regular but with no preoccupation with obtaining/using the drug. Factors contributing to recreational use may again be availability and opportunity.
- **Problematic**  
Regular and predictable pattern of use. Drug use may enable coping or avoidance of problems while at the same time creating negative consequences in various areas of an individual's life. The individual is preoccupied with obtaining and using substance/s.
- **Dependent**  
Regular, frequent use at high levels. The user experiences ongoing preoccupation with the substance/s and psychological and physiological dependence – a compulsive need to have the drug/s. States of emotional and physical distress are experienced when the substance/s are not available. The user is aware that a problem exists but continues to use. They are caught up in a cycle.



*Process of dependency*

## ► The stages of change model

Prochaska and DiClementes (1986) developed a trans-theoretical model to depict how people change. The model was developed from research with smoking cessation programs and from this initial research, they introduced the concept that behaviour change is a process involving five stages. The model has generic application across many behaviours and has since been tested with weight control, substance use and other problematic behaviours.

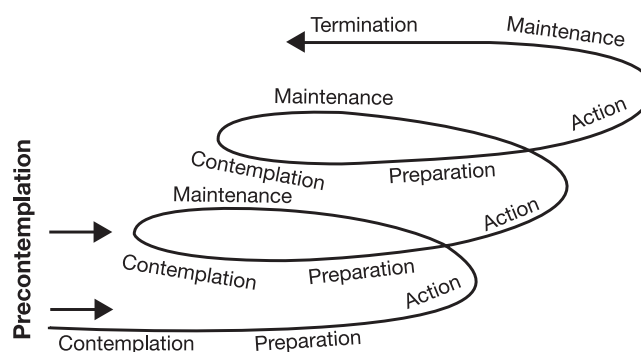


*Stages of change model (Prochaska & DiClemente 1986)*

The stages of change include:

- **Precontemplation** – there is no intention to change a behaviour in the foreseeable future
- **Contemplation** – people are aware of a problem and contemplating action, but have not yet made any commitment
- **Preparation** – individuals are intending to take action within the near future and may have begun to make some plans in preparation for the change
- **Action** – the stage in which individuals take action to modify their behaviour
- **Maintenance** – where people work to prevent slips or a relapse and continue to work on gains made staying with the changed behaviour.

The spiral diagram further illustrates these processes and is a more useful way of conceptualising behaviour change:



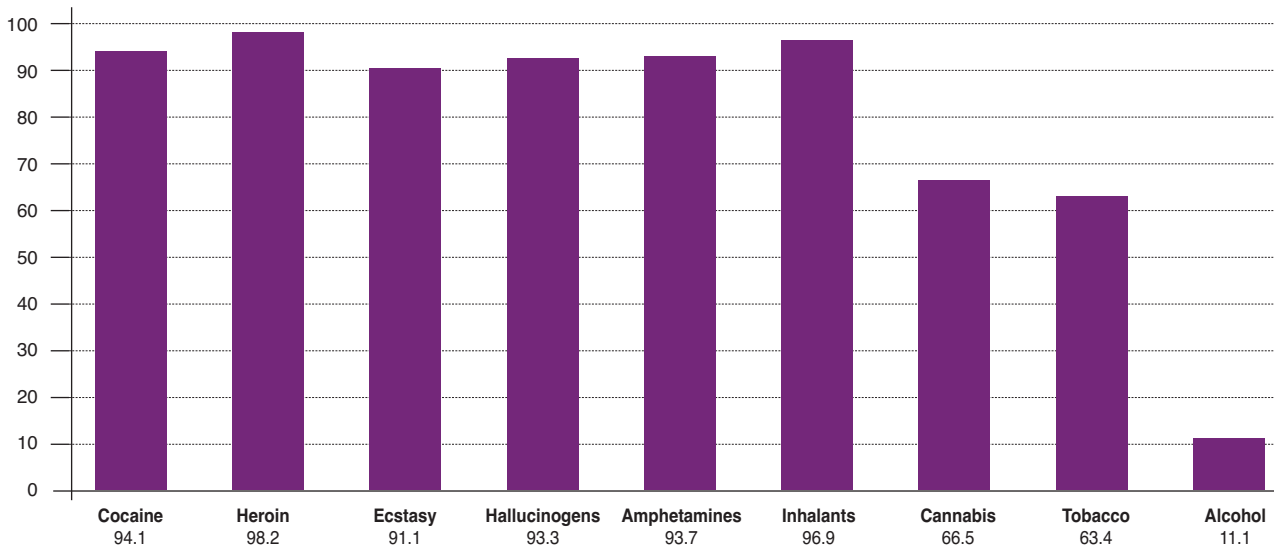
*Spiral model of stages of change (Prochaska & DiClemente 1992)*

## 6. PREVALENCE OF DRUG USE AMONG AUSTRALIANS 14 YEARS AND OLDER AND NT SECONDARY AGED STUDENTS

The following information is included to provide teachers with a context for further understanding patterns and prevalence of drug using behaviour among different populations.

### Life time non-use 14 years +

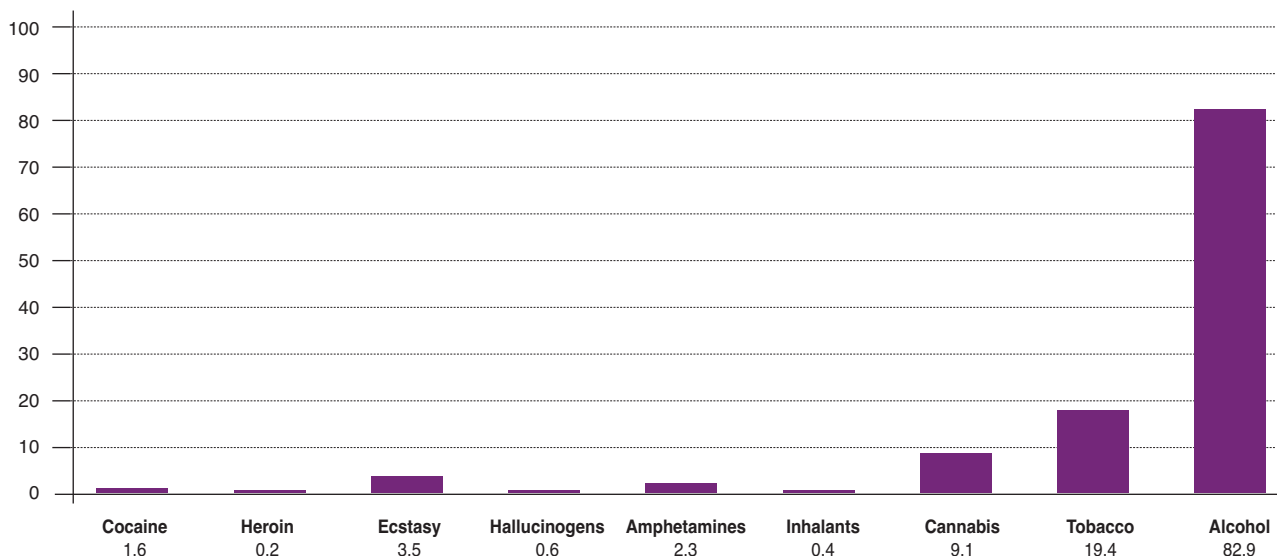
This graph reports the proportion of the population aged 14 years or older in Australia who reported **never** using a drug (including alcohol and tobacco)



2007 National Household Survey - Graph courtesy of Drug and Alcohol Research and Training Australia (DARTA), 2008.

### Recent Drug Use – 14 years and over

This graph reports the proportion of the population aged 14 years or older in Australia who reported recently using the drug (including alcohol and tobacco). Recent use is defined as using in the last 12 months



2007 National Household Survey – Graph courtesy of Drug and Alcohol Research and Training Australia (DARTA), 2008.

It has long been recognised that the quality and quantity of information on Indigenous patterns of illicit drug use requires significant improvement. Reviews of the available data suggest that as with the general population there are varying patterns of use of different illicit drugs according to location as this influences availability among other factors.

Indigenous Australians who become involved in drug use typically begin that use from a younger age than other Australians. Source: National Cannabis Prevention and Information Centre (NCPIC)

# General drug information

## 7. DRUGS AND THE LAW

### ► Alcohol

There are two laws in the NT that aim to reduce alcohol-related harm across the community: the Northern Territory of Australia Traffic Act and the NT Liquor Act.

In the NT, it is illegal to drive with a blood alcohol content (BAC) in excess of 0.05%. The current limit for provisional and learner drivers is 0.00%.



The primary object of the NT Liquor Act is to regulate the sale, provision and consumption of liquor so as to minimise the harm associated with the consumption of liquor in a way that takes into account the public interest.

One objective of the NT Liquor Act is to protect and enhance community amenity, social harmony and well-being through the responsible sale, provision, promotion and consumption of liquor.

Components of the NT Liquor Act that may be of interest to students include:

- Restricted Areas
- Powers of search and seizure
- Minors on licensed premises
- Misinterpretation of age by minors
- Minors not to sell and consume liquor
- Minors not to be sent to buy liquor
- Minors not to buy or consume liquor on licensed premises
- Power to exclude or remove persons.

### ► Tobacco

Cigarette smoking is the single largest cause of preventable death and disease in Australia and a major risk factor for cardio-vascular disease. The Northern Territory has the highest cardio-vascular disease rate in Australia.

#### **NT Tobacco Control Act 2005**

The *NT Tobacco Control Act 2005* is designed to reduce harm to people's health from the consumption of tobacco and other smoking products by: discouraging people from smoking; reducing people's exposure to environmental tobacco smoke, and supporting people to stop smoking by: restricting smoking in certain places; regulating packaging, advertising (including through sponsorship); regulating the conduct of premises at which tobacco and other products are sold; prohibiting the sale and supply of tobacco and other smoking products to children and for other related purposes.

Components of the NT Tobacco Control Act that may be of interest to students include:

- Definitions (e.g. adult means 'a person who is 18 or more years of age'; a 'child means a person who is under 18 years of age')
- Food service areas; tobacco products; smoke from areas
- Smoke-free areas
- Packaging requirements
- Advertising and sponsorship restrictions
- Display restrictions
- Restrictions on point of sale including vending machines
- Licensing of tobacco retailers
- Sale and supply to children
- Administration and enforcement.

The NT Tobacco Control Act is part of a comprehensive approach to control tobacco related harm in the NT. Other strategies include education, health promotion campaigns and mass media advertising to reduce the prevalence of smoking and the incidence of tobacco related diseases.

### ► Cannabis

#### ***Is cannabis illegal in Australia?***

It is illegal to use, possess, grow or sell cannabis in Australia, but the penalties for cannabis offences are different in each state and territory. In some states and territories, if someone is caught with a 'small amount' of cannabis they may be given a \$50 fine, while in other states and territories they may be charged with a criminal offence and receive a much larger fine, or even be sentenced to jail. The definition of a 'small amount' of cannabis also differs between states and territories. In response to increases in hydroponic cannabis cultivation (cannabis grown indoors in an artificial environment), the Australian Drug Misuse and Trafficking Act (1985) was amended in 2006. The amendment reduced the amount of indoor cultivated cannabis needed to qualify for a 'commercial quantity' and 'large commercial quantity'.

#### ***What is the difference between decriminalisation and legalisation?***

Some jurisdictions have decriminalised minor cannabis offences, such as the possession of a small amount of the drug for personal use. This means that the offence can be dealt with by a civil penalty, such as a fine, rather than by receiving a criminal charge. Speeding is a good example of an offence that is commonly dealt with by a civil penalty.

If an offence is decriminalised, it does not mean that it is legal. Legalisation of cannabis would mean that cannabis would no longer be an illicit drug, but would be a legal drug like alcohol and tobacco.



## Which states and territories have decriminalised cannabis?

The following states and territories have decriminalised minor cannabis offences. Any cannabis offence is still illegal in these areas.

### Australian Capital Territory

The ACT introduced a civil penalty system for the possession of small amounts of cannabis in 1993. If someone is caught with up to two non-hydroponic cannabis plants, or up to 25 grams of marijuana (cannabis plant material), they receive a \$100 fine with 60 days to expiate instead of a criminal charge. Instead of paying the fine, the person may choose to attend a drug assessment and treatment program.

### South Australia

In 1987, South Australia was the first state to decriminalise minor cannabis offences. The possession of up to 100 grams of marijuana, 20 grams of hash (the resin from the cannabis plant), one non-hydroponic plant or cannabis smoking equipment leads to a fine from \$50 to \$150 with 60 days to expiate.

### Northern Territory

Since 1996, adults found in possession of up to 50 grams of marijuana, one gram of hash oil, 10 grams of hash or cannabis seed, or two non-hydroponic plants can be fined \$200 with 28 days to expiate rather than face criminal charge.

## What happens in other states?

In the rest of Australia, any cannabis offence is a criminal offence. If someone is charged with possession of cannabis in these areas and found guilty, they could receive a large fine or jail time and will have a criminal record.

It should be noted that it is usually up to the police officer whether or not to 'divert' the offender or charge them. Also, juveniles or people who have a history of drug offences, or violence are ineligible for diversion.

The UNODC World Drug Report for 2009 estimated that the number of people worldwide who used cannabis in 2007 was between 143 and 190 million persons.

Source: National Cannabis Prevention and Information Centre (NCPIC)

Jurisdiction (Year of initiation)	Maximum amount of cannabis allowed	Exclusions	Fine	Alternatives to paying fine
SA (1987)	<ul style="list-style-type: none"> <li>• 100 grams plant material</li> <li>• 20 grams resin</li> <li>• 1 plant</li> </ul>	Artificial cultivation; cannabis oil	\$50-\$150	Criminal conviction
ACT (1992)	<ul style="list-style-type: none"> <li>• 25 grams plant material</li> <li>• 2 plants</li> </ul>	Artificial cultivation; cannabis resin and oil	\$100	Attend the Alcohol and Drug Program, an assessment and treatment program
NT (1996)	<ul style="list-style-type: none"> <li>• 50 grams plant material</li> <li>• 10 grams resin</li> <li>• 1 gram oil</li> <li>• 10 grams seed</li> <li>• 2 plants</li> </ul>		\$200	Debt to state, no conviction – juveniles are sent to assessment
WA (2004)	<ul style="list-style-type: none"> <li>• 20 grams plant material</li> <li>• 2 plants</li> </ul>	Artificial cultivation; cannabis resin and oil	\$100-\$200	Attend an education session

**Table 1**

Minor cannabis offences in jurisdictions that have decriminalised cannabis

# General drug information

## ► Other illicit drugs

Illegal use, possession, manufacture or supply of illicit drugs carries heavy fines and/or prison sentences. Penalties range from a \$2,000 fine and/or two years in a prison to a \$100,000 fine and/or imprisonment for 25 years. In addition, a person convicted of a drug offence will receive a criminal record and this can lead to difficulties in getting a job, credit or visas for overseas travel.

There are four main types of charges relating to illegal drugs. These include:

- use
- possession
- cultivation
- trafficking.

The laws relate to all illicit drugs, including prescription drugs if they have been supplied without a prescription, or have been obtained fraudulently.

In NT, it is against the law for anyone to drive or be a supervisory driver while under the influence of drugs. Breaking this law carries penalties including disqualification from driving, fines and/or imprisonment.

## ► Volatile substances

### ***Volatile Substance Abuse Prevention Act***

The Northern Territory Volatile Substance Abuse Prevention Act (the Act) was introduced in February 2006, in response to community concerns about abuse of volatile substances such as petrol, paint and glue.

#### **Purpose of the Act**

The Act provides a comprehensive and systematic approach for the prevention, intervention and treatment of volatile substance abuse (VSA) in the Northern Territory. Its main focus is the protection, health and safety of children and adults who are abusing such substances. Community control is also central to the Act, providing legal support to local programs that have been in place for many years, and assisting individuals and communities to combat volatile substance abuse.

The Act provides police with the powers they need to address volatile substance abuse, courts with the tools they need to provide treatment to people at risk, and communities the support they need to control volatile substances and protect children and adults from the detrimental effects of volatile substance abuse. This landmark legislation was taken up enthusiastically from the beginning, with many people benefiting from assessment, treatment and other interventions. Communities in many regions now have a management plan in place to control

possession, use and supply of volatile substances. The Act was recently reviewed, resulting in several amendments, streamlining its operation and facilitating administrative processes. The amended Act came into force in February 2010.

#### **Volatile substance abuse is not illegal**

The Act does not criminalise volatile substance abuse and does not involve prison sentences.

#### **The Act does not impede other legislation**

The Act does not preclude other legislation being enforced. For example, children at risk of harm due to VSA may also be dealt with under the Care and Protection of Children Act if necessary, for other issues. Or in the case of a person committing a criminal offence they can be charged and taken before a criminal court, even if they are under the treatment order process of the Act. The courts dealing with people under other legislation also have access to assessment and treatment programs funded under the Act.

#### **There are four main areas within the Act:**

##### *1. Prevention and intervention*

Police and authorised persons are empowered to remove and dispose of volatile substances from somebody who is inhaling, intends to inhale, or has recently inhaled a volatile substance. If it is necessary for the health and safety of the person or other people around them, the person can be taken to a responsible adult (usually a family member) or to a place of safety. A place of safety is a place declared by the Minister and can be within or outside the community. In remote areas it may be a youth centre or an outstation; in urban centres it may be a sobering up shelter or a youth accommodation service. If there is no safe place the police can take a person into short term protective custody, until the person is no longer at risk of harm. As many remote areas do not have police stations, the Act allows for specially trained authorised persons to remove volatile substances from persons at risk and take them to a safe place or to a responsible adult. Authorised persons must be individually approved by the Minister. They can be health workers, youth workers, councillors, elders or night patrollers, etc. Authorised persons must successfully complete an approved training course, which includes volatile substance abuse related health information, intoxication management and first aid. They must also have a current drivers licence and undergo a criminal history check.

## 2. Assessment and Treatment

The Department of Health (DOH) employs specialist assessors for people with volatile substance abuse issues. People in the community who are concerned about a person's volatile substance abuse can contact an assessor and apply for an assessment to be carried out on the person at risk. The following are authorised to apply for such an assessment:

- police officers or authorised persons
- family members of persons at risk
- responsible adults for children
- doctors, registered nurses, Aboriginal health workers and psychologists;
- Northern Territory Families and Children (NTFC) P2 workers.

The assessment findings determine whether a recommendation is made to the Chief Health Officer to apply to the local court for a treatment order. A court-ordered treatment program can be of up to 16 weeks' duration and can be extended if necessary. A range of treatment programs are available that include not only residential programs, but also treatment for withdrawal, stabilisation and after-care, other appropriate therapies and health, diversionary and educational interventions.

If a person fails to participate in a court ordered treatment program or absconds, a warrant can be applied for to compel the person to attend. Persons authorised to seek a warrant include VSA assessors, police officers, authorised officers, the Chief Health Officer, or a legal representative of the above mentioned persons. At times, a court ordered program is not the best option for a person; and other plans are made to support the person at risk, their family and community. The general goals for the person at risk remain the same as for a compulsory program: cessation of volatile substance abuse, reduced high risk behaviour, improved physical and mental health and improved social functioning.

## 3. Community Management of Volatile Substances

Community members and Shire Councils are able to apply to the Minister for a certain area in their community or their whole community to be declared a management area under the Act. A management plan is then developed for the area to establish rules for possession, supply and use of volatile substances. Delegates of the Minister hold community meetings, explaining the workings of management plans and consequences for the communities with such plans. The delegates also assist and guide communities through the making of the plan. Community members, with support from Shire Council Managers, elders, police and community agencies must agree to the area and the plan. This requires one or more community meetings to ensure all relevant

stakeholders are aware and consulted. The community can ban petrol and make rules on storage and disposal of paints, glues and any other volatile substances that have been abused. The draft plan is first provided to the Commissioner of Police and the Chief Executive (Department of Health), who need to endorse it and then it is submitted to the Executive Director Health Protection, for approval. Once approved, the plan is published in the NT Government Gazette; and a copy is made available in the community for all to view. On this publication the plan becomes law in the community, and contravening it can result in fines or imprisonment. Signs must be erected at community entry points warning people of the existence of the plan and informing of its provisions.

## 4. Unlawful supply of volatile substances and confidentiality

The Act provides that a person must not supply a volatile substance to another person if the supplier knows, or ought to know, that the other person intends to inhale the substance. Likewise a supplier must not give a person a volatile substance if the supplier knows, or ought to know, that the recipient intends to give the substance to another person for inhaling. Unlawful supply is an offence under the Act and is punishable by a fine or imprisonment.

The Act provides that the identity of a person who supplies information to the police regarding an offence under the Act must be kept confidential. A person who disclosed the name of an informer or gives details leading to the informer's identity, commits a crime punishable by a fine or imprisonment.

Source: *Fact Sheet, Northern Territory, Department of Health and Families*

## 8. DEALING WITH EMERGENCIES

- **When dealing with an emergency situation in the school environment, school policy and procedures are followed at all times.**

Within a broader context, it is important students are able to respond in an emergency situation when the safety of oneself and others is at risk. For example, alcohol and other drug overdoses can result in loss of consciousness or other harms which may be deemed emergency situations. If a student believes their friends or a family member may be adversely affected by alcohol or other drugs, action is needed.

See **Unit 2.2 Resource Sheet 5: Basic life support guidelines** (p118) for an overview of the St John Ambulance DRSABCD Action Plan

# General drug information

## 9. STANDARD PRECAUTIONS

### *What are standard precautions?*

Standard precautions are work practices required to prevent the spread of infections. It is a standard precaution to treat all blood (outside of the body) as potentially infectious.

**Where possible, minor injuries should be self treated by the injured person and standard precautions should be applied to ALL people regardless of whether or not you believe that person has an infection. Obviously younger students will need adult assistance.**

Standard precautions include good hygiene practices such as washing and drying hands, using plastic or disposable gloves when in contact with another person's body fluids, and appropriate handling of needles, syringes and other sharp objects.

### *Why are standard precautions necessary?*

Standard precautions are necessary to reduce the risks of catching any infection that another person may have. Some items, such as discarded needles and syringes, could potentially contain organisms responsible for the transmission of blood borne viruses (BBVs), such as hepatitis and HIV.

### *What are some examples of standard precautions?*

#### • **Broken skin**

Broken skin includes not only open wounds, scratches and cuts, but also skin that is damaged from dermatitis, or inflamed skin around the nails and cuticles. Bleeding teeth or gums may also allow entry of organisms if body fluids enter the mouth.

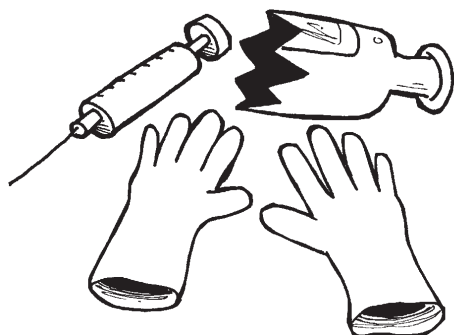
#### • **Washing**

Washing is one of the most effective ways to remove infectious organisms from the skin. Hands and lower arms should always be thoroughly washed and dried after any contact with another person's body fluids or body wastes. Use of plastic gloves is also an expected standard practice.

#### • **Discarded needles and syringes**

In addition to the above standard precautions responding to discarded needles and syringes requires standard precautions to

decrease the risk of transmission of a BBV. For example: having appropriate **sharps containers** (e.g. one that is leak, puncture and shatter proof, such as a lunch



box or an empty plastic cool drink bottle) for the disposal of needles, syringes and other sharp objects. If objects, such as discarded syringes are found, the sharps container should be **taken to the object** and an adult should use **tongs** (or another appliance) and place it by the blunt end into the container. Put the sealed container in a domestic rubbish bin (not the recyclable bin).

#### • **Needle stick injuries**

Needle stick injuries and blood cross contamination can be a potential source of infection by HIV, hepatitis B and C infection. However, a person who is pricked or scratched with a discarded needle has a very **low risk** of becoming infected with HIV. This is because the virus does not live long outside the body. There is a possibility of infection from hepatitis B or C or tetanus, because these viruses are able to survive outside the body for longer periods.

#### **First aid procedure for injuries where blood transfer is suspected:**

- Wash the infected area immediately and thoroughly with soap and water.
- Apply antiseptic and a sterile waterproof dressing to the wound.
- Take the infected person to a medical practitioner for assessment and treatment.
- Tests will be done to assess if protection from hepatitis B is required. A tetanus injection is advisable.
- HIV antibody testing may be recommended by the medical staff. This should always include pre and post-test counselling.
- DET school staff need to refer to the 'Being Blood Aware' Guidelines for schools.

**All NT Department of Education and Training (DET) schools need to refer to the policy section of the DET website. Catholic and non-government schools need to refer to their sector policy and guidelines.**

## More information about specific drugs

### 1. CAFFEINE

#### What is caffeine?

Caffeine is one of the class of chemicals known as xanthines. It is a **stimulant** so therefore, speeds up the production of nerve impulses thereby increasing the activity of the brain. In its purest form, caffeine consists of bitter-tasting crystals, and is found in many common substances such as coffee, tea, cocoa, chocolate, cola, some prescription and over the counter medicines (e.g. *No Doz*) and stimulants available from health food shops called guarana. Guarana is usually sold as a drink; however, it also comes in capsules and gum form.

#### What are the immediate effects of using caffeine?

The effects of caffeine will vary from person to person due to the drug itself, characteristics of the person and occasion on which the drug is taken. The amount of caffeine in one or two cups of coffee can produce a few mild effects within five minutes, including an increase in:

- alertness
- metabolism and body temperature
- blood pressure
- urination
- gastric acid secretion.

Peak blood levels are reached within 30 minutes and on average, half the caffeine in a given dose is metabolised. There is no day-to-day accumulation of caffeine in the body as it is almost all metabolised.



In large doses, (around eight average cups of coffee or 600 mg) caffeine can produce (especially in non-users) headaches, jitters, nervousness and even delirium.

Caffeine can improve the performance of some athletes, combating tiredness and increasing endurance. It is used to stimulate regular breathing patterns of premature babies immediately after birth. It has also been used in conjunction with other medications to treat migraines.

Caffeine can help the body burn fat quickly which is why it is used in weight loss products. It is also used as an appetite suppressant.

#### What are the long-term effects of regular high intake of caffeine?

In very large doses, (10,000 mg or more) caffeine can produce high blood sugar and urinary acid levels. Ten grams is equivalent to 100-200 cups of tea or coffee!

**Regular use** of more than 600 mg of caffeine per day (or eight cups of instant coffee) can cause **chronic insomnia, persistent anxiety, depression and a stomach upset**. It can also cause some heart conditions to get worse and increase the cancer causing effects of some substances. There is no evidence of caffeine producing any toxic effects if consumption is below 600 mg a day.

There is a danger that caffeine may threaten the **bone mass of young children** since it can cause excess secretion of calcium and magnesium. Children may be less likely now to replace this lost calcium by drinking milk, given the growing popularity of caffeine laden soft drinks.

Caffeine and carbonated bubbles in soft drinks can trigger '**refluxing**', in which a muscle allows the acidity contents of the upper stomach to back up and irritate portions of the respiratory tract, including the throat and ears. Doctors have recommended that **children** stay well under 100 mg of caffeine a day, which is approximately **one cola drink and a 200 g chocolate bar**.

#### What are energy drinks?

Energy drinks are designed to increase physical performance and stamina. Most energy drinks are produced and marketed for the general population; however, some are designed especially for elite athletes.

#### What are the main ingredients in energy drinks?

The main ingredients in energy drinks are caffeine, taurine (amino acid) and glucuronolactone (natural metabolite and carbohydrate). Some new drinks on the market also contain opium poppy seed extract or ephedrine. Both taurine and glucuronolactone also occur naturally in the body.

#### What are the health effects of energy drinks?

Not enough is currently known about energy drinks and their effect on health and well-being. Producers of these products do state the health benefits. Some state an increase in physical endurance, increase in concentration and mental alertness, improved reaction time and improvement in stamina. Evidence shows that it may be wise to be cautious in the consumption of energy drinks.

Although caffeine, taurine and glucuronolactone occur naturally in the body, the fact that they are present in much higher doses in energy drinks may be cause for concern. Caffeine can have an effect on the growing brain and that it may cause a **decline in the body's immune system**. At present, health authorities have deemed energy drinks as relatively safe for consumption, with some cautions.

# Specific drug information

## How much caffeine in a 'cuppa' or chocolate bar?

DRINK/PRODUCT	SIZE/AMOUNT	STRENGTH (CAFFEINE CONTENT)	NOTES
<b>Coffee</b>			
<i>Instant</i>	150 ml	60-100 mg	According to amount used; depending on the type of beans, method and strength of brew; packaging will usually indicate strength
<i>Drip/percolated</i>	150 ml	10-150 mg	
<i>Espresso</i>	150 ml	90 mg	
<i>Decaffeinated</i>	150 ml	2 -4 mg	
<b>Tea</b>	150 ml	30-100 mg	Depends on strength of brew
<b>Cocoa</b>	150 ml	30-60 mg	Other chemicals in the product can vary the caffeine content
<b>Cola soft drinks</b>	250 ml	40-50 mg	Often contains lots of sugar and phosphoric acid too
<b>Diet cola soft drink</b>	250 ml	40-50 mg	Often contains lots of sugar and phosphoric acid too
<b>Chocolate milk drink</b>	250 ml	2-7 mg	
<b>Energy drink</b>	250 ml	80 mg	
<b>Milk chocolate bar</b>	55 g	3-20 mg	
<b>Dark chocolate bar</b>	55 g	40-50 mg	
<b>Prescription and over-the-counter medicines</b>		20-100 mg per dose	<i>No Doz</i> and some medicines (cough, headache and slimming preparations) contain caffeine

## Who should avoid energy drinks?

Research shows that children and young people who consume energy drinks may suffer sleep problems, bed-wetting and anxiety. Children who consume two or more cans of energy drinks a day may become irritable and anxious.

**Women who are pregnant** are advised to avoid energy drinks as high amounts of caffeine can increase the risk of miscarriage, difficult birth and delivery of low-weight babies.

Young people often combine caffeine and alcohol believing that the caffeine helps them party harder and longer. The effects of combining **energy drinks with alcohol** are not yet clear but there have been serious concerns for some time. There have been reports of young people dying, possibly as a result of mixing alcohol and energy drinks.

Energy drinks with caffeine can cause dehydration. The combination of dehydration and **exercise** can be dangerous.

People with **heart disease** and those who are **sensitive to caffeine** are advised not to exceed 2–5 cans per day.

## Caffeine content of some popular energy drinks and soft drinks

DRINK (250 mL)	CAFFEINE CONTENT
Impulse	88 mg
Red Bull	80 mg
'V'	78 mg
Coca-Cola	48.75 mg
Diet Coke	48 mg
Pepsi	40 mg
Diet Pepsi	44 mg
Pepsi Max	44 mg



## 2. ANALGESICS

### What are analgesics?

The term 'analgesic' refers to substances that are used to relieve minor pain. These drugs are referred to as depressants and are often called pain relievers or painkillers. They include:

- Ibuprofen (Nurofen and Aspirin)
- Paracetamol (Panadol)
- Combination product (such as those containing Paracetamol and codeine e.g. Panadeine)

Paracetamol is a commonly used analgesic. It is available without a prescription unless it is used in combination with other substances (compound analgesics). For more information about analgesics and their classification refer to your local pharmacist or hospital.

### How many young people use minor analgesics?

The 2005 Australian School Students Alcohol and Drug survey (ASSAD survey 2005) found that **analgesics** were the **most commonly** used substance (licit and illicit) among secondary school students. Over two thirds of students had used analgesics in the four weeks prior to the survey, and this included 40% of students who had used analgesics in the week prior to the survey.

**More females** than males were **regular users** of analgesics; around 52% of females aged 15 years and over had used analgesics in the week prior to the survey compared to around 34% of males aged 15 years and over. The increased use of analgesics among females from age 12 coincides with the onset of menstruation according to the conclusion in the ASSAD (2005) survey. By the age of 12, over 90% of students had used analgesics.

### What is aspirin and can it be harmful?

**Aspirin** (acetylsalicylic acid) is widely used for relief of pain fever and inflammation. It may cause **irritation** of the **gastric mucous** membrane and even **bleeding from the stomach**. Excessive use of aspirin over a long period may result in ringing in the ears, giddiness, nausea and mental aberration. Regular long-term use of aspirin may cause **kidney damage and anaemia**. Aspirin has also been linked as a trigger for **asthma attacks**.

The fatal dose of acetylsalicylic acid varies with the type of preparation. Ten to 30 g of aspirin may be lethal for adults, although sometimes very high doses have not caused death. This poisoning requires urgent medical treatment.

**Aspirin should not be given to children** or teenagers except on medical advice. It has been found to increase the risk of Reye's Syndrome, a rare disorder that can result in a coma and death.

### What is paracetamol and can it be harmful?

Paracetamol is very soluble and is used for the relief of pain and fever. It is absorbed very rapidly through the upper gastro-intestinal tract and reaches a peak blood concentration in about one hour.

The recommended daily dose for adults is a maximum of 4 g or 8 tablets per day. **Instructions on medicine packets must be read and followed or if unsure check with the local doctor or pharmacist.**

Because of the effect of paracetamol on the liver and kidneys, it should be avoided by people with an infection in either of these organs.

**Australia** has the **highest incidence** of **analgesic-related renal failure** in the world. Such damage can occur from using as little as two tablets per day on a regular basis.

### Does aspirin prevent heart attacks?

Low doses of aspirin can thin the blood and prevent blood clots which are often the cause of heart attacks. This is appropriate only for those assessed by a doctor to be at high risk of a subsequent heart attack.

### Why are analgesics used by teenagers?

Most young people use analgesics for the same reasons as adults, that is, to relieve pain. In many instances, children use analgesics because this is what they have learned from their parent's example and from advertising. Analgesics are often advertised as a quick fix for many of life's stressors.

# Specific drug information

## What are the possible causes of headaches?

One of the most common types of pain young people experience is a headache. Headaches can be caused by a range of factors, some of which may include:

- dehydration (many headaches are experienced in summer)
- menstrual pain
- skipping meals
- inadequate ventilation – stuffy rooms
- cessation of a high caffeine intake
- illness such as toothache, virus, hay fever
- emotional upsets and crying
- stress and worry
- eye strain
- exposure to loud noises or strong smells.

## Can analgesics do more than relieve pain and fever?

Analgesics cannot:

- cure whatever is causing the pain
- prevent headaches
- provide extra energy
- calm people who are upset
- induce sleep.

## What are the alternatives to using analgesics?

Analgesics for pain relief should be used only after several alternatives have been explored. The alternative tried will be influenced by the cause of the pain. A range of strategies may help relieve different types of pain.

- If the pain is related to menstruation try lying down, placing a hot water bottle on the abdomen or lower back, massage, a drink of warm milk, drinking lots of water two or three days before the start of menstruation, or mild exercise.
- If the pain is stress-related, try talking to someone, listening to music, hugging, deep breathing, a shoulder massage, or mild exercise.
- If the pain is related to illness or tiredness, try getting extra sleep and a healthy diet.

## When should analgesics be used?

Sometimes analgesics will be the best form of short-term treatment for pain. They are very useful drugs when used occasionally for pain or to help lower a temperature. They may be used while seeking a solution to the cause of pain. For example, treating a toothache while waiting to visit the dentist.

## How should analgesics be used?

Once it has been decided that taking an analgesic is the most appropriate course of action to relieve pain, strategies to reduce the potential for harm include:

- checking the **expiry date** before use
- using them strictly **as directed**. Like all medications, analgesics may have side-effects. The recommended dose has been calculated to minimise the negative effects and maximise the therapeutic effects
- **avoiding** taking analgesics for **more than three days** in a row without consulting a general practitioner as they are meant for short term pain relief
- **returning** the medication to a **locked container** out of reach of children after use
- not using in combination with **other drugs**
- consulting a **general practitioner** or pharmacist if unsure about any aspect of treatment.



## 3. ALCOHOL

### What is alcohol?

Alcohol is a by-product of the process known as fermentation whereby yeast reacts with the sugar contained in fruits, vegetables and grains to produce alcohol and carbon dioxide. There are six basic types of alcoholic drinks: beers, cider, table wines, fortified wines, liqueurs and distilled drinks. Ethyl alcohol or ethanol is the intoxicating ingredient in alcoholic drinks. While alcoholic drinks vary in colour and taste, pure alcohol is colourless and tasteless.

### How many young people drink alcohol?

The most widely and regularly used substances among Australian secondary school students in 2005 were the legal drugs (analgesics, alcohol and tobacco).

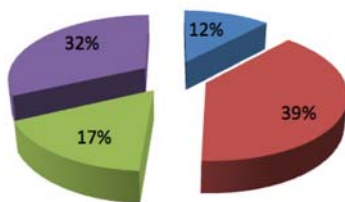
NT Secondary School Students Alcohol Use ASSAD 2005 (NT specific unpublished report)



Most older students have had more than 10 drinks in their lifetime – 72% at age 17; 56% at age 16; and 53% at age 15. Younger students were most likely to report either that they had never had an alcoholic drink or had had “just a few sips” – 81% at age 12; 60% at age 13; and 49% at age 14. A higher proportion of male students (36%) than female students (27%) had consumed more than 10 drinks in their lifetime. Female students were more likely than male students to have consumed either less than 10 drinks (19% females; 16% males) or “just a few sips” (44% female; 34% male).

An age and sex interaction is apparent with 17 year old males (81%) being the group most likely to have had 10 or more drinks and 12 year old females being the group most likely to have had no drinks or “just a few sips (93%). Consumption of more than 10 drinks in a lifetime increased with age for both sexes, although at higher proportions for males (range of 10% at age 12 to 81% at age 17) than females (range of 4% at age 12 to 63% at age 17).

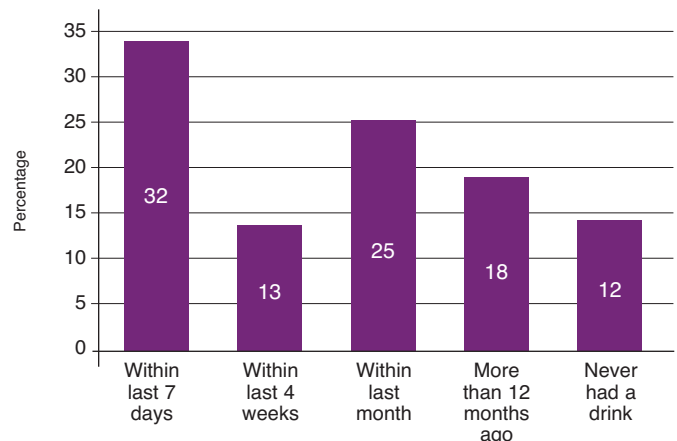
■ Never ■ Just a few sips ■ Less than 10 drinks ■ More than 10 drinks



**NT students lifetime alcohol use/non-use 2005**  
2005 Australian School Students Alcohol and Drug Survey (ASSAD)  
Survey Results for Tobacco and Alcohol Usage  
12 – 17 year old School Students – Northern Territory

32% of the sample had a drink within seven days of interview and for survey purposes this group has been called ‘current drinkers’. The proportion of current drinkers increased with age from 20% of 12 year olds to 46% of 17 year olds. For younger students, aged from 12 to 14 there was little difference between the sexes in the proportions of current drinkers: 19% to 31% for males and 20% to 33% for females. In contrast, male students aged 15 years or older were more likely to be current drinkers than female students of the same age, up to a maximum of 63% for 17 year old males and 38% for 16 year old females.

The proportion of male students who were current drinkers also increased more rapidly with age for male students, from 31% of 14 year olds to 63% of 17 year olds, than for female students, from 33% of 14 year olds to 36% of 17 year olds. That is, the association between being a current drinker and age was stronger (and more linear) for male students.



2005 ASSAD Survey Results for Tobacco and Alcohol Usage  
12 – 17 year old School Students – Northern Territory

## What type of alcoholic drink do young people consume?

Overall, the alcoholic drinks most likely to be consumed by 12-17 year olds were spirits (42%), followed by premixed spirits (32%), full-strength beer (27%). Full-strength beer (43% vs. 9%) was more popular among males than females, whilst pre-mixed spirits (52% vs. 14%) were more popular among females than males.

## Where do young people prefer to drink?

The 2005 ASSAD survey reported that the most common places for drinking alcohol for current drinkers were at **home** (33%) and at **parties** (32%). Approximately 16% consumed their last drink at a **friend’s home**. Approximately 5% had consumed their last drink at a **licensed venue**.

Drinking at home decreased with age while drinking at parties and friends’ homes tended to increase with age. For students aged 12-15 years, home was the most common drinking place while for 16-17 year-olds, parties were the most common place of last drink.

## Where do most young people obtain their alcohol?

The 2005 ASSAD survey reported that the majority of students who had consumed alcohol in the past week **did not** purchase their own alcohol (91%), with the most common source being from **parents** (40%), followed by **friends** (19%). Some students reported that they had **asked someone to buy alcohol for them** (18%), while a smaller portion was **given alcohol by their siblings** (8%).

## Is alcohol a drug?

Alcohol is one of the **most common and socially acceptable drugs used in Australia**. Many people incorrectly assume that the term ‘drug’ means only those drugs that are prohibited by law. Alcohol slows down the CNS, affecting the transmission of messages to and from the brain. It slows the user’s reaction time and coordination and is thus classified as a **depressant**.

# Specific drug information

## *How is alcohol absorbed, metabolised and eliminated?*

Alcohol is absorbed into the body through the stomach and small intestine then passes into the bloodstream where it is carried to all parts of the body. It is distributed throughout the water in the body. Food in the stomach slows the absorption process, which is the reason why, as a harm reduction strategy, people are encouraged to eat before and while they drink. However, even though the process of absorption may be slowed down all the alcohol consumed will, eventually, reach the bloodstream.

Alcohol is metabolised and eliminated by the body in four ways:

- Broken down by the liver (~ 90%). The liver breaks down approximately 10 g of alcohol per hour (one standard drink)
- Breathed out (~ 3%)
- Lost as perspiration (~ 3%)
- Eliminated as urine (~ 3%).

## *What are the effects of alcohol?*

Alcohol affects different people in different ways, or even the same person in different ways on different occasions. The effects of alcohol will depend on:

- alcohol consumed (dose, strength, etc)
- individual drinker (gender, size, mood, expectation, state of health, etc)
- drinking environment (who with, where, customs, culture, laws, etc).

There are, however, certain effects that most people experience when drinking. **Initially**, the drinker may feel relaxed, less inhibited and more confident. Movement and speech may become slightly disjointed. **More alcohol** is likely to result in loss of muscle control, tiredness, blurred vision and confusion. **Higher doses** can result in nausea, vomiting, vertigo, and sleep. **Still higher doses** may result in blackout, coma or death due to alcohol poisoning. It must be stressed that individual differences make it impossible to predict exactly what reactions and behaviours will occur as a result of alcohol consumption (see information on the Interaction Model on page 336).

## *Are males and females affected by alcohol in the same way?*

A male and female of the same height and weight will not be affected by alcohol in the same way. Generally, **women** experience **higher blood alcohol levels** than **males** after drinking the same amount. This is because women tend to have more fatty tissue and less water in their bodies than males. As alcohol is water-soluble,

and women tend to have less water in their bodies than males, the same amount of alcohol is distributed into a lesser amount of water. Therefore, women will have a higher concentration of alcohol in their blood.

## *How can a person sober up?*

There are many myths about sobering up after becoming intoxicated by alcohol. Some of these include drinking black coffee, exercising, taking a cold shower, or vomiting. However, the only thing that will sober up a person, is **time**. It takes one hour for an average, healthy adult to eliminate one standard drink (10 gms) of alcohol. Other strategies may make the person feel better, but will not hasten the sobering-up process. Vomiting will only get rid of alcohol still in the stomach, it will not reduce the amount of alcohol already in the person's bloodstream.

## *What are the possible health benefits of alcohol use?*

The cautious conclusion of the research on the health benefits of alcohol use is that moderate levels of alcohol intake (one standard drink per day) may be protective against certain kinds of heart disease. These benefits may outweigh the detrimental effects; particularly in those aged over 40 years and in high-risk groups (smokers, those who have high blood pressure, are overweight and/or have a genetic predisposition to heart disease). It is not yet clearly established that wine is the only alcoholic beverage that offers these benefits. It is possible that the particular benefits attributed to wine could be the result of factors other than beverage type (such as diet).

The results of research into compounds found in wine and various food products, which are believed to provide benefit by inhibiting low-density lipoprotein oxidation in humans, while promising, are inconclusive. It should be noted that:

- the health effects have only been observed in a test tube. There is uncertainty as to how these experiments might relate to the complex processes which occur in humans;
- many products that may offer these benefits (grapes, tea, etc.) can be consumed without any of the risks associated with alcohol consumption.

## *What harm may be caused by alcohol use?*

Excessive consumption of alcohol causes many diseases, injuries and social problems. Alcohol-related problems are among the **four major public health problems in Australia**, along with coronary heart disease, injury and cancer.

Problems related to alcohol use can be defined as

either short-term or long-term. While long-term effects can be discussed, the possible **immediate and short-term problems** are **most appropriate** for secondary **students**.

Drinking too much alcohol on one occasion (binge drinking) can result in many negative consequences. Some examples include:

- vomiting
- arguments and/or violence
- hangover
- unplanned sexual behaviour which could result in pregnancy, HIV and/or other STDs, a bad reputation, and social isolation from friends
- road trauma related to drinking and driving or being a passenger in a vehicle driven by someone who has been drinking
- injuries
- regrettable behaviours
- coma and death from alcohol overdose
- drowning.

It is safer not to use alcohol at all. However, it must also be recognised that some students will choose to drink, either now or in the future. They may also attend functions where other people are drinking. If students use alcohol, are planning to use alcohol, or know others who use alcohol the classroom discussion may focus on the reduction of harm. In this context, students should note the following:

- Discuss the issue of drinking with your parents and try to come to some agreement about consumption.
- Organise transport in advance. Never drink and drive, or get into a car with someone who has been drinking or using other drugs.
- Drink at a safe place.
- Eat before and during drinking.
- Avoid binge drinking. Drink slowly and enjoy the experience while reducing the chance of negative consequences.
- Choose drinks that are lower in alcohol content.
- Pour your own drinks to avoid your drink being 'spiked' and to keep tabs on how much you are drinking.
- Keep hold of your own drink to avoid your drink being 'spiked' and to keep tabs on how much you are drinking.
- Avoid drinking alcohol in places where it is illegal. For example, in a public open space or on licensed premises if under the age of 18 years.

- Ask a friend who is not drinking to look after you.
- Look after your friends. For example, stop them from getting involved in fights, don't let them leave with someone they have only just met, administer first aid if they collapse from drinking too much.
- Learn first aid so you can help friends in difficulty.
- Drink water to avoid dehydration.
- Get an adult to help if things get out of hand.
- Call for medical help if needed.
- Do not use other drugs while drinking alcohol.
- Alternate alcoholic with several non-alcoholic drinks.

## Australian Alcohol Guidelines (2009)

### *What is a safe level of drinking?*

**A:** There is no level of drinking alcohol that can be guaranteed to be completely 'safe' or 'no risk'.

The guidelines set out advice on the level of drinking alcohol that will enable healthy adults to keep their risk of alcohol-related accidents, injuries, diseases and death low both in the short and long term.

### *What has changed from the previous 2001 Australian Alcohol Guidelines?*

**A:** In the 2001 Australian Alcohol Guidelines: Health Risks and Benefits there were two designated drinking levels where drinking above these levels was 'risky' and 'high risk'. These terms are not used in the 2009 Guidelines because we now know that risk increases progressively – the more you drink = the greater the risk.

The 2009 Guidelines are based on reducing health risks from drinking alcohol.

- The 2009 guidelines advise both men and women to drink no more than two standard drinks per day to reduce their health risks over a lifetime. The previous guidelines set out four drinks for men and two drinks for women per day, on average.
- Young people (up to 18 years of age) are advised not to drink alcohol at all.
- Women who are pregnant, planning a pregnancy or breast feeding are advised not to drink.

### *What are further health issues and situations to consider?*

**A:** People who supervise children or engage in risky activities, including driving, operating machinery, water and snow activities, young adults (aged 18–25) and older people need to take special care.

## Specific drug information

People taking certain medications or who have physical or mental health problems that could be made worse by alcohol consumption, should seek advice from a health professional.

People drinking alcohol also need to take into account legal issues, such as drinking and driving, intoxication in public and purchasing or drinking alcohol under the age of 18.

### **Why do the guidelines advise that not drinking alcohol is the safest option for children and young people under the age of 18?**

**A:** The risks of accidents, injuries, violence and self-harm are high among drinkers aged 18 years and younger.

Earlier initiation of drinking is related to increased alcohol consumption in adolescence and young adulthood, and these patterns in turn are related to the possibility of damage to the developing brain and development of alcohol related harms in adulthood.

### **Is there a safe level of alcohol consumption during pregnancy?**

**A:** No. Alcohol may harm your baby whilst you are pregnant.

There is no lower limit that can be guaranteed to be completely safe so the safest thing to do is to stop drinking altogether while pregnant or breast feeding.

### **What are the risks of using illicit drugs and alcohol together?**

**A:** Mixing illicit drugs such as cannabis, heroin, cocaine, methamphetamine or ecstasy, with alcohol can have dangerous or lethal consequences.

### **What is a standard drink?**

One standard drink contains approximately 10gms of alcohol.

### **Do the Guidelines define “binge drinking”?**

**A:** Although “binge drinking” is popularly understood to mean someone going out to get drunk, the Guidelines do not define binge drinking because it means different things to different people and is difficult to define scientifically. Instead of the term “binge drinking”, the Guidelines refer to a single occasion of drinking. On a single occasion of drinking, the risk of alcohol-related injury increases with the amount consumed.

### **Has the ‘standard drink’ changed from the previous guidelines?**

**A:** No – a standard drink is still 10 grams of alcohol.

### **Is a standard drink different to a serving of alcohol?**

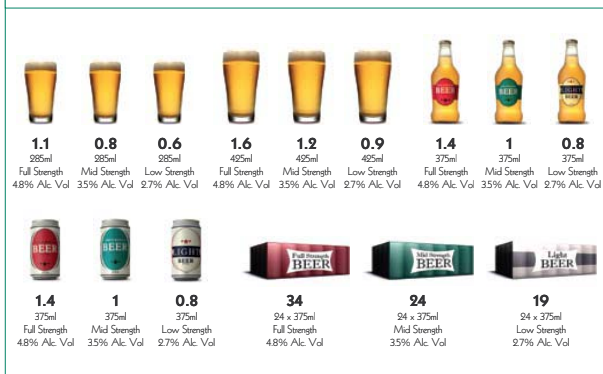
**A:** Yes – it is important to note that drink serving sizes are often more than one standard drink. There are no common glass sizes used in Australia.

*Source: National Health and Medical Research Council Website (2010)*

Standard drink recommendations have been set so that people have some idea which levels of consumption will cause the least harm to their health. Knowledge of standard drinks allows people to monitor how much they are drinking. Keeping track of, and cutting down on, the amount of alcohol consumed can reduce negative consequences such as hangovers, unsafe sex practices, vomiting, violence and abusive behaviour.

DRINK	AMOUNT	mL	% ALCOHOL/ VOLUME	STANDARD DRINKS
Full-strength beer	1 middy	285 mL	4-6%	1
Wine	1 glass	100 mL	10-14%	1
Fortified wine (port, sherry)	1 glass	60 mL	17-19%	1
Spirits	1 shot	30 mL	37-43%	1
Alcoholic Soda	1 bottle	330 mL	5.5%	1.5
Alcoholic Cider	1 stubby	375 mL	4-6%	1.5
Canned spirits and soft drink	1 can	375 mL	6-8%	1.5

## NUMBER OF STANDARD DRINKS – BEER



## NUMBER OF STANDARD DRINKS – WINE



## NUMBER OF STANDARD DRINKS – SPIRITS



The notion of a standard drink is used widely internationally, but the definition varies from country to country. These guidelines use the Australian standard drink, which is defined as containing 10g of alcohol (equivalent to 12.5mL of pure alcohol).

A serving of alcohol frequently differs from a 'standard drink', often being larger. For example, for table wine, a standard drink corresponds to 100mL of wine, whereas a typical serve may be 150mL.

In Australia, all bottles, cans and casks containing alcoholic beverages are required by law to state on the label the approximate number of standard drinks they contain.

## Alcohol and health in Australia

Alcohol is responsible for a considerable burden of death, disease and injury in Australia. Drinking is a major factor in much of the injury resulting from road crashes and other accidents, and in social problems such as violence, family breakdown and child abuse and neglect. As such, alcohol-related harm is not restricted to individual drinkers but has relevance for families, bystanders and the broader community.

## 4. TOBACCO

### What is in tobacco?

Tobacco contains thousands of chemicals that may harm people's health. The main chemicals are summarised below.

- **Nicotine** is largely a **stimulant**, which causes increased blood pressure, increased heart rate, reduced skin temperature, irregularities in heart rhythm, increased demand by the heart for oxygen, and increased activity of the gastrointestinal tract. A typical cigarette contains 1-2 mg of nicotine.
- **Carbon monoxide** leaves the heart (and all body tissue) with less oxygen to do the work that is required by the body (i.e. circulating the blood). The carbon monoxide attaches to haemoglobin (a substance in red blood cells). The function of the red blood cells is to carry oxygen around the body. However, the blood cells prefer carbon monoxide to oxygen. This places extra strain on the body because the heart has to work harder to get the oxygen it requires. At the same time, the heart has to do this extra work when its own blood supply is short of oxygen.
- **Tar** is the total particulate matter produced by a burning cigarette. It contains several thousand chemical compounds with a wide range of effects. The contents include a number of proven carcinogens (cancer causing substances). The average content of tar in Australian cigarettes has been reduced significantly from 20 mg in 1969 to about 10 mg in 1985. Tar content ranges from 1 mg per cigarette to 15 mg.
- **Phenol** stuns and eventually destroys the cilia that line the bronchial tubes. This leaves the lungs open to irritants and cancer-producing substances.
- **Irritant chemicals** cause 'smoker's cough' and hasten the destruction of lung tissue. They also cause 'heavy chest', shortness of breath and wheezing.

# Specific drug information

## How many young people use tobacco?

**Most young people and most adults are not smokers.** It is important for students to understand that young people who do not smoke are more likely to be one of a crowd, than the odd person out. Experimenting with smoking does not necessarily mean that a young person will become a regular smoker. However, nicotine is a potent drug and neuro-physiological adaptation can happen quickly.

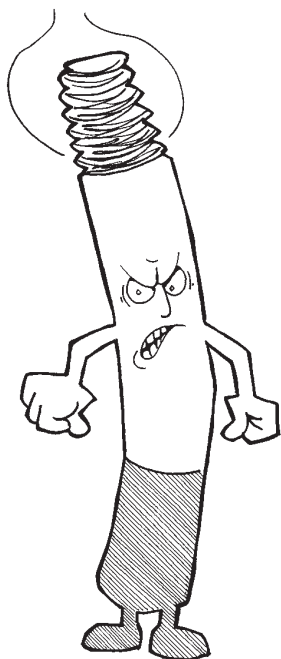
## How many deaths are caused by tobacco?

**Tobacco causes more ill health and premature death than any other drug used in Australia. In 2004-05, an Australian Government report estimated that active and passive smoking caused almost 15,000 Australian lives to be lost and cost the hospital system \$669.6 million.** Source: *Quit SA (2010)*.

Smoking is the largest preventable cause of death and disease in Australia for both Indigenous and non-Indigenous people, contributing 7.8 per cent to the total Australian burden of disease and injury. The rate of smoking in the Northern Territory is the highest in Australia. Rates of smoking among Aboriginal people are particularly high, with the prevalence of smoking in some communities as high as 73%. The Northern Territory Tobacco Action Plan 2010–2013 has been developed to address this priority issue. The goal of this plan is to improve the health of all Territorians by reducing the harm caused by tobacco consumption and exposure to tobacco smoke. Special emphasis is placed on reducing harm for Aboriginal Territorians, who suffer the greatest burden from tobacco use.

## Tobacco use in the NT

The rate of smoking in the NT is the highest in Australia. Smoking prevalence data from 2007 reports that one quarter (25.3%) of non-Indigenous NT adults aged 14 years and over smoked tobacco on a daily basis. In 2004–2005, more than half (55.9%) of Indigenous NT adults aged 18 years and over were current smokers. Based on this data, the rate of smoking among NT Indigenous adults is



approximately 2.2 times the NT non-Indigenous rate, and 3.3 times the national rate. Higher rates of smoking correspond with a higher risk of tobacco related diseases and conditions. In the NT, the burden of tobacco related disease is particularly high among Aboriginal and Torres Strait Islander people.

Source: *NT Department of Health and Families: Northern Territory Tobacco Action Plan 2010–2013.*

## Smoking related conditions

Smoking is a key risk factor for the three diseases that cause most deaths in Australia: ischaemic heart disease, cerebrovascular disease and lung cancer. Smokers are also at increased risk of developing chronic obstructive pulmonary disease and reduced lung function. Smoking in pregnancy increases the risk of health problems for both mother and child. Smoking is responsible for around 80% of all lung cancer deaths and 20% of all cancer deaths. Smoking has been linked to cancers of the mouth, bladder, kidney, stomach and cervix, among others.

Source: *Department of Health and Ageing (2006)*

## Smoking patterns

Rates of current smoking have decreased slightly for both men and women in recent years, based on age-adjusted estimates from the last three National Health Surveys (1995, 2001 and 2004-05). Over the period 1995 to 2005 the estimated proportion of men who were current smokers changed from 28% to 26% , and the corresponding change for women was 22% to 20%, after adjusting for age differences.

Source: *Australian Bureau of Statistics.*

## Underage Smoking

People who start smoking when they are young are more likely to smoke heavily, become more dependent on nicotine and be at increased risk of smoking-related illness or death (*McDermott, Russell and Dobson 2002*).

## Tobacco consumption among Australian students

While tobacco consumption amongst the population as a whole has recently reduced by almost 20%—from about just under 2500 to just under 2000 cigarettes per day—the reduction among Australian secondary-school students appears to have been even more dramatic.

In the three years since 2002, the number of cigarettes smoked among weekly 16 and 17 year-old smokers declined by about 30%. The percentage of secondary-school students reporting smoking at least

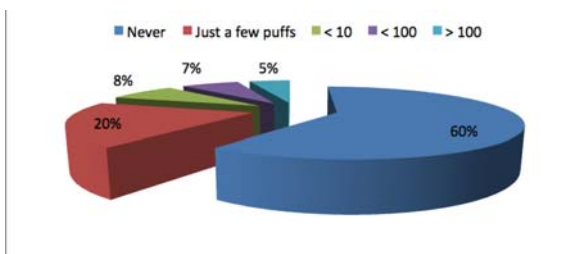
once weekly also declined dramatically between 1999 and 2005, both among the older and the younger age groups.

Per capita cigarette consumption across the whole population of secondary-school students has declined dramatically. Secondary-school students in Australia in 2005 on average are smoking about 58% fewer cigarettes than they were in 1996.

Source: L Stinson et al, personal communication using data published in ABS 4221.0 Schools Australia

## Smoking status

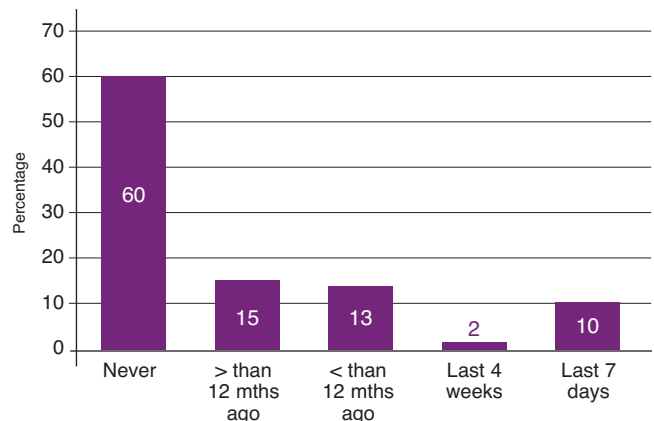
84% of NT students described themselves as non-smokers and 5% as ex-smokers. Non-smokers were more likely to be female (86%) than male (82%) and older students were less likely to be non-smokers than younger students. At the other extreme, 2% of all students described themselves as heavy smokers, all of them 14 years or older. 16 year old males were most likely to describe themselves as a heavy smoker (13%), while 17 year old males were the group most likely to describe themselves as a light occasional smoker. While self-description as a smoker (occasional, light or heavy) generally increases with age this relationship is not strictly linear.



**NT students lifetime tobacco use/non-use 2005**  
2005 ASSAD Survey Results for Tobacco and Alcohol Usage  
12 – 17 year old NT School Students – (Unpublished Report)

60% of NT students had never smoked, even part of a cigarette, and this proportion declined with age, from 80% of 12 year olds to 48% of 17 year olds; this trend was not strictly linear. For example, 14 year olds were more likely to have smoked than 15 year olds. While similar proportions of male (61%) and female (59%) students had never smoked this was not consistent across age groups.

Younger female students, aged 12 to 14, were more likely to have smoked than their male counter-parts; this was also the case for 17 year olds, although the difference at that age was small.



2005 ASSAD Survey Results for Tobacco and Alcohol Usage  
12 – 17 year old School Students – Northern Territory

Overall, 10% of students had smoked within 7 days of the survey; this group are termed 'current smokers'. Male students (12%) were slightly more likely to be current smokers than female students (9%). This pattern is pronounced for students aged 15 to 17 years old but is reversed for the younger ages. That is, 12 to 14 year old female students were more likely to be current smokers than male students of that age.

## What are the medical uses of tobacco?

Unlike most other psychoactive drugs, there are no current medical uses for tobacco.

Australian Bureau of Statistics figures show that smoking in Australia has dropped by 24% since the late 1970s. This has been primarily the result of people giving up smoking.

## What is passive smoking?

Passive smoking is a term used to describe the inhalation of tobacco smoke by people who don't smoke but spend time with smokers. **Mainstream** smoke is smoke drawn through a cigarette into a smoker's mouth and lungs and then exhaled. **Sidestream smoke** is the smoke that drifts off the end of a burning cigarette, pipe or cigar and is completely unfiltered. Some poisons in tobacco smoke are much more concentrated in sidestream smoke than mainstream smoke and are more dangerous because the particles are smaller. These smaller particles reach deeper into the lungs and stay longer in the body.

Passive smoking is also referred to as **second-hand tobacco smoking** or the inhalation of environmental tobacco smoke (ETS).

# Specific drug information

## Major health effects of passive smoking

The breathing in of tobacco smoke by non-smokers can lead to harmful health effects in an unborn child, middle ear infections, bronchitis, pneumonia, asthma and other chest conditions in children. It is also linked to sudden infant death syndrome (SIDS). In adults, passive smoking can increase the risk of heart disease, lung cancer and other chronic lung diseases.

Source: Queensland Health (2006)

- **Irritant effects:** Most non-smokers experience general discomfort from tobacco smoke, such as irritation to the eyes, throat and airways.
- **Heart disease:** There is increasing evidence that passive smoking causes heart disease in healthy non-smokers. Research has found that non-smokers living with smokers have a 30% increased risk of death from a heart attack.
- **Lung cancer:** The average lung cancer risk to the passive smoker is increased by 30%, compared to someone who is not exposed. It has been estimated that the risk of developing lung cancer from passive smoking is about 90 times higher than the risk of developing an asbestos-related cancer from asbestos in buildings.
- **Existing health conditions:** The conditions of people with allergies and lung disease can be aggravated by exposure to tobacco smoke. Although there is no evidence linking passive smoking as a cause of asthma in adults, there is evidence that it can exacerbate asthma in those who already suffer from the underlying condition.
- **Pregnancy:** The unborn child whose mother is a smoker or is exposed to smoke is a passive smoker because it receives tobacco by-products through its mother's bloodstream. The nicotine increases the baby's heart rate and the carbon monoxide from the tobacco takes the place of oxygen in the blood, leaving less for the baby. A pregnant woman who does not smoke herself but is exposed, on a regular basis, to the smoke of others is more likely to have a low birth weight baby and that child is at greater risk of dying before, at, or shortly after birth.
- **Infancy:** In the first year of life, smoking is considered one of the major risk factors for Sudden Infant Death Syndrome (SIDS or cot death). If the baby is breast fed by a mother who smokes, nicotine and other tobacco by-products are passed on through the milk. If parents or other people regularly smoke around the baby, the risks associated with passive smoking increase.
- **Childhood:** Cigarette smoke is more dangerous for young children than adults because their lungs are still developing. Children exposed to passive smoking are more likely to have serious chest

infections, poor lung function and growth, and triggered asthma attacks.

## Strategies to encourage a smoker to quit

Ask the smoker:

- when and why they smoke
- to write down when it was and why they had each cigarette
- to be aware of when they smoke and try to do something different, e.g. stand up if they usually sit down to smoke
- to think of all their good reasons for quitting and write them down
- to set a date to quit, write it down and tell family and friends of this date
- what support they may need, e.g. a friend to quit with
- to plan in advance ways to cope with cravings for cigarettes, e.g. when I feel like a cigarette I will chew gum, have a walk or use the 'Four D's' (**Delay** the urge, **Drink** water, **Deep** breathe, **Do** something else to take your mind off smoking)
- to contact the Quit line on 131 848 for a free Quit Kit.

## What consequences of smoking are relevant to young people?

When educating young people about the consequences of smoking, it is important to emphasise the **immediate and short-term effects of smoking** more than the long-term negative effects. This is because students do not generally identify with the long-term consequences associated with smoking.

Consequences that are more likely to be personally relevant for students include:

- Smoking causes **premature** ageing of the skin.
- Smoking is **expensive**. A pack-a-day smoker spends approximately \$3,650 a year on cigarettes. This money could be used for clothes, CDs and videos.
- Smoking causes **smelly breath** and leaves hair and clothes smelling of stale cigarette smoke.
- Non-smokers save money on such things as shampoos, conditioners and breath fresheners.
- Smoking affects the **environment**. Millions of trees are burned to cure tobacco to make cigarettes.
- Smoking **stains teeth** and **fingers**.
- Just **one cigarette** begins to put extra pressure on the **heart**.
- Smoking can cause **respiratory problems** for asthmatics.



## 5. CANNABIS

### What is cannabis?

The term cannabis refers to the products derived from the Indian hemp plant called *Cannabis sativa*. Some common street names for cannabis are grass, dope, gunja, mull. Cannabis is used recreationally in three main forms.

- **Marijuana** is the most commonly used form and is made from the dried leaves, stems and flowers of the plant. It is the most common and least powerful form of cannabis.
- **Hashish** (hash) is made from the plant's resin, which is extracted from the flowering tops and leaves of the female plant, then dried and compressed. The concentration of THC is higher than in marijuana, producing stronger effects.
- **Hashish oil** is a very thick, concentrated liquid which is extracted from the plant. It is the most powerful form of cannabis.

A non-potent strain of *Cannabis sativa* is used to produce fibres for use in paper, textiles and clothing.

### What is the drug in cannabis?

Delta-9 tetrahydrocannabinol (THC) is the psychoactive ingredient of the Indian hemp plant (*Cannabis sativa*).

Cannabis is classified as a unique psychoactive drug because in low doses the psychoactive ingredient, THC, primarily has a **depressant** effect on the CNS, but in larger amounts can also cause **hallucinations**.

### How is cannabis used?

Marijuana is usually smoked in hand-rolled cigarettes often called joints or in smoking implements such as



pipes and bongs. Hashish can be smoked or taken orally, usually in tea, cakes or cookies. Hashish oil can be consumed by smoking (one way this is done is by rubbing a small amount of oil onto the outside of a cigarette) or taken orally in food or drinks.

### How many young people use cannabis?

The 2005 Australian secondary school students' use of over-the-counter and illicit substances Report states that **Cannabis** was the **most commonly used illegal drug among 12-17 year old students**.

Cannabis use increased with age from 5% of 12 year olds who had ever used cannabis to 32% of 17 year old students reporting use.

Weekly use increased with age from 1% of 12 year old students to 6% of 17 year old students and weekly use was more common amongst males than females. Students who used cannabis in the past year most commonly used it with others at a friend's place.

**The proportion of students using cannabis had decreased between 1996 and 2005.**

*Source: Centre for Behavioural Research in Cancer & the Cancer Council Victoria (2006)*

### Cannabis use in Indigenous communities

Across the general community research shows that cannabis use has been declining over the past decade. In contrast, Indigenous workers across the country are becoming increasingly concerned about the recent rapid escalation and pervasiveness of cannabis use within their respective communities.

**Studies in remote Indigenous communities in the 'Top End' of the Northern Territory (NT) did not detect cannabis use in a 1980's survey** conducted in the region. **A rapid rise** in its use was evident from the **mid-1990's** due to expansion of local trafficking. In **2001**, studies by Alan Clough and colleagues found that between **60-73% of males** and **16-27% of females** (aged 13-36 years) in eastern Arnhem Land (NT) communities were using cannabis, with around three-quarters of these using it at least weekly and 44% smoking it daily. Follow-up studies in **2005-06** in the same communities indicated that these high rates persisted with **61% of males** and **58% of females** in these age groups using **cannabis at least weekly**. The majority of these users (**88%**) reported symptoms of **cannabis dependence**.

Professor Clough's team are **replicating this work in Cape York and the Torres Strait Islands** and reported their finding of **similarly very high levels of use** in these remote communities in **2009**.

*Source: National Cannabis and Prevention Information Centre (NCPIC) online (2010).*

# Specific drug information

## Further information

The Cannabis Information and Helpline:  
1800 30 40 50.

## Visual Information

*Sickness from Tobacco* and *Coping with Stress and Grief* were produced by the School of Tropical Medicine, Public Health and Rehabilitation Sciences at James Cook University. These videos give an Indigenous perspective on issues, such as tobacco, coping with stress and grief, and were filmed on Groote Eylandt in the Gulf of Carpentaria, Northern Territory.

## What are the possible immediate effects of using cannabis?

As with other drugs the effects of cannabis vary according to the characteristics of the:

- **user** – personality, mood and previous experience with cannabis
- **drug** – the amount of cannabis used, how the cannabis is used, the amount of THC contained in the cannabis
- **setting** – the laws related to cannabis use, the place where the cannabis is consumed and the social setting.

THC has both depressant and mild hallucinogenic effects on the CNS. A small dose can produce the following immediate effects:

- mild euphoria
- relaxation
- loss of inhibitions
- a tendency to talk and laugh more than usual
- loss of concentration
- impaired balance and coordination
- increased appetite, often termed 'the munchies'
- reddened eyes
- increase in heart rate
- tunnel awareness – where a person focuses their awareness on one thing and ignores all others
- blood pressure changes (may increase while sitting down and decrease on standing).

With larger doses of cannabis the effects listed above may be stronger. The user may also experience changes in perceptions in time, colour, distance, touch or other sensations similar to mild hallucinations.

Larger doses of cannabis can produce:

- confusion
- restlessness
- delusions
- hallucinations
- depersonalisation
- excitement
- a serious psychotic episode.

Cannabis can also affect:

- short-term memory
- logical thinking
- motor skills (movement skills)
- ability to perform complex tasks.

## Cannabis and other drugs

If cannabis is used in conjunction with other depressant drugs, the depressant action generally increases.

Using cannabis with other drugs increases risks. When cannabis is combined with alcohol, it can frequently lead to behaviour which causes injuries. For example, because cannabis interferes with a person's motor and coordination skills, vision and perceptions of time and space, a person's ability to drive safely and complete tasks that require concentration can be impaired. This impairment increases substantially when cannabis is used with alcohol.

## How long after using cannabis are the effects felt?

When smoked, the initial effects of cannabis are usually felt within **15 minutes**, with the maximum effects usually felt within an hour. If eaten, it may take up to an hour before the effects are felt.

The peak effects of cannabis normally last only a short time because the concentration of THC in the bloodstream is redistributed quickly into fatty body tissue and is also converted by the lungs and liver into its metabolites.

## How long are the effects felt?

When cannabis is **smoked**, the effects can last for between **two and four hours**. When **eaten**, the effects may last for between **four and seven hours**.

## How long does it remain in the body?

THC and its metabolites are highly fat-soluble. They may be stored and accumulated in the fatty tissues of the body (including the brain) from which they are gradually released over time and then cleared from the body. This means these compounds may be detectable in very small amounts in the blood for several days or weeks. It has been shown that THC can be held in fatty tissues for **more than 28 days**.

The health significance of the storage of cannabinoids in fatty tissues has not been fully determined. THC and other cannabinoids do not remain active in terms of psychoactive effects.

### *Is it possible to overdose on cannabis?*

The acute toxicity of cannabis is very low. There are no confirmed cases of deaths from cannabis overdose in world literature. It should be noted, however, that while there are no recorded deaths from cannabis overdose, there are other risks associated with its use.

### *What are the possible risks when intoxicated on cannabis?*

Possible health problems:

- injuries in a variety of situations
- injury and death associated with motor vehicle crashes
- sexually transmissible infections (including HIV)
- drowning
- possible reproductive impairment
- possible damage to unborn children.

Possible legal and financial problems:

- arrest
- a criminal record for possessing small amounts of cannabis in some states and territories in Australia
- expensive fines.

Research in Australia and the US shows evidence of some long-term effects in some regular cannabis users.

- **Respiratory illness:** Marijuana cigarettes have more tar than tobacco, placing cannabis users at an increased risk of respiratory illness such as lung cancer and chronic bronchitis. This risk is increased because marijuana smokers often inhale deeply, and hold the smoke in the lungs longer, to increase the effects of the drug. Cigarette smokers who also smoke cannabis have an even greater risk of respiratory disease.
- **Reduced motivation:** Many regular users, especially young people, have reported that they have less energy and motivation, so that performance at work or school suffers. Usually these effects disappear gradually when cannabis use stops.
- **Brain function:** Concentration, memory and the ability to learn can all be reduced by regular cannabis use. These effects can last for several months after ceasing cannabis use.

- **Hormones:** Cannabis can affect hormone production. Research shows that some cannabis users have a lower sex drive. Irregular menstrual cycles and lowered sperm counts have also been reported.

### *What harm may be caused by cannabis use?*

It is safer not to use cannabis at all. However, some students may be aware of a range of harm-reduction strategies for using cannabis. In this context, students should note the following:

- **Don't drive or operate machinery.** These activities can be dangerous while under the influence of cannabis. The risk of being involved in a motor vehicle accident is likely to be increased when cannabis users drive while intoxicated by cannabis. The combination of alcohol and cannabis intoxication will substantially increase this risk.
- **Avoid activities that require coordination** where the effects of cannabis may place the user at increased risk of injury or death such as swimming.
- Using cannabis can have harmful effects that can place users in dangerous situations. Therefore, **they should not be left alone.** If the situation becomes unsafe, call for help immediately. Students need to be made aware that police are not called to attend drug-related first aid situations if an ambulance is in attendance.

### *Are there therapeutic uses of cannabis?*

Some cannabis users report that cannabis helps them relieve the symptoms of medical problems. In 2000, a NSW Government report concluded that cannabis could be useful for certain medical conditions, and recommended more research should be conducted.

The report suggested that cannabis may be most useful for the following conditions:

- pain relief (analgesia) – for example in people with cancer
- nausea and vomiting – particularly in people having chemotherapy for cancer
- wasting, or severe weight loss – in people with cancer or AIDS. Cannabis may increase the person's appetite and relieve their nausea
- neurological disorders – cannabis may be useful in relieving the symptoms of multiple sclerosis, spinal cord injury and other movement disorders, because it helps relieve muscle spasms.

Research is continuing.

# Specific drug information

## Is there a link between cannabis and psychosis?

In general, there appear to be three separate circumstances whereby cannabis and psychosis are linked:

- It is believed that cannabis use (especially if heavy and regular) may be linked to a condition known as a drug-induced psychosis, or '**cannabis psychosis**'. This can last up to a few days. The episodes are often characterised by hallucinations, delusions, memory loss and confusion.
- Cannabis use may also precipitate a **latent psychosis**. In other words, it could bring forward an episode of schizophrenia or manic depressive psychosis in a vulnerable or pre-disposed individual.
- It is possible that cannabis use can **trigger** psychotic episodes in a person who already has a mental illness.

## Can users become dependent on cannabis?

Frequent use can lead to dependence for some people. Cannabis dependence syndrome occurs in heavy, chronic users. There is good experimental evidence that chronic heavy cannabis users can develop tolerance to its subjective and cardiovascular effects. Recent research has shown dependent users experience some physical withdrawal symptoms, such as sleep and appetite disturbance and a general physical unease as well as psychological withdrawal symptoms.

## Does cannabis use lead to the use of other illicit drugs?

The majority of those trying heroin, cocaine or amphetamines have tried cannabis. However, most users of marijuana do not use other illicit drugs.

**Adolescents** who initiate cannabis use in their **early teens** are at **higher risk** of progressing to **heavy** cannabis use and other **illicit drug use**, and to the development of dependence on cannabis. Probability should not, however, be confused with causation.

## What is the law regarding cannabis use?

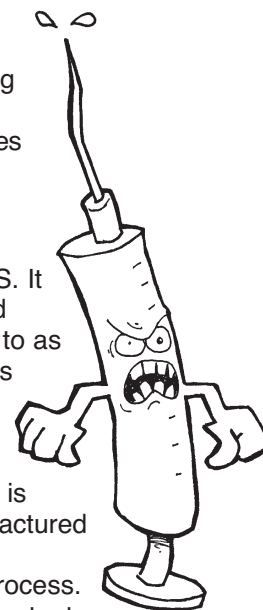
It is illegal to use, possess, grow or sell cannabis in Australia, but the penalties for cannabis offences are different in each state and territory. Refer to p314-315 regarding NT specific information regarding Cannabis legislation.

## 6. HEROIN

### What is heroin?

On the street, heroin may be known by many different names, including hammer, H, smack, horse, white, beige. The popularity of these names varies from time to time.

Heroin (diacetylmorphine) is a **depressant**, which means it suppresses the activity of the CNS. It belongs to a group of drugs called **opioids**, which are often referred to as **narcotic analgesics**. These drugs are strong pain relievers. Opioids are derived from a milky white substance produced by the **opium poppy**, which, when dried is known as opium. Heroin is manufactured from morphine or codeine, major alkaloids of opium, by chemical process. Heroin is about three times more potent than morphine.



In its pure form, heroin is usually a white crystalline powder. On the street it is usually sold in the form of powder or 'rocks' and can range in colour from white to brown, depending on the substances it is mixed or 'cut' with. It is usually sold in small folds of paper or small plastic bags, and sometimes in capsules.

Currently most of the illicit heroin in Australia comes from Asia, the Middle East and South America. The opium poppy is grown legally in Tasmania for medical purposes.

The purity of heroin sold on the street varies considerably and is dependent on the amount of other substances, such as glucose, quinine and talcum powder, with which a drug is cut.

In Australia, heroin is most commonly injected intravenously. It can also be smoked (either in cigarettes or on tinfoil, referred to as 'chasing the dragon') and snorted.

### How many young people use heroin?

In the 2005 ASSAD survey a small proportion of students (2%) reported that they had ever used opiates such as heroin or morphine. Only 1% of students reported having used opiates in the month prior to the survey. There was a decrease in the proportion of 12-15 year olds and 16-17 year olds reporting to having used opiates between 1996 and 2005.

### What are the possible effects of heroin?

As with all drugs the effects of heroin will vary from person to person depending on characteristics of the individual, the drug and the setting.

Heroin crosses the blood brain barrier quickly, resulting in a euphoric feeling, or intense rush, which is then followed by a calming effect, slowing the reactions through the thought process. The effects of heroin usually last approximately four hours.

The **immediate effects** of heroin may include:

- feelings of well-being
- relief of pain
- shallow breathing
- nausea and vomiting
- constipation
- sleepiness
- loss of balance, coordination and concentration.

**Large doses** of heroin can cause:

- very depressed breathing
- pupils to narrow to pin-point
- cold skin
- the CNS to depress to the point where a person slips into a coma and dies.

Because street heroin is usually mixed with other substances, it is almost impossible to assess its strength or composition without laboratory testing. Unpredictable and high levels of purity can be a cause of overdose. Combining heroin with other drugs, particularly other depressant drugs, such as alcohol, and minor tranquillisers, such as Rohypnol is, however, a significant cause of overdose. When two or more depressant drugs are combined, the CNS becomes very depressed and breathing may cease.

### *What are the harms associated with injecting drugs?*

There is a range of problems associated with injecting any illicit drug. People who inject heroin or other drugs risk becoming infected with HIV and other BBVs if they share needles, syringes and other injecting equipment (i.e. swabs, tourniquet, spoons, filters, water) with other people.

**Injecting** can also result in a blockage of blood vessels (caused by powder particles not being properly filtered); this can cause major damage to the body's organs including:

- inflamed blood vessels and abscesses
- blood poisoning
- bacterial infections, which may damage the heart valve
- vein collapse
- infection at injection site
- bruising.

**Long-term use** of heroin can result in a range of health problems including:

- dependence
- loss of appetite

- pneumonia
- chronic constipation
- heart problems
- chest and bronchial problems
- irregular menstruation (females)
- infertility and impotence (males).

Heroin use can also result in a range of social and legal problems.

**Caution should be taken when discussing injecting drug use with young people. It is important to be aware that very few school students inject drugs.**

It is necessary that young people who do inject drugs be provided with counselling options. Some students may be aware of the various harm reduction strategies around injecting drugs including:

- **New sterile equipment** should always be used (needle, syringe, swab, tourniquet, spoon, glass, filter and sterile water).
- **Avoid getting blood on hands** and fingers. It is believed that some BBVs have been transmitted when users have placed bloody fingers or hands on equipment or the site of injection.
- **Filter paper**, clean cotton wool or tampons should be used to filter the drug. Cigarette filters are not recommended.
- **Sterile water** should be used to inject the drug.

### *How do people overdose?*

Overdose from heroin (or other opioids) happens when the body becomes so relaxed that breathing ceases. Breathing becomes very slow, body temperature drops, and the heartbeat becomes irregular. When breathing becomes so slow that it stops altogether, death can occur.

The major causes of heroin overdose are:

- the combination of heroin (or other opioids) with alcohol or other CNS depressants such as benzodiazepines
- the higher purity of heroin.

Not all people who overdose 'drop' immediately. Data shows that death, as a result of overdose, may occur rapidly (less than 20 minutes after injection) or may be delayed (occur more than 20 minutes after injection). Friends should be encouraged to look for signs that their friends may be in trouble – this could include heavy snoring.

The ambulance service will not call the police unless there is a death or if they are threatened. Young people need to be encouraged to call an ambulance if they think a friend is overdosing.

# Specific drug information

## 7. ECSTASY (MDMA)

### What is ecstasy?

MDMA stands for methylenedioxymethamphetamine, and is commonly known as ecstasy. Ecstasy is known on the street as E, ease, X, XTC, love drug and hug drug. MDMA is a derivative of amphetamine, and shares the **stimulant** properties of amphetamines and hallucinogens in its side effects as well as residual effects.

Ecstasy was originally developed as an **appetite suppressant**, although it was never used for this purpose. It was occasionally used in the US in the mid 1970s in therapy classes to enhance communication.

Ecstasy became available in Australia in the mid 1980s and was made illegal in 1987.

In Australia, street ecstasy doesn't always contain just MDMA – it is often mixed with (or substituted by) related drugs, including amphetamine, MDA, PMA, ephedrine and LSD. Some tablets sold as ecstasy contain no ecstasy at all. Some even contain no drugs at all.

Ecstasy is usually sold as small tablets or capsules. Yellow or white tablets are the most common, but many other colours and designs have also been available. Some tablets are also sold with embossed shapes on them such as hearts, doves, robins, rabbits and champagne bottles.

Ecstasy is usually swallowed. If swallowed, the effects usually start within 30 to 90 minutes. Most of the effects last for six to eight hours; however, sometimes effects may last for up to 24 hours.

### How many young people use ecstasy?

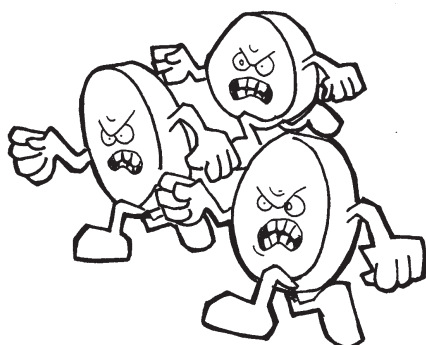
The 2005 ASSAD survey reported that only 4% of students had ever used ecstasy and recent use of ecstasy was not common among any age group. Only 2% of students aged 16-17 had used ecstasy in the month prior to the survey.

### What are the possible effects of ecstasy?

As with other drugs, the effects of ecstasy will vary from person to person depending on the characteristics of the individual, the drug and the setting.

Some of the **immediate effects** of ecstasy may include:

- feeling of well-being
- increased confidence
- anxiety
- nausea
- sweating



- hot and cold flushes
- jaw clenching
- teeth grinding
- increased pulse rate
- increased blood pressure
- high body temperature
- dry mouth
- insomnia
- poor concentration
- sensations of floating
- paranoid feelings – fear of persecution.

**Higher doses** can produce:

- irrational behaviour
- convulsions (fits)
- dehydration
- urinary retention
- rhabdomyolysis (muscle meltdown)
- vomiting
- hallucinations
- excessive thirst.

Ecstasy affects the production of serotonin, a mechanism that regulates the body's temperature. It appears to cause a loss of control of normal body temperature.

When the effects of ecstasy are combined with physical activity such as dancing, the user may overheat and dehydrate. In order to combat dehydration and to rehydrate the body, people need adequate amounts of water.

Ecstasy may also disturb the brain's mechanism for satiation (knowing when you have had enough water), causing users to continue drinking. This results in body cells swelling. When the brain is affected, swelling of the brain stem and spinal cord affects respiration, heart rate and blood pressure can lead to death.

Ecstasy users at dance parties should sip water at the rate of 600 ml per hour to replace lost fluids and rest frequently in cool places. The effects of the drug may cloud the judgment and perception of the user, so it may be wise to alert others who are not using to monitor users.

Ecstasy may also have a 'hangover' effect which usually occurs the day after it is taken. Symptoms may include:

- depression
- drowsiness
- muscle aches
- loss of appetite
- insomnia
- loss of concentration.

## 8. AMPHETAMINES

### *What are amphetamines?*

Amphetamines are a group of drugs commonly referred to as **speed**. Common street names include MDA, goey, ox blood, dexies, crystal meth and ice. Dexamphetamine and methamphetamine are the best known forms of amphetamine currently available in Australia. They speed up or stimulate the activity of certain chemicals in the brain and are classed as **stimulant** drugs.

Amphetamines brought on the street are usually supplied as a white or yellow powder, tablets or as liquid in capsules. They can be swallowed, injected, smoked or inhaled (snorted).

### *How many young people use amphetamines?*

The vast majority (95%) of secondary school students have never used amphetamines. By the age of 17, (7%) of students reported having had some experience with amphetamines. Around 3% of students aged 14 years and over reported using amphetamines in the month prior to the survey.

### *What are the possible effects of amphetamines?*

The effects of amphetamine depend on the characteristics of the drug, the individual and the setting.

The immediate effects of amphetamine can last from two to five hours. Often, the user describes the initial feeling as a 'rush'. The effects can include:

- increased alertness
- increased confidence and energy
- hyperactivity/talkativeness
- reduced appetite
- inability to sleep
- enlarged pupils
- anxiety
- irritability
- suspiciousness
- a threatening manner
- panic attacks.

Sometimes users may experience a residual 'hangover' which may last from two to 26 hours.

At **low doses**, the physical effects of amphetamines can be similar to those of natural adrenalin produced by the body. The effects can include:

- reduced appetite
- increased rate of breathing and pulse
- increased blood pressure
- dry mouth
- headache

- skin rashes
- widening of the pupils.

**High doses** of amphetamine can include:

- restlessness
- irritability
- dizziness
- irregular heartbeat
- stomach cramps
- impaired coordination, particularly with difficult motor tasks such as driving.

**Psychological** effects include:

- increased alertness and energy
- delayed fatigue
- feeling of well-being and good mood.

With **increasing doses** users may become:

- talkative
- excited
- restless
- irritable
- filled with a sense of power
- irrational
- aggressive
- hostile.

**Repeated high doses** can cause:

- delirium
- panic
- hallucinations
- feelings of persecution.

The continued use of amphetamines is likely to cause some health problems. These may include:

- malnutrition
- reduced resistance to infection
- violence
- hallucinations
- high blood pressure which can lead to stroke
- panic attacks
- periods of psychosis.

### *What is attention deficit hyperactivity disorder (ADHD)*

Attention deficit hyperactivity disorder (ADHD) is characterised by inattentiveness, impulsivity, and hyperactivity that are persistent and sufficiently severe to cause functional impairment at school, at home and with peers. Hyperactivity is not always present in those with ADHD. Individuals diagnosed with the predominantly inattentive subtype, (ADHD-PI), display symptoms of inattention only. This subtype is often harder to detect, as the symptoms are sometimes mistaken for laziness and lack of motivation.

# Specific drug information

It is important for ADHD to be diagnosed by a trained specialist to avoid misdiagnosis. Also, it is common for ADHD to be accompanied by other disorders, such as depression, anxiety and learning difficulties. All need to be identified and treated appropriately.

## How is ADHD treated?

The most effective treatment for ADHD is a multimodal approach, including behaviour management, family counselling and support, educational management and medication.

Amphetamines have been used since about 1936 for treating ADHD. Extensive research has shown them to be safe and effective. The stimulant group of medication (dexamphetamine and methylphenidate) has a 60–90% likelihood of being effective.

Dexamphetamine and methylphenidate (Ritalin) are common treatments for ADHD. These medications, if successful, will 'enhance' an inattentive child's natural abilities. They help focus attention, shut out distraction and allow impulsive children to think before they act.

Dexamphetamine is the longer lasting of the two short-acting medications and tends to work for six to eight hours. This is usually attempted first because, if effective, a school dose can be avoided. Ritalin has a rapid onset and short duration (approximately 3½–4 hours), and hence is administered at breakfast and lunchtime. By evening, the blood level drops, allowing for normal sleep. The short half-life is a problem in some children who experience an end-of-dose rebound in dysfunctional behaviour. Although the medications are similar some children respond better to one rather than the other.

There are also two long-acting forms (up to 12 hours) of methylphenidate on the market (Ritalin LA and Concerta). They require only a once-daily dose and work in the same way as the short acting stimulants. A long-acting non-stimulant, atomoxetine (Strattera), is also available.

## 9. HALLUCINOGENS

### What are hallucinogens?

Hallucinogens are naturally or synthetically produced drugs that act to alter a person's perception of the world.

Natural hallucinogens include plants, such as some mushrooms (psilocybin) and the peyote cactus (mescaline). Other hallucinogens such as LSD, bromo-DMA, MDA, STP and PCP (angel dust) are manufactured in laboratories. Certain drugs such as cannabis and MDMA (ecstasy) may produce hallucinogenic effects at high doses or in particular circumstances.

### How many young people use hallucinogens?

In the 2005 ASSAD survey it was reported that 3% of secondary school students had some experience with hallucinogens and 'ever use' increased with age from 1% for 12 year olds to 5% of 16 year olds. Just over 1% of 16-17 year old students had used hallucinogens in the month prior to the survey, and the majority of students reporting use of hallucinogens in the year before the survey had used them infrequently.

### LSD

Lysergic acid diethylamide (LSD) is commonly known as acid, trips or tabs. It is synthetically produced and is considered to be the most powerful hallucinogen developed.

LSD is effective in extremely small doses with usual doses ranging from 25 to 300 micrograms. Because the amounts of the drug are so small it is usually mixed with sugar and sold on small pieces of absorbent paper decorated with popular designs. It can also be sold on sugar cubes, small squares of gelatine or in capsule, tablet or liquid form.

LSD is usually swallowed. It may be swallowed immediately, placed under the tongue and dissolved, or the paper tile first chewed for up to 15 minutes to release the hallucinogen into the mouth. When swallowed, the effects of LSD usually take between 30 to 60 minutes to begin, depending on individual reactions and the amount of food in the stomach. The effects usually last for six to 12 hours.

As with all drugs, the effects of LSD are dependent on characteristics of the drug, the user and the setting.

The **short-term** physiological effects may include:

- slight increase in body temperature
- dilation of the pupils
- slightly increased heart rate and blood pressure
- increased levels of glucose in the blood
- dizziness
- drowsiness
- nausea.

The **psychological effects** can include:

- alterations in the mood and emotion
- euphoria and dysphoria (sometimes during the same trip)
- visual hallucinations
- perceptual disorder
- emotional instability
- inability to cope
- paranoia.

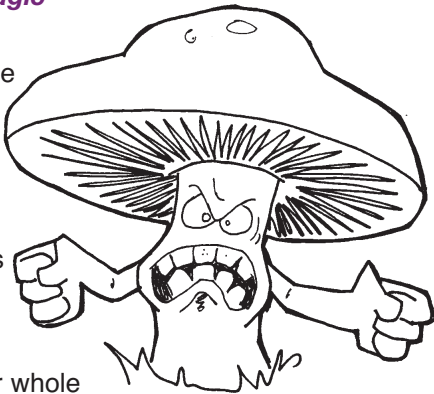


LSD may also precipitate psychotic episodes that would normally be suppressed.

Some users may experience 'flashbacks' where there is a spontaneous recurrence of the original experience at a later date. These 'flashbacks' can occur weeks or even months after the last use of the drug. The mechanism that underlies 'flashbacks' is unknown.

## Psilocybin (magic mushrooms)

Psilocybin is the natural hallucinogenic chemical found in some mushrooms. It may be sold as white crystals, crude mushroom preparations or whole dried brown mushrooms. Some species of magic mushroom grow wild in Australia.



It is very dangerous to pick and eat wild mushrooms as it is very difficult to distinguish magic mushrooms from the poisonous 'look alikes'. Some poisonous mushrooms can cause death or permanent liver damage within hours of being taken.

The effects of magic mushrooms are usually similar to those of LSD but usually last for a shorter time (four to six hours). Users often experience a feeling of nausea before the psychoactive effects of the drug set in.

## 10. MINOR TRANQUILLISERS

### What are tranquillisers?

Tranquillisers can be classified into two groups: major tranquillisers which treat severe mental illness, and minor tranquillisers which are used to treat less serious depression, anxiety and insomnia.

**Major tranquillisers**, including phenothiazines, are used mainly in cases of psychosis, such as schizophrenia and mania. They are also used to treat some behavioural disorders in children.

**Minor tranquillisers** may be classed as sedatives, hypnotics or (sleeping pills) and anxiolytics (which relieve anxiety). Some of the more common minor tranquillisers, by trade name, include Valium, Serepax, Mogadon, Nitrazepam, Rivotril and



Rohypnol. Like alcohol and heroin, minor tranquillisers are **depressants**. They affect the CNS by slowing down the body physically, mentally and emotionally.

### How many young people use tranquillisers?

The 2005 ASSAD survey reported that use of tranquillisers other than for medical reasons among students was low, with 85% of students never having used tranquillisers. Between 4% and 5% of students 13 years old and above had used tranquillisers in the month prior to the survey and around 2-3% had used them in the week before the survey.

### What are the most commonly used minor tranquillisers?

The most commonly prescribed group of anxiolytics and hypnotics are benzodiazepines (benzos). Benzodiazepines are usually prescribed by doctors to treat anxiety and sleep problems. They are also used in the treatment of epilepsy, alcohol withdrawal and muscle spasms. When doctor's instructions are followed, they are usually safe and effective if used for short periods of time.

Long-term use can result in unpleasant side effects and may lead to dependence. Harm associated with the use of minor tranquillisers may include lack of motivation and nausea. Because reflexes are slowed down, the ability to drive and complete other complex tasks may be affected. When used with other depressant drugs, such as alcohol or heroin, the potential for harm increases.

## 11. COCAINE

### What is cocaine?

Cocaine is a **stimulant**, which is commonly known on the street as coke, snow, flake, dust, crystal, nose candy and white lady. The most common routes of administration are by snorting and intravenous injection. The hydrochloride salt form of cocaine is not suitable for smoking, as in this form, the drug decomposes at the temperature required to vaporise it.

The base form of cocaine, which is achieved by the chemical activation of the hydrochloride form, vaporises at low temperature and can be smoked. This form of cocaine is commonly known as crack (from the cracking sound it makes when it is heated).

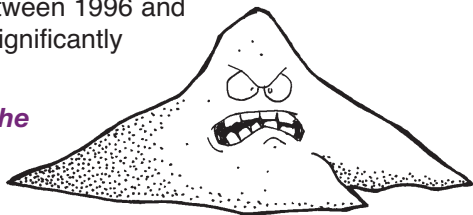
### How many young people use cocaine?

The 2005 ASSAD survey reported that cocaine was rare among students with only 3% of all students having ever used cocaine. Only 1% of students had used cocaine in the month prior to the survey. While the proportion of older students using cocaine in their lifetime had not changed between 1996 and 2005, the proportion of younger students reporting using

# Specific drug information

cocaine between 1996 and 2005 had significantly decreased.

## What are the effects of cocaine?



As with all drugs the effects of cocaine are dependent on characteristics of the drug, the user and the setting.

### Immediate effects

The effects of smaller doses may include:

- increase in heart rate
- increase in blood pressure
- increased body temperature
- increased energy and alertness
- increased confidence
- feeling of invincibility
- diminished fatigue.

The effects of larger doses may include:

- anxiety
- insomnia
- paranoia
- persecutory fears.

### Long-term effects

- sexual dysfunction
- interpersonal conflicts
- severe depressive conditions
- dysphoria
- bizarre and violent psychotic disorders which may persist for weeks after use.

## 12. ANABOLIC-ANDROGENIC STEROIDS (ANABOLIC STEROIDS)

### What are anabolic-androgenic steroids?

Anabolic-androgenic steroids (or anabolic steroids) are a group of drugs that include the male sex hormone **testosterone** and several synthetically produced structural derivatives of testosterone. They are not classed as psychoactive drugs. The anabolic effects assist in the growth and repair of tissue, mainly muscle. The androgenic effects are involved in the development and maintenance of male sex characteristics. All anabolic steroids have both anabolic and androgenic effects to varying degrees.

Anabolic-androgenic steroids have the potential to increase the size and strength of an athlete, thereby improving performance in activities, which require strength and size. They have no positive effects on

aerobic performance. Some people use steroids to enhance their body shape.

Anabolic steroids are available as tablets to swallow, or as liquid for injecting.

### How many young people use steroids?

The 2005 AASAD survey reported that the use of steroids without a doctor's prescription was very uncommon, with around 3% of students having ever used steroids. Approximately 1% of students in any age group had used steroids without a doctor's prescription in the month before the survey. There was no change in the proportion of 12-15 year old students who had used steroids between 1996 and 2005.



### What are the possible effects of anabolic-androgenic steroids?

There are ranges of adverse side effects which users may experience following the non-medical use of anabolic steroids, some side effects are irreversible and others have been associated with death.

**Physical** side effects may include:

- acne
- high blood pressure, caused by a build of fat in the arteries
- liver problems
- heart problems
- increased cholesterol levels
- gynaecomastia (breast-like growth in the male)
- hair loss
- hypertension
- sleeplessness

- headaches
- tendon injuries
- permanent short stature in adolescents
- tendon/ligament damage
- water retention.

**Psychological** side effects may include:

- increased aggression
- increased irritability
- mood swings, schizophrenic type activity
- depression
- dependence.

**Females** may experience:

- clitoral enlargement
- smaller breasts
- voice changes
- cessation of menstruation
- excessive growth of hair on back and bottom.

**Males** may experience:

- shrinking testicles
- prostate problems.

In addition, there is also a risk of infection with HIV and other BBVs such as hepatitis C, if injecting equipment is shared. Regular users also place themselves at risk of other health problems associated with injecting drugs.

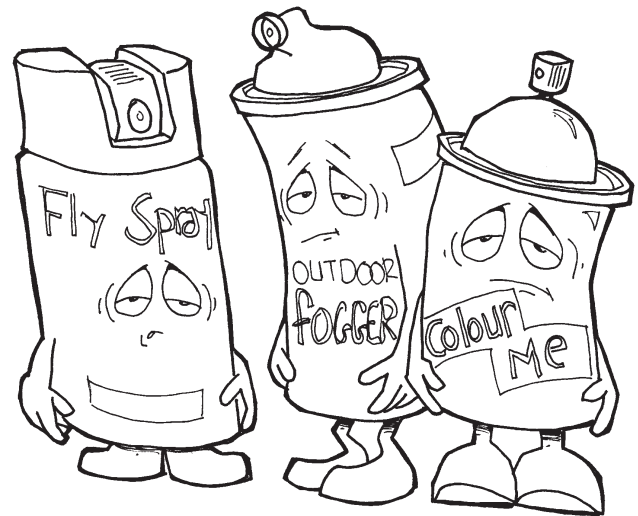
Some regular users develop very aggressive personalities, which can result in episodes known as 'roid rages'.

Steroid users have various patterns of drug use. There are, however, some features that form the basis of all anabolic steroid use. 'Cycling' refers to the practice of using anabolic steroids for a set period of time, followed by a period of no use. 'Stacking' refers to the practice of using two or more anabolic steroids.

## 13. VOLATILE SUBSTANCES (SOLVENTS/INHALANTS)

**It is recommended that information on volatile substance use should not form part of the general drug education curriculum.**

School drug education on volatile substance misuse, including butane, should occur when groups of students are at risk, by virtue of a local outbreak or when widespread discussion of the issue by young people is occurring. A sensitive and targeted response is needed to avoid the problem escalating. Teachers need to ensure that their response is consistent with their school's drug policy and procedure documents.



### *What are volatile substances?*

Volatile substances (solvents, inhalants) can be defined as any substance that **gives off a vapour at room temperature** and is capable of causing intoxication. They are liquids or semi-solid liquids and have the capacity to change rapidly from a liquid or semi-solid state to a gas when exposed to air.

Products containing volatile substances include semi-solids such as glues; liquids such as petrol, chrome paints, paint thinners and cleaning fluids; and gases such as aerosols (e.g. spray paints, deodorants, fly sprays), nitrous oxide (e.g. whipping cream bulbs), amyl nitrate and butane.

Strategies to address volatile substance use must take into account the substance being used as well as the context of the individual, community and social group in which this person belongs and the type of use occurring.

Volatile substances are classified as **depressants**. In larger doses, some users may also experience hallucinations. The onset of effects from volatile substances can occur within two to five minutes and disappear within five to 45 minutes.

### *How many young people use volatile substances?*

In the 2005 ASSAD survey it was reported that inhalant use was more common among younger students than older students. While 17% of all students had ever used inhalants, 'ever use' decreased from 21% of 12 year olds to 10% of 17 year olds. Recent use of inhalants also decreased with age, so that while 6% of 12 year old students had used inhalants in the week prior to the survey, only 2% of 17 year old students had used these substances recently. Three per cent of 12 year olds had used inhalants 10 or more times in the past year

# Specific drug information

and this decreased to 1% of 17 year olds. The proportion of 12-15 year old students using inhalants in their lifetime and in the past month had decreased significantly between 1996 and 2005.

## ***What are the possible effects of volatile substances?***

The effect of volatile substance use has been compared to feeling drunk. As with alcohol, volatile substance use can contribute to accidents, antisocial behaviours and death.

The effects of volatile substances are dependent on characteristics of the drug, the user and the setting and can result from both short and long-term use. It is important to note that significant harm can occur from a single occasion of use.

**Short-term** effects may include:

- excitement
- euphoria
- slurred speech
- double vision
- relaxation
- loss of inhibitions
- headache
- confusion
- loss of coordination
- aggressive behaviour
- irritations to the eyes, nose and throat
- shallow breathing
- possible hallucinations.

**Long-term** effects of regular chronic use may include:

- weight loss
- fatigue
- tremors
- violent outbursts
- depression
- social and developmental problems
- damage to the liver, kidneys and brain.

When intoxicated with volatile substances young people are at greater risk of injury, participating in unprotected and/or unwanted sexual behaviour, violence and other regrettable behaviours.

If a person intoxicated with particular solvents participates in vigorous activity, there is risk of heart failure (known as sudden sniffing death syndrome).

**For more information regarding volatile substances, please contact:**

***The Alcohol and Other Drugs Program, NT Department of Health.***

## Young people and crash involvement

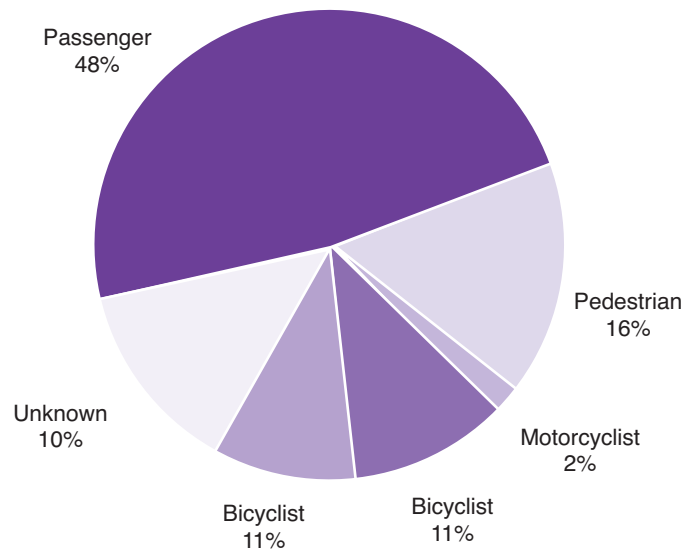
Road crashes are the leading cause of injury-related death for young people aged between 0 and 16 years. Young people involved in road crashes are more likely to be:

- injured than killed
- killed when not wearing a restraint
- killed as a passenger or pedestrian
- seriously injured or hospitalised as a cyclist or rider of wheeled recreational devices such as skateboards, scooters and rollerblades.

Between 1999 and 2008, 520 young road users aged 0-16 years were killed or hospitalised as a result of road traffic crashes.

The graph and table below shows the breakdown of fatalities and hospitalised casualties of young people up to 16 years of age by road user group. The majority of these killed or hospitalised were as passengers (56%). 52 young pedestrians were killed or hospitalised in 2005. Of these 38 (73%) occurred in the metropolitan area and 14 (27%) in the rural area.

## Fatalities and hospital admitted road crashes on NT roads involving children 0-16 years of age, 1999-2008



The graph above and table below show the breakdown of fatalities and hospitalised casualties of young people up to 16 years of age by road user group. The majority of those killed or hospitalised in the NT were as passengers (48%).

Fatalities and hospital admitted road crashes casualties by road user group and gender for children aged 0 – 16 in NT 1999-2008

Road User Group	Metropolitan		Rural		Total	
	Male n	Female n	Male n	Female n	Male n	Female n
Driver	20	16	18	14	38	30
Passenger	38	36	101	73	139	109
Motorcyclist	40	26	11	6	51	32
Bicyclist	7	2	2	1	9	3
Pedestrian	35	13	6	3	41	16
Other	6	6	20	20	26	26
<b>Total</b>	<b>146</b>	<b>99</b>	<b>158</b>	<b>117</b>	<b>304</b>	<b>216</b>

The table highlights differences between male and female road user groups in the NT such as driver, passenger, motorcyclist, bicyclist, pedestrian and whether the fatality or road crash occurred in a metropolitan (urban) or rural (remote) location. Note the high numbers of males involved in road crashes as passengers in rural areas.

# Information for road safety education

## Road safety issues for young people

### WHY ARE PASSENGERS AT RISK?

Passengers in this age group are at risk because they:

- **do not wear restraints or wear incorrectly fitted restraints**
- **are not seen by drivers when they are entering or exiting cars**
- **may distract the driver or engage in some other inappropriate behaviour while travelling**
- **do not think about what they are doing or the consequences of their actions**
- **may not enter or exit a vehicle safely or use a restraint properly**
- **choose to travel with drivers who act unsafely (such as speeding or drink driving).**

### WHAT ARE THE RISKS?

- Almost one in every two children killed on the road is a passenger travelling in a motor vehicle (*Injury deaths (Australia) Children aged 5-14 years of age, 1990-1997. (Source: NISU National Data Set (Injury Surveillance) Cause Categories 1999).*)
- Passengers travelling unrestrained in a car are ten times more likely to be killed in a road crash than those wearing a seat belt (*Data Analysis Australia 2000*).
- Driver distractions such as noisy passengers, talking on mobile phones, changing music stations or C.D'S, are now considered to be contributing factors to road crashes.
- In the Northern Territory (between 1999-2008), 44 young passengers aged 0 to 16 years of age were killed and 476 were hospitalised (*George Institute 2009*).
- Passengers sometimes travel in the back of a utility (ute) or open load space. This is illegal and exceptionally dangerous. They are much more likely to suffer injury or death in a crash or rollover due to non-restraint usage.
- In a crash, children carried in another passenger's arms will most likely be propelled forward as the person will not be able to hold onto the child.
- Crash studies indicate that the force of a crash at 40 km/h with a power pole or parked car is like being dropped from a two-storey building onto concrete. The force at the point of impact will be

equivalent to 20 times the child's own weight (i.e. 600 kg if the child weighs 30kg).

- Of children and adolescents aged 0 to 16 years, killed or injured in car crashes, 32% were found not to be wearing a restraint in the Northern Territory (*The George Institute, 2009*).

### Reducing risk when travelling in a motor vehicle

Young people can reduce the likelihood of injury by:

- wearing a correctly fitted and adjusted restraint at all times
- not travelling in overcrowded vehicles or open load spaces (i.e. back of utes, panel vans, station wagons)
- not travelling with a driver who has consumed alcohol or other drugs
- entering and exiting from the door closest to the kerb
- ensuring that the driver can concentrate on driving and is not distracted
- keeping all body parts within the moving vehicle
- having a range of practised responses to use in traffic-related situations (e.g. when a driver is speeding or has been drinking).

## RESTRAINTS

### What are some facts about seat belts?

- Restraints have been found to be particularly effective at minimising injury in single vehicle crashes (*ARRB Transport Research 1999*).
- Restraints are most effective if they are worn properly. A properly fitting restraint is firm fitting and worn flat (without any twists). The sash section of a seat belt should cross the sternum (or bony section) of the chest. A lap belt should be positioned across the hips (below the abdomen).
- A properly fitted and adjusted restraint, that is suitable for the size and weight of the child, reduces the risk of a serious or fatal injury by an estimated 50%.
- In the event of a crash, it is safer to be restrained than to be thrown clear from a vehicle. Serious injuries can result from occupants being thrown from a vehicle and landing on a hard surface such as a road. Rates of injury and death are reduced if occupants are held securely by a restraint.
- Rear seat passengers need to be restrained for their own safety as well as the safety of others in the vehicle. In the event of a crash, this can

reduce by half, the risk of serious injury to themselves and people in the front of the vehicle. An unrestrained body or object propelled in the motor vehicle at the time of impact can injure or kill other vehicle occupants.

## RESTRAINT LAWS FOR PASSENGERS AND DRIVERS

Every person travelling in a motor vehicle must use an appropriate Standards Australia approved restraint where one is available.

Drivers are responsible for ensuring that all passengers under 16 years are wearing their seat belts when riding in a vehicle fitted with seat belts.

Penalties apply to drivers and passengers who fail to wear seat belts.

### Selecting an appropriate child car restraint

Child and infant car restraints offer crash protection appropriate for the weight and height of the child. Age is not an indicator for changing the type of restraint.

#### Birth to 6 months, up to 9kg

For a child of this weight an approved rearward facing baby seat must be used.

#### 6 months to 4 years, up to 18kg

For a child of this weight an approved rearward or forward facing safety seat should be used.

#### 4 years to 7 years, up to 26 kg

For a child of this weight, a forward facing child safety seat or booster seat should be used. As a general rule it is safer to use a rigid booster seat with a back, side wings and sash guide to keep the belt in place.

#### 26 kg to 32 kg

For children that have grown to the size where his or her eyes are at the same level as the top of the back of the booster seat (or 26 kg to 32 kg), a lap-sash belt can be used.

When using lap-sash belts, it is important to tighten the belt and remove the slack. A lap-sash belt offers more protection than a lap only belt.

### Who checks and installs restraints?

Information relating to the installation of child restraint devices can be found at your nearest Motor Vehicle Registry (MVR) telephone 1300 654 628 or refer to the website [www.mvr.nt.gov.au](http://www.mvr.nt.gov.au)

For further information contact Kidsafe or AANT or refer to the websites [www.kidsafent.com.au/carseats.htm](http://www.kidsafent.com.au/carseats.htm) or [www.aant.com.au](http://www.aant.com.au)

### Which door should children use when entering and exiting a vehicle?

It is dangerous for children to get out of a vehicle on the traffic side as they may be directly in the path of oncoming traffic.

When exiting and entering a vehicle, children should:

- use the rear door on the kerb side (the safety door)
- wait beside the car under adult supervision.

### Reducing risk when travelling on public and community transport

Young people can reduce the likelihood of injury when boarding and alighting from a bus by:

- standing well away from the roadside
- waiting for the bus to stop and letting other passengers get off before boarding
- moving quickly to an available seat
- holding onto the straps or handles if a seat is not available
- standing in the aisle away from exit doors
- storing bags underneath the seat
- keeping all body parts inside the bus
- ensuring that the driver and other passengers are not distracted
- remaining seated until the bus has completely stopped
- waiting on the footpath or roadside until the bus has moved away (at least 20 metres down the road) before attempting to cross remembering to stop, look, listen and think.

## BUSES

### What are the risks?

- Child pedestrians are more likely to be involved in crashes at or around bus stops than while travelling by bus.
- Between 1996 and 2000, 31 children aged 0-12 years of age received injuries associated with bus travel in Australia (*Adams & Cercarelli 2003*).

### Reducing risk when travelling on trains

Young people can reduce the likelihood of injury when boarding and alighting from a train by:

- standing on the platform well clear of the approaching train until it has stopped
- waiting for all passengers to get off before boarding
- choosing a seat if one is available
- standing clear of the exit doors.

# Information for road safety education

## PEDESTRIANS

Research suggests that:

- young people are more likely to be hit by a car when crossing mid block
- this age group are most involved in pedestrian crashes when crossing the road and emerging from beside parked vehicles
- injuries usually occur in residential areas, on straight, sealed and dry local roads, and during the hours commencing 8:00am, 12:00pm and 4:00pm
- most pedestrian crashes are the result of errors made by the young person
- between 1999–2000 in Australia, there were 1,144 hospitalisations of children aged 0-14 years for pedestrian injuries (*Al Yaman, Bryant & Sargeant 2002*)
- in Australia (April 2004 to March 2005) 20 pedestrians aged between 0 and 16 years of age were killed (*ATSB, Road Deaths Bulletin March 2005*)
- between 1999 and 2008, 83 pedestrians aged 0 to 16 were fatally injured or hospitalised in the Northern Territory. Of these 51 were male and 32 were female; 66 were in the metropolitan area and 17 were rural
- males are twice as likely to be injured as a pedestrian than females
- studies show that children as pedestrians are most vulnerable when they are tired: 'Children are more likely to be involved in a road accident after 3pm' (*George Institute, 2009*).

### Reducing pedestrian risks

Young people can reduce the likelihood of injury when crossing the road by:

- always using the **systematic search strategy** (described below)
- selecting safer places to cross where they have a clear view of the road and approaching traffic in both directions
- using designated crossings (e.g. crosswalks, pedestrian phase signals, railway crossings)
- using a footpath when available.

### Systematic search strategy

Regardless of age, the following procedure should be used by all pedestrians when crossing roads.

**Step 1:** Choose the safest place to cross.

**Step 2:** **Stop** back from the kerb and road.

**Step 3:** **Look** in all directions for traffic.

**Step 4:** **Listen** for traffic.

**Step 5:** **Think** about when it is safe to cross.

**Step 6:** When the road is clear and all traffic has come to a complete standstill, walk straight and quickly across the road. Keep checking the road by looking, listening and thinking about the traffic while crossing.

### Pedestrian facilities

It is important that pedestrians use designated pedestrian facilities even if it means walking some extra distance. If a pedestrian facility is not available, pedestrians should always cross where they have a clear view of traffic in every direction and drivers can see them waiting to cross.

Pedestrian facilities include:

- traffic lights with pedestrian phasings
- warden controlled children's crossing
- pedestrian footbridge
- pedestrian crossings
- traffic lights with parallel pedestrian crossing
- underpass and overpass
- roads with a median strip in the middle.

### Using railway level crossings

Pedestrians should:

- always use the maze crossing or pedestrian facility
- use the systematic search strategy, looking and listening for trains
- not cross until the lights have stopped flashing, the bells have stopped ringing and the boom barriers are raised or open, even if a train cannot be seen approaching
- wait until the train has moved away before crossing.

### Crossing at traffic lights

It is safer to use the systematic search strategy described previously when the green 'walk' figure is illuminated. However, children should be reminded not to presume that traffic will stop and to check the traffic before stepping onto the road.

### Crossing between parked cars

Crossing between parked cars is not the safest option for pedestrian, however, when this is the only choice:

- select a gap between two cars which have no drivers
- make sure the gap is not big enough for a car to park
- walk to the outside corner of the car and stop where drivers can see the pedestrian and the



pedestrian can see the traffic (i.e. in line with the outside edge of the cars)

- use the systematic search strategy to cross the road.

## Walking where there is no footpath

When a footpath is not available, pedestrians should:

- walk on the road verge as far away from the road as possible
- walk on the edge of the road if no verge is accessible and face oncoming traffic
- move off the road edge until any oncoming vehicles have passed.

## Boarding a bus

Pedestrians waiting to board a bus should stay on the footpath or road verge until the bus has stopped and then move.

## Crossing after a bus has left

Pedestrians should wait until the bus has moved away and the road is clear before crossing using the systematic search strategy.

## Visibility in traffic

Pedestrians can increase visibility in the traffic environment by:

- wearing light, brightly coloured or reflective clothing (e.g. a jacket, cap or sneakers) especially at times of poor visibility (i.e. dusk or wet weather)
- carrying a bag that has reflective strips of stickers.

## CYCLISTS AND RIDERS OF SCOOTERS, SKATEBOARDS AND ROLLER-BLADES

Young people derive great enjoyment and satisfaction from cycling and using other wheeled recreational devices. It gives them a sense of pride and achievement when they become proficient in their skills. However, cycling, rollerblading, roller skating, and skateboarding pose significant risks for young people each year demonstrated by hospital admissions amongst the 0-16 age group.

- The most common injuries associated with these boards and skates are to the hand, wrist and elbow, the knees and to the head.
- Head injuries occur when riders, not wearing helmets, are unable to break their fall or hit objects. They are less common than other injuries but are usually the most serious.
- Children most at risk are those 6 to 14 years old.
- Most falls are the result of simple loss of control.

- The majority (73%) of injuries occur either at home, on the roads or on a footpath/bike path, not in a skating or recreation area.
- Approximately one third (29%) of skate associated injuries occur on sealed roads.

## SKATEBOARDS, ROLLER BLADES AND SCOOTERS

Using skateboards, roller blades and scooters can result in crashes leading to serious injuries. Many of these are caused by user error such as losing control or acting in an unpredictable way. Children are most likely to be injured when first learning to use these small wheeled toys or when learning a new skill. Children and adults need to understand that necessary skills for using a skateboard, roller blades or scooter develop over time and with practice in a safe environment.

Children should know safer places to skate such as skate parks, playgrounds and bicycle paths.

## Developmental considerations

Behavioural, physical, sensory and cognitive abilities of children develop continually through childhood. Children under ten years of age generally have not developed the necessary cycling and traffic skills to safely ride in the traffic environment. They are at risk because they:

1. may not have the necessary physical skills to handle a bicycle
2. lack knowledge and skills to deal with the traffic environment
3. do not always think about the consequences of their actions
4. have not developed an effective search behaviour and may not look for long enough when scanning traffic
5. give in to peer pressure to act unsafely
6. over-estimate their ability
7. are still developing the ability to discern the speed of an approaching vehicle and distance depth cues, and the sensitivity to sounds and being able to determine where sounds are coming from. (These skills may take up to age 12 to fully develop).

For young cyclists who have mastered balance and keeping course, the additional mental effort required to apply road rules can interfere with the motor tasks. Research suggests that most cycling crashes for this age group occur when vehicles are manoeuvring such as backing out of driveways and entering the road. Cycling through intersections is particularly challenging for 12-14 year olds and they also find scanning for gaps very difficult.

# Information for road safety education

## What are the risks for children riding in rural areas?

Children riding in rural areas are just as likely to lose control of their bicycles as city children. They also have to deal with a range of road conditions such as gravel, potholes and slippery surfaces. There are often no footpaths and as traffic can travel at greater speeds in some rural areas, the risk is increased for young children learning to ride.

## Reducing cyclist and other riding risks

Young people can reduce the likelihood of injury by:

- selecting a correct sized bicycle and helmet
- wearing an Australian Standards Approved bicycle helmet
- wearing protective equipment such as wrist, elbow and knee pads
- increasing their visibility in the traffic environment by wearing reflective or brightly coloured clothing
- complying with road rules and traffic signs.

## Selecting a correct sized bicycle

- There should be about 3cms clearance between the crossbar of the frame and the rider when they are standing with feet flat on the ground.
- On BMX and mountain bikes the clearance should be 5 to 10cms.
- When seated the riders arms should be slightly bent when holding the handle grips and their knees should not hit the handlebar.
- The rider should be able to reach and operate the brake levers.

## Effectiveness of helmets

Over three quarters of fatal bicycle injuries are due to head injury (LeBlanc, Beattie, Culligan 2002). Studies have shown that bicycle helmet use decreases the risk of head injury by 85% (Thompson et al) and brain injury by 88% (Henderson 1996). More recent studies agree with this finding, with the estimated protective effects ranging from 47 to 88% (Thompson and Rivara 2000, Attewell, Glase and McFadden 2001).

The protective effects of a helmet during a crash or fall are increased by the:

- helmet being properly worn (sitting at the front of the head)
- retention straps being tight and fastened. This prevents the helmet from moving or coming off and the risk of head injury being reduced during a crash
- helmet being fitted properly. Improperly fitted helmets can double the risk of head injury.

## Selecting and fitting a helmet

Helmets are designed to protect the wearer against possible impact. For maximum protection a helmet must be a good fit (i.e. snug to the head) and securely fastened. If a helmet is too small it will not give adequate coverage and protection. If a helmet is too large it may move on the head and not provide the protection intended.

Check head size by using a tape measure placed just above the eyes and ears. Match this with the helmet sizes listed on the display box to find a helmet that covers this measurement.

Helmets will come with fitting instructions however the following points will be appropriate for most styles:

- place the helmet on the rider's head and using the pads supplied ensure a snug fit
- test the fit by grasping the helmet and attempt to move it to the front and back of the head
- adjust the straps so that the side adjuster forms a 'Y' shape below the ears and the buckle is positioned well under the chin
- attempt to move the helmet backwards and forwards once on the head and straps have been fastened correctly
- make further adjustments if necessary as a loose helmet can increase the risk of injury.

## Helmet care

Extreme heat can damage the shell and weaken the helmet. This is usually visible when 'bubbling' occurs on the surface of the helmet shell. Avoid leaving the helmet outside in the weather, near a heater or on the back ledge of the car.

Substances (i.e. petrol, paint adhesives and cleaning agents) can damage helmets. Clean helmets with mild soap and water, rinse then dry with a cloth not in front of heater or in the sun.

## Replacing helmets

Helmets are essentially manufactured for single impact protection. They absorb the impact and protect the head. When a helmet has been subjected to a severe blow it should be replaced even if it appears undamaged.

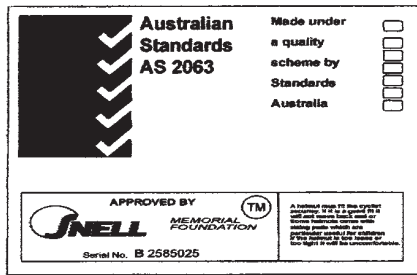
Replace a helmet when it shows obvious signs of wear or no longer fits the head correctly.

## Australian Standards

The Australian Standards Mark AS 2063.2 or AS/NZS 2063 certification label will be

displayed on a helmet that has passed stringent safety tests and meets the standard required by Australian State road laws. Not all helmets meet this standard.

**Note:** Throughout this resource, the word 'riding' refers to the use of bicycles and all wheeled recreational devices such as skateboards, scooters and rollerblades.



## Adolescence drivers

### RISKS ASSOCIATED WITH DRIVING FOR ADOLESCENTS

All people using the road must walk, drive or ride (a motor vehicle, bicycle or animal) with due care, and with consideration for other people so that safety for everyone becomes a major priority. The first **responsibility** of being a **road user** is not to have a **crash**.

#### Risk-taking

The early and adolescent years are a time when young people develop and shape their own set of values. This is often done through experimenting with different actions and behaviours that involve risks. Young people take risks for a number of purposes, including to gain independence, establish personal identity and provide excitement. Adolescence is also a time where there is a huge reliance on peer group approval, and young people feel a greater need to impress and conform with peers. As a result, the emerging adult is susceptible to many influences and pressures that condone risk-taking as glamorous and desirable and encourage dangerous behaviour.

Many young drivers have a predisposition to risk-taking behaviour and consequently face a higher risk of being involved in a crash. Risk-taking on the road can manifest in a range of unsafe driving behaviours, including speeding, drink driving, non-use of restraints and driving while tired. In addition to these behaviours, young people are more likely to drive at night and on the weekend and be distracted while driving.

## Common risks for young drivers

Research indicates that the most common risks young P plate drivers tend to engage in while driving include speed, mobile phone use, cutting across lanes and drifting, aggressive driving, amber light running and driving while fatigued (Styles et al, 2004). The early contributing factors for this risky behaviour include:

- pragmatic reasons (e.g. getting to destination on time and convenience)
- modelling (e.g. by peers and family)
- sensation seeking (e.g. drifting, burnouts, road games, speeding and lane cutting).

## Additional motivating factors for risk-taking include:

- the transition from being supervised to having the freedom associated with solo driving
- other drivers' engagement in stupid behaviour
- emotional state
- a desire to challenge oneself and test the vehicle being driven
- a desire to impress or frighten others
- the absence of any negative consequences.

## Crash involvement

There are a number of factors which contribute to the over-representation of young people in crashes:

- driver age and inexperience
- young drivers underestimate their own driving ability
- a tendency amongst the 17-24 age group to take risks
- speeding is a major contributor to crashes involving young drivers
- young people are less likely to drink and drive than other drivers, but those that do drink and drive are at greater risk of crashing, possibly because of inexperience with driving and with drinking
- young drivers often drive at night, particularly for work, study and social occasions, and can be affected by fatigue
- some young drivers do not wear seat belts, which significantly increases their chance of injury in crashes
- young drivers are less experienced than older drivers, and this can lead to problems with hazard perception and risk assessment
- there is an increased risk of crashing when young drivers carry passengers in their vehicle.

# Information for road safety education

Research by Palamara et al (2001) indicates that:

- young drivers with less than 4000 km or 100 hours of driving experience are less experienced and more at risk of crashing
- first year drivers have a substantially higher risk of being involved in a crash and of incurring a traffic infringement and conviction (i.e. court conviction)
- both infringements and convictions predict a first year driver's involvement in a crash (i.e. infringements alone can predict a first year driver's involvement in a serious injury crash).

## Inexperience

Hazard management and perception skills are critical to safer driving and are learned more slowly than any of the other safe driving skills. Being slow to perceive, predict and react to the unexpected behaviour of other road users increases an inexperienced driver's risk of being involved in a crash (Catchpole et al, 1994).

Hazard perception is a combination of perceptual and cognitive skills, including decision-making, personal risk assessment and the ability to detect and respond appropriately to all aspects of the driving environment. Young people need to be made aware that hazard perception skills develop gradually as experience accumulates.

Young drivers can also be inexperienced driving on country roads. In rural and remote locations, driving tired and managing environmental conditions such as higher speed limits, single lane traffic, large trees, storm drains or culverts on the roadside, gravel roads and loose surfaces, make it more difficult to control vehicles safely. All these circumstances and more can present difficulties for an inexperienced driver.

## Overconfidence

Many young people quickly pick up vehicle handling skills for driving and as a result tend to think they have mastered driving, and consequently feel very confident about their driving ability. However, the ability to handle a vehicle is only a very small part of safe driving. This belief and overconfidence in their ability, coupled with underestimation of what safer driving is, means that some young people drive unsafely, thinking that they are in control.

## Consequences of road crashes

Death and serious injury are the extreme consequences of a road crash. Young people need to be reminded that a preventive approach is paramount to their safety. This includes considering the consequences of risk taking and practising their driving skills as much as possible while a learner driver.

The consequences of road crashes can be grouped into physical, social, emotional, financial and legislative. Such costs are not only borne by the individuals involved in the crash, but witnesses of the crash, emergency workers, families, friends and the broader community.

### Financial

- increased insurance excesses and premiums
- property damage including damage to own vehicle
- police and crash investigation costs
- loss of income
- ambulance fees
- funeral expenses
- medical and hospital fees
- rehabilitation costs
- towing and repair costs.

### Social

- loss of freedom
- loss of licence
- loss of job and income
- rejected by family, peers and community.

### Emotional

- trauma
- guilt and remorse
- depression.

### Physical

- pain and suffering both short and long-term
- disability
- death
- hospitalisation.

### Legislative

- loss of licence
- criminal record
- demerit points
- loss of vehicle
- imprisonment
- entry to other countries declined.

## Risk-taking and driving

Young people sometimes have no concept of the consequences of their behaviour and tend to live and drive for the moment. They think they are immortal and that crashes only occur to other people. They need to be aware of the cause and effect principle in relation to risk taking in the traffic environment.

When discussing risk-taking and driving with young people, the evidence shows that consequences about certain issues resonate more strongly with

young men. The following consequences need to be emphasised with young people:

- causing harm to self and others, including permanent disability
- causing damage to the motor vehicle
- loss of licence
- loss of mobility and a need to rely on others for transport
- insurance problems and excess increases
- penalties and infringements (e.g. imprisonment, loss of vehicle and fines).

## RESTRAINTS

### Facts about restraints

- Drivers and passengers travelling unrestrained in a car are ten times more likely to be killed in a road crash than those wearing a restraint (Data Analysis Australia, 2000).
- Among those killed in a road crash and found not to be wearing a restraint, almost 60% were aged 17 to 39 years old (Data Analysis Australia, 2000).
- Rear seat passengers need to be restrained for their own safety as well as the safety of others in the vehicle. In the event of a crash, this can reduce by half, the risk of serious injury to themselves and people in the front of the vehicle. An unrestrained body or object propelled in the vehicle at the time of impact can injure or kill other vehicle occupants.
- In the event of a crash it is safer to be restrained than to be thrown clear from a vehicle. Serious injuries can result from occupants being thrown from a vehicle and landing on a hard surface such as a road. Rates of injury and death are reduced if occupants are held securely by a restraint.
- An unrestrained child cannot be held securely by a passenger during crash impact. A child needs to be placed in an appropriate restraint for their size and weight.

### Relevance for young drivers

Young male drivers and passengers, those living in rural areas and drivers of older vehicles, are the groups most likely to not use restraints. Young people who do not use restraints report that the barriers to their use of restraints include:

- belief that restraints are ineffective, uncomfortable and not necessary on short trips (i.e. familiar territory and low speeds)
- laziness and vehicle overcrowding.

## FATIGUE

### Facts about fatigue

- While accurate estimates of road crashes where fatigue is a factor are difficult to determine, it is known that males aged 17-24 are more likely than any other age and gender group to be involved as a driver or motorcycle rider in a fatigue-related crash (Data Analysis Australia, 2000).
- It is also known that 'fall-asleep' crashes occur predominantly in young people and 55% of these crashes involve drivers aged 25 years of age or younger (Pack, A et al, 1995).
- Recent research indicates that 17-19 hours of sustained wakefulness (finishing at 2300 and 0100 hours, produced similar or worse levels of performance as a BAC of 0.05%, while 20-25 hours of wakefulness (finishing at 0200 and 0800 hours) produced performance levels from some tasks similar to that seen with a BAC of 0.10% (Lamond et al, 1999).

### Relevance for young drivers

For all drivers, including young drivers, the major contributing factors to driving whilst tired include:

- driver characteristics (i.e. age, experience, personality, food and beverages consumed, lifestyle pressures)
- prior amount of sleep and continuous hours of being awake
- time of day (i.e. daylight hours versus dawn, twilight and night time)
- length of the driving task
- vehicle environment (i.e. comfortable and in fixed position in car, motion of car, automatic transmission, cruise control, heater)
- road environment (i.e. long stretches of uninterrupted road, amount of traffic, on-coming headlights).

### Signs of fatigue

The following signs that a driver is entering or is already in the 'fatigue danger zone' for driving include:

- blinking
- yawning
- difficulty keeping head up
- closing eyes for a moment or going out of focus
- wandering, disconnected thoughts
- missing a road sign or exit
- slowing unintentionally
- drifting over the centre line or onto the side of the road

# Information for road safety education

- unable to remember driving the last few kilometres.

The message for all drivers is to stop and take a nap when the early mental signs of fatigue set in. Drivers tend to take notice of the physical signs rather than the early mental signs. Research indicates that at present, drivers' progress too far along the fatigue continuum before they realise a problem exists and often by that point it is too late (Donovan Research, 1998).

## SAFETY DEVICES

### Air bags

An air bag system consists of the airbag module which contains an inflator, the air bag itself and a trim cover. The proper firing of the air bag is controlled by crash sensors which supply electrical signals to a control unit which fires the inflator to inflate the air bag. The driver-side air bag module is in the hub of the steering wheel. The passenger-side air bag module (if so equipped) is in the dashboard above the glove box.

In a vehicle that has air bags, the following would occur.

- In the 15-20 milliseconds after impact, the crash sensors and the control unit determine the severity of the collision and decide whether to deploy the air bag.
- At about 25 milliseconds, the air bag splits its covering pad in predetermined places and begins to inflate rapidly.
- At about 45 milliseconds the bag is fully inflated while the seat belted occupant is still moving forward.
- At around 60 milliseconds, the occupant contacts the air bag which immediately begins to deflate via vent holes in the back.
- Up to 100 milliseconds, the occupant continues to sink deeply into the air bag which cushions the head and chest while it is deflating.

## INSURANCE

### Compulsory Third Party Insurance

To ensure that compensation for victims of road trauma is available, all Australian jurisdictions mandate third party insurance for registered vehicles.

In the NT, the Motor Accidents (Compensation Act) details the cover provided and level of benefits payable on behalf of the government through the Territory Insurance Office (TIO). The NT Motor Accidents Compensation scheme provides cover for persons injured in a motor vehicle accident in the NT, including drivers, passengers, pedestrians, motorcyclists, or cyclists.

### Reporting a crash

Reports to the NT police must be made as soon as possible and, only in exceptional circumstances (such as having to go to hospital), not later than 24 hours after the crash if:

- any person is injured or killed
- damage to any property (including an animal) is caused
- you do not give the required particulars to other people
- another driver/rider's particulars are not given to you.

Reports to the police should include:

- date, time and location of the crash
- names and addresses of all people involved
- registration numbers of all vehicles involved
- Names and addresses of any witnesses
- Positions and speed of vehicles before and at the time of collision.

## In an emergency

It is possible that students will come across a crash either as a passenger, or as a driver of a vehicle, and they may even be the first to arrive on the scene. Actions on these occasions are vital to save lives and prevent other vehicles from crashing.

As a witness, students may be able to provide valuable help, or call Emergency Services for assistance. While there is not a legal requirement to stop unless involved in a crash, it is important that all drivers are aware of the need to provide assistance and act as responsible citizens and road users.

If someone comes upon a crash it is important to take the following actions:

- R RESPOND** – park safely and protect self and others.
- E ENVIRONMENT** – check for traffic and other hazards, give a warning to other traffic by switching on hazard lights place a red traffic hazard warning triangle on the road to warn other traffic (if available).
- A ASSESS CASUALTIES** – quickly assess location, type of crash and number of victims.
- C COMMUNICATE** – call 000 (or 112 if using a mobile phone) and communicate details to Police, Fire and Emergency Services.
- T TREAT** – assist by applying basic measures to clear the victim's airway and control bleeding.

## Actions to take at a crash scene

- **DO NOT** remove any patients from a vehicle unless they are in immediate danger (e.g. there is imminent risk of explosion or fire).
- **Check** breathing and if necessary clear any obstructions, drain any fluid from the mouth and tilt the head back.
- **Control** bleeding by applying direct pressure on the wound (using a clean cloth or clothing if possible).
- **Remember** the possibility of spinal injuries and keep any patient as still as possible.
- **Keep** any patients as comfortable as possible (provide shade, warm blanket etc) until medical help arrives).

It may be worthwhile organising a First Aid course for students with St John Ambulance Australia (NT), or the Australian Red Cross NT.

## If unable to stop at a crash scene

While you must stop if you are involved in an accident, if you come upon a scene of an apparently serious crash and you do not wish to stop, telephone 000 (or 112 if using a mobile phone) as soon as you can if help has not already arrived at the scene. Do not stop if the situation is under control. If you do stop, you may add to the congestion, hinder others providing assistance or cause a further accident.

## Road rules

Road laws have been developed to help to keep the community safe. The Northern Territory of Australia TRAFFIC ACT (2010) defines the responsibilities of all road users. Fines and penalties apply for failure to comply with the road rules outlined in the TRAFFIC ACT. Further information about traffic regulations is available on the Northern Territory Government's website [www.transport.nt.gov.au](http://www.transport.nt.gov.au) and The Driving in the Northern Territory – Road Users Handbook (2009) which outlines the road rules and general road safety information.

## Care and Consideration

It is the responsibility of all road users to ensure that road rules are obeyed. All drivers must have an appropriate licence for the type of vehicle being driven, and must have their licence with them when driving. In the Northern Territory, all motor vehicles must be registered and a compulsory Motor Accident Compensation contribution paid if vehicles are driven on a road or public place. To drive un-licensed or unregistered and uninsured are serious offences

which can attract significant penalties. All road users must drive or ride with due care at all times, and exercise care, courtesy, common sense and reasonable consideration for other road users. Aggression and unthinking behaviour may be seen from other drivers, but it is important to stay calm and not be pressured by other drivers to over react or behave foolishly on the road, whether as a driver or rider of a bicycle or other wheeled vehicle or recreational device.

All road users have a duty of care to avoid collisions and where necessary to give way to other vehicles and pedestrians. Children are impulsive and have difficulty judging speed and distance, so it is important to take extra care when driving or travelling near schools. Drivers have the same responsibilities as pedestrians to take care and abide by all signs and road markings in the Northern Territory.

## Road signs, signals and markings

Children encounter many different signs and road markings in the traffic environment. Most of these are designed to inform drivers of their responsibilities; however, it is important that children develop an understanding of the safety meaning of these signs and road markings.

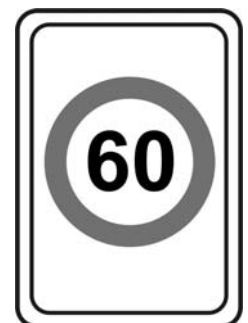
### STOP SIGN

Stop signs are placed at intersections where it may be difficult to see approaching traffic. It is important to come to a complete stop at the stop line, or the edge of the intersecting road if there is no stop line. Give way to any vehicle approaching from any other direction before continuing.



### SPEED LIMIT SIGN

These signs show the maximum speed limit on a road; however, sometimes, due to pedestrian activity, other traffic, weather and road conditions, it is safer to travel at a slower speed.



# Information for road safety education

## CYCLE PATH

These paths are for use by bicycles, as shown on signs or markings; however, skaters, bladders and wheelchairs may use them provided they give way to bicycles.



## SHARED PATH

This sign means an area open to the public that is designated for use by both riders and pedestrians. A sign is placed at the path beginning and ending at the nearest of the following:

- an end shared path sign
- a no bicycles sign
- a no bicycles road marking
- a bicycle path sign
- a carriageway
- the end of the path.



## GIVE WAY SIGN

Give way signs are installed at intersections to clarify which traffic has right of way. Slow down or stop and give way to any vehicle approaching from any other direction before continuing.



## SCHOOL ZONE SIGN

These signs are installed at the beginning and end of a school zone. Drivers must not exceed the 40 km/h speed limit during the stipulated times.



## SCHOOL CROSSING

These signs are located near each end of a school crossing.



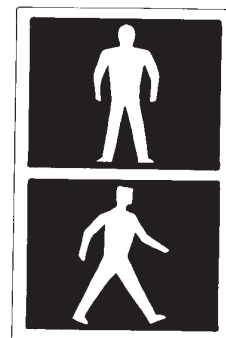
## PEDESTRIAN CROSSING

These signs are located near each end of a pedestrian crossing.



## PEDESTRIAN LIGHT

A pedestrian light is a device designed to illuminate at different times. For example, a flashing red pedestrian or the words 'don't walk' illuminated in red indicates that pedestrians should not proceed. A flashing green pedestrian light or the word 'walk' illuminated in green indicates that pedestrians may proceed.



## Passengers and the law

During the period 2000-2005, one in every two fatalities on NT roads was not wearing a restraint when one was available (NT Vehicle Accident database).

Every person travelling in a motor vehicle must use an appropriate Standards Australia approved restraint where one is available. Drivers are responsible for ensuring that all passengers under 16 years are wearing their seat belts when riding in a vehicle fitted with seat belts. For children under 12 months of age a driver must ensure the child is restrained in an approved child restraint.

### Keeping within a vehicle

Drivers must not allow passengers to have any part of their body outside the vehicle. This rule does not apply to motor cycle riders and their passengers. Passengers of a vehicle are not permitted to ride on the bonnet, roof, side/rear steps or ladder of a vehicle. It is illegal to ride in the back of utilities and trucks. It is not permitted to drive with a person or people in or on a trailer, including a caravan.

## Pedestrians and the law

Under the Australian Road Rules, a pedestrian includes a person driving a motorised wheelchair that cannot travel at over 10 kph, a person in a non-motorised wheelchair, or a person pushing a



motorised or non-motorised wheelchair. A pedestrian also includes a person in a wheeled recreational device or a wheeled toy.

The risks for pedestrians may be reduced if they understand and comply with laws relating to pedestrian behaviour. Some of these include:

## Using the footpath

- Pedestrians should use the footpath or nature strip where possible, as it is an offence not to (unless it is impractical to do so).
- If there is no footpath, pedestrians must travel, where practical, on the right side of the road facing the oncoming traffic. If it is not practical to travel on the right side then the pedestrian must use the left of the road and immediately move off the road when a vehicle approaches from behind.
- Pedestrians may walk on the left or right side of the road, keeping as far left as practicable. It is safer to use the right hand edge of the road facing oncoming traffic.
- Pedestrians cannot walk more than two abreast on the road unless overtaking.
- Drivers must give way to pedestrians and child cyclists on the footpath when entering or exiting a driveway.
- If a driver is turning left or right or making a U-turn, the driver must also give way to any pedestrian at or near the intersection on the road or part of the road the driver is entering.

## Crossing the road

- Pedestrians should use and obey traffic lights and signals.
- Pedestrians must use a marked crossing if they are within 20 metres of the crossing.
- Pedestrians must follow the directions of a traffic attendant when using a children's crossing.

## Cyclists and the law

Cyclists need an understanding of road laws and traffic behaviour in addition to riding skills to be safe on the road. Bicycles are classified as vehicles and riders have the same rights and responsibilities as drivers.

### The important points for cyclists to remember are:

- Cyclists may ride on the footpath provided they keep to the left and give way to pedestrians.
- Wear an approved safety helmet carrying the Australian Standards Mark (AS2063), properly adjusted and fastened.
- Warn pedestrians when riding past on a shared path or footpath by using a bell or calling out.

- Cyclists must walk their bikes across pedestrian crossings and at traffic signal crossings (unless there is a bicycle crossing light).
- On a path dedicated for the exclusive use of bicycles - cyclists have the right of way.
- Marked bike lanes should be used wherever practicable.
- Drivers must give way to pedestrians and cyclists on the footpath when entering or exiting a driveway.
- Bicycles must have at least one effective brake and a bell, horn or similar warning device in working order. If riding at night or in hazardous weather conditions riders must have a white light on the bicycle which is visible at least 200 metres from the front, a red visible light for at least 200 metres from the rear, and a red reflector that is visible for at least 50 metres from the rear.

## Bicycle offences

Apart from the risk of being killed or seriously injured, there are fines for not wearing a helmet. It is a traffic offence for children up to the age of 17, to ride a bicycle; without a helmet, and/or without the helmet securely fastened. A Traffic Infringement Notice may be issued for \$25.

## Wheeled recreational devices and the law (including scooters, skateboards, roller blades/skates and in-line skates)

### What is a wheeled toy or device?

The definition of a wheeled toy includes child's pedal car, tricycle and scooter. A wheeled recreational device is a wheeled vehicle that has been built to transport a person, is propelled by human power or gravity and is ordinarily used for recreation or play. In addition to scooters, it includes in-line skates, skateboards, roller skates and unicycles.

### Where can you legally ride, skate or scoot?

You can ride a scooter or skate on footpaths and shared paths, provided you keep to the left and give way to pedestrians.

The following laws apply:

- Riders or skaters must keep to the left and give way to pedestrians on a shared path or footpath.
- Scooters are not permitted on any road that has a median strip or line marking, on a one-way street with more than one marked lane or any road with a speed limit of more than 60 km/h.
- Scooters are not allowed on any road during hours of darkness.

# Information for road safety education

- If riding on a permitted road which has a separate section for pedestrians and bicycles, and is marked accordingly, you must ride on the section dedicated for bicycles, give way to cyclists and keep to the left.
- If riding on a footpath, you must give way to pedestrians.
- For further information on local skating restrictions contact the Local Council.

## Helmet use and protective gear

While not compulsory, helmets are highly recommended. Protective gear such as elbow and kneepads are also recommended.

## What kinds of behaviour are not allowed when riding a scooter or skating?

- Games such as jumping off kerbs are not allowed on any part of a road.
- Scooter riders cannot be towed by another vehicle (including a bike). This applies to both the scooter rider attaching themselves to a vehicle and the driver (rider) of the vehicle allowing them to do so.

## Rules relating to wheeled recreational devices with motors

It is currently legal to use unregistered motorised scooters of any output on private property in the Northern Territory. This ruling also applies to other wheeled recreational devices such as skateboards that have motors attached, as well as bicycles with motors of greater than 200 watts and pocket motorbike racers.

## Minibikes, QUADS and off-road vehicles

The rider or driver of any motor vehicle or motorbike must be aged 16 years or over and hold the appropriate driver's licence or permit. However, some children younger than 17 have access to minibikes, quads, trail bikes and other off-road vehicles which may be driven on off-road tracks with adult supervision and appropriate safety equipment.

Riding these vehicles can result in crashes leading to serious injuries. Children up to ten years of age may not have the necessary sensory, physical and cognitive skills to ride these vehicles safely.

It is safest to choose a bike of a suitable size and with an engine capacity no greater than 80 cc. It is important for children to be aware of the power of the bike and potential hazards when riding.

Children are most likely to be injured when first learning to ride or when learning to operate a new vehicle.

## Rules relating to motorcycles

Motorcycles are classified as motor vehicles and are therefore subject to the same road rules as cars, trucks and other motor vehicles. In addition, the following rules apply to Motor Cycle Riders:

- an approved helmet must always be worn by the motorcycle rider and any pillion passenger and the helmet must comply with the Australian Standard
- motorcycles must have two rear view mirrors to provide a clear view of the road behind
- only one pillion passenger may be carried, and then only if the bike is fitted with proper footrests and seating
- pillion passengers must always sit astride the seat facing forwards and with both feet on the foot rests
- learner riders and riders who have not held a motorcycle licence for 12 months continuously or whose licences are provisional must not carry passengers
- riders may ride two –abreast but no more than 1.5 metres apart
- both the rider and the passenger are responsible for ensuring the passenger wears an approved helmet
- riding between two lanes of stationary vehicles where lane lines are marked is not permitted.

To improve visibility it is also suggested that motorcycle riders wear bright coloured clothing; ride with the headlight on at all times and ride in a position on the road that provides maximum safety and visibility. Motorcycle riders should also wear protective clothing.

## Alcohol, Drugs and Driving

It is an offence for persons to drive, start the engine or put a motor vehicle in motion:

- While under the influence of alcohol or any drug, as the driver is incapable of proper control of the vehicle (commonly referred to as 'driving under the influence' or DUI).
- With a Blood Alcohol Concentration (BAC) above the legal limit. The legal blood alcohol limit in the Northern Territory is below 0.05, except where there is a zero BAC requirement such as: drivers under 18 years of age; drivers who hold a learner's permit; drivers who hold a provisional licence; drivers who do not hold a licence for the type of vehicle they are driving at the time; drivers who are unlicensed or prohibited from holding a licence (other than failed to renew licence); approved driving instructor, etc.

The NT government has strengthened laws relating to drink driving and repeat offenders. Failure to comply with the BAC laws may lead to a person being charged with:

- driving under the influence
- exceeding the legal BAC limit
- refusing a breath test
- refusing a blood test

The above charges may result in financial penalties (fines), accrual of demerit points, cancellation or suspension of a driver's licence or imprisonment.

People who are convicted by a Northern Territory court of a DUI offence while under the influence of alcohol or other drugs may have their licences cancelled.

## Skills for safer road use

### WHAT SELF-MANAGEMENT AND INTERPERSONAL SKILLS DO ADOLESCENTS NEED TO BE SAFER ROAD USERS?

Adolescents need to practise and develop planning and communication skills to assist them in managing situations related to being a safer road user. There are a few important elements about communication skills outlined below.

#### Assertive communication

In developing assertive communication, students should be encouraged to use 'I' statements to express their feelings. For example, 'I feel unsafe when this happens'. 'I' statements are assertive messages as they directly convey feelings or intent. When communicating assertively, students should also be encouraged to make eye contact with the person to whom they are speaking, stand up straight, speak in a firm voice and stay calm. Apologising, whispering, looking scared, and becoming angry are all actions to avoid.

#### Tips for assertive behaviour

##### To communicate assertively:

- look the other person straight in the eye
- look confident and stand strong
- speak firmly and stay calm
- say how you feel

##### Avoid:

- speaking softly
- looking guilty, scared or intimidated
- getting angry or being a bully.

## Self-management skills

### REVIEWING THE SITUATION

Students need to be able to identify issues or problems that may require help from others to reduce the likelihood of harm to themselves or other road users.

Students may also need to seek help from adults other than their parents, carers or family. Students need to know who they can trust to help them in the road environment (e.g. traffic attendants and police).

#### Managing situations as a passenger may involve:

- choosing to use a seat belt
- choosing not to distract the driver
- choosing to enter and exit a vehicle using the rear passenger door closest to the kerb.

#### Managing situations as a pedestrian may involve:

- choosing safer places to walk, cross and play
- planning a safer route to walk in the local area
- choosing to walk with an adult
- not crossing when and where others say.

#### Managing situations as a cyclist may involve:

- always wear a helmet when riding a bicycle
- wear bright coloured clothing
- follow the road rules and try to ride on shared paths where possible.

### PLAN BEFORE DECIDING

Planning involves being able to set realistic, specific and measurable goals in the short, medium and long term.

Students need to be aware of the process of planning. The following questions may help students when planning.

- What is the goal to be achieved?
- When do I need to achieve the goal?
- Who can help achieve the goal?
- What steps do I need to take and in what order?
- How will I know if I have been successful?

Students need to be provided with relevant information about planning and opportunities to practise the planning process. They also require effective communication skills to carry out their plans and convey them to others. A planning model, provided on the next page, may assist students when planning and setting goals.

# Information for road safety education

## DECIDING AND ACTING

Being able to make informed decisions by considering the positive and negative consequences of actions and selecting the most appropriate option is an important skill for maintaining personal health and safety.

Students will need to make many decisions about their own and others' safety on the road. Examples of the decisions students will be required to make may include selecting a safer route to walk and places to cross roads, and choosing to wear a seat belt or helmet when others are not wearing safety devices.

Equipped with relevant facts and positive attitudes, young children are more likely to make informed and safer decisions about their road user behaviour.

## MAKING DECISIONS

In order to make informed decisions, students need to understand how a decision is made and be provided with opportunities to practise the decision making process. The process involves stating the problem or issue, gathering the necessary information, examining the options, considering the consequences of each option and finally deciding and evaluating the decision.

Self-efficacy will impact the decisions students make, their ability to communicate assertively and their beliefs and attitudes. Self-efficacy can be described as a person's feelings of self-worth and esteem. A student with a strong sense of self-worth and self-efficacy is more likely to value safety and make decisions that will promote safety for themselves and others. They are also more likely to be able to communicate their decision or opinion assertively.

## DECISION-MAKING MODEL

The decision-making model will allow students to consider and explore a range of alternatives before making a decision. The model below shows the decision-making process for considering options.

Students should understand that there is the potential for a decision to have positive and negative consequences and that predicting outcomes can be difficult. Learning how to make more accurate predictions requires practice.

**Decision-making skills related to students include:**

THE DECISION-MAKING PROCESS	APPLIED TO ROAD SAFETY
<b>Think for a moment about what is happening</b>	Identify the decision to be made in the particular situation (e.g. Will I cross the road with others when I believe it is unsafe?)
<b>Determine how safe or dangerous a situation is</b>	Identify who and what is contributing to a potential risk and the effects of risk taking on individuals (e.g. How much can I trust this person? Are they old enough to help me cross the road?)
<b>Think about what the outcome will be</b>	Identify a range of alternative actions in a situation (e.g. Can I ask another adult to help me?)
<b>Decide what is right for you</b>	Evaluate options according to the outcome sought. This involves predicting and reflecting on the impact of decisions on oneself, others and wider community; identifying 'safety nets' or harm minimisation strategies (e.g. What will the consequences be to myself and others if we cross the road?)
<b>Seek advice if you need to</b>	Identify strategies for communicating the decision and dealing with peer (or other) pressure (e.g. How will I tell this person I'm not going to cross the road with him/her?)
<b>Act on your decision</b>	Evaluate the decision. (e.g. Did I make the right decision? Would I make the same decision next time?)

## ATTITUDES ABOUT ROAD SAFETY

### WHAT FACTORS DETERMINE AND INFLUENCE A PERSON'S ATTITUDE TOWARD ROAD SAFETY?

The development of positive attitudes is paramount to a lifetime of safer driving and road use. Students participating in a road safety education program begin to consider their beliefs, values, attitudes and behaviours about a range of road safety issues.

Young students may have some existing attitudes about road safety and road safety situations. While young students lack the essential life experiences that shape an individual's attitudes, they are subject to a range of factors that will determine and influence their beliefs, attitudes and intentions with respect to riding a bicycle, walking or being a passenger. Factors that determine and influence such attitudes include knowledge, personal experience, personality, family, peers, media and society. These are described in more detail below.

#### Personal experience

The majority of students involved in road safety education will have had some prior experiences interacting with the traffic environment under the supervision of an adult. They would have had some experiences walking in and around their local area, to and from school, travelling in a vehicle and possibly riding bicycles or other small wheeled devices (i.e. scooters, skateboards and roller blades). These experiences will have contributed toward their knowledge and attitudes about road use.

#### Personality traits

Students will be affected by their personality traits, including their propensity for risk taking, ability to manage emergencies and stressful situations and the degree to which their behaviour is affected by emotions.

#### Family (role models)

Parents, family members and significant others influence a student's attitudes and knowledge about road use. Parents are recognised as the primary role models of road safety behaviour for their children and as such their role in road safety education is crucial. Students as passengers observe their parents as drivers and are likely to imitate their behaviour. Research has shown that children of parents with adverse driving histories are more likely to demonstrate these behaviours themselves (*Ferguson et. al. 2001*).

#### Peers

Friends, peer groups and acquaintances can influence a young person's road-user attitude and behaviour. This influence may be positive or negative. Everyone acts differently depending on who they are with and young children are no different.

#### Media

The media can have a very powerful influence on young people's attitudes. The media often glamorises taking risks while riding scooters and skateboards, speeding and dangerous driving.

#### Society and culture

Different societies and cultures have different views on personal safety and the safety of others. Societal views on acceptable and unacceptable road-user behaviours can reinforce an individual's attitudes toward road safety.

### PERSONAL SAFETY AND THE SAFETY OF OTHER ROAD USERS

An inherent belief in the safety of self and others contributes towards an adolescent becoming a safer road user. Developing attitudes of respect and tolerance towards other road users and a commitment to personal safety and the safety of others while travelling as a passenger, pedestrian or cyclist are key aspects of being a safer road user. By valuing safety for all, an adolescent is more likely to participate in road safety practices, avoid risk and comply with road rules.

# Information for road safety education

## ROAD SAFETY AGENCIES AND RELEVANT WEBSITES

AGENCY	CONTACT DETAILS	INFORMATION AVAILABLE
<b>Transport Safety, Northern Territory Government</b>	Darwin Ph: 8924 7019 Alice Springs Ph: 8951 5354 Ph: 8924 3900 <a href="http://www.roadsafey.nt.gov.au">www.roadsafey.nt.gov.au</a>	This site links to road safety education, booster lessons and the <i>Choices</i> workshop. It also has links to campaigns and information on safer driving.
<b>Australian Redcross Northern Territory</b>	<a href="http://www.redcross.org.au">www.redcross.org.au</a> Ph: 8922 6200	First aid and community training.
<b>St John Ambulance</b>	<a href="http://www.stjohnnt.com.au">www.stjohnnt.com.au</a> <a href="http://www.nt.gov.au/transport/">www.nt.gov.au/transport/</a>	First aid training and first aid kits.
<b>TravelSmart</b>	Ph: 8925 5901	Go to Transport Policy and Planning and then the link to TravelSmart to get involved in reducing dependency on motor cars.
<b>AANT</b>	<a href="http://www.aant.com.au">www.aant.com.au</a>	Motoring safety magazine NT motor
<b>Safer Road Use</b>	<a href="http://www.saferroaduse.nt.gov.au">www.saferroaduse.nt.gov.au</a>	NT road safety reports and statistics

## CONTACTS FOR ALCOHOL AND OTHER DRUG INFORMATION

The following information is provided to support teachers access information in the NT when responding to parents and or other queries regarding Alcohol and Other Drugs:

*Education Officer – Drug Education, NT Department of Education and Training*

*Alcohol and Other Drugs section, NT Department of Health*

There are a range of websites which provide information regarding Alcohol and Other Drugs including the Australian Drug Foundation at [www.adf.org.au](http://www.adf.org.au)

### GLOSSARY

<b>Air bag</b>	A large nylon bag which inflates and deflates rapidly during certain types of collisions.
<b>Bicycle</b>	A two or three-wheeled vehicle designed to be propelled solely by human power, or a two or three-wheeled vehicle that is a power-assisted pedal cycle.
<b>Bicyclist</b>	A person riding a bicycle. Includes passengers.
<b>Casualty</b>	A person killed, admitted to hospital, or injured, requiring medical attention as a result of a road crash. Excludes injured persons who do not require medical attention.
<b>Child restraint</b>	A device used for restraining a child travelling in a motor vehicle (e.g. baby capsule, baby seat, booster seat).
<b>Crash</b>	Any apparently unpremeditated collision reported to the police which resulted from the movement of at least one road vehicle on a road open to and used by the public, and involving death or injury to any person or property damage. Any one crash can involve more than one road vehicle and result in more than one death or injury.
<b>Crash severity</b>	Derived from the most serious injury in a crash, or if no injury, from the dollar value of property damage. The six levels are: <ol style="list-style-type: none"> <li>1. fatal crash</li> <li>2. injury crash requiring hospitalisation</li> <li>3. injury crash requiring medical treatment</li> <li>4. injury crash requiring no medical treatment (i.e. minor injury or extent of injury unknown)</li> <li>5. major property damage - over \$1,000</li> <li>6. minor property damage - under \$1,000.</li> </ol>
<b>Driver</b>	Any person in control of a car, truck, tractor or bus. Includes person in control of a motorised wheelchair. Does not include persons in control of a motorcycle, moped or bicycle (see Rider).
<b>Fatal crash</b>	A road crash where at least one person died within 30 days of a crash as a result of injuries sustained in the crash. The crash must occur on a road, open to and used by the public, and involve a vehicle which was in motion. It cannot be an 'Act of God', an act of deliberate intent, or as a result of a prior event such as heart attack.
<b>Fatality</b>	A person who dies from injuries sustained in a road crash, within 30 days of the road crash.
<b>Helmet</b>	A protective device worn on the head to prevent injuries in the event of a crash. Child bicyclists under the age of 17 are required by legislation to wear a helmet that meets Australian Standards.
<b>Hospitalisation</b>	A person admitted to hospital as a result of a road crash and who does not die from injuries sustained in the crash within 30 days of the crash.
<b>Killed</b>	A person who died from injuries sustained in a road crash within 30 days of the crash.
<b>Lap-sash belt</b>	See Restraint.
<b>Passenger</b>	A person other than the driver, travelling in or on a car, truck or bus. Does not include motorcyclists or bicyclists.
<b>Pedestrian</b>	A person on foot or a person on skates, child's tricycle, wheelchair, roller blades, scooter, or other unpowered vehicles (not including bicycles). Includes a person who has just alighted from a vehicle. Does not include a skateboarder.
<b>Restraint</b>	A device designed to hold a person within the body of a vehicle and limit movement during a crash, thereby reducing severity of injury. Includes inertia reel and fixed lap or sash seat belts, and child restraints, such as a rearward facing baby seat, forward facing toddler seat, booster or normal car seat. The device must meet the relevant Australian Vehicle Design Rules and the Australian Standards. Drivers and passengers of vehicles must wear restraints.
<b>Rider</b>	Any person in control of a motorcycle, moped, bicycle or animal.
<b>Road toll</b>	Count of fatalities resulting from road crashes.
<b>Road user</b>	Includes driver, passenger, motorcyclist, bicyclist and pedestrian.
<b>Seat belt</b>	See Restraint.
<b>Serious casualty</b>	A person killed or hospitalised as a result of a road crash.
<b>Serious crash</b>	A road crash which results in a fatality or hospitalisation.
<b>Vehicle</b>	Device upon which any person or property may be transported or drawn upon a road. Includes bicycles, skateboards and animal transport such as horses.
<b>Wheeled device</b>	Device other than a bicycle, e.g. scooter, skateboard, in-line skates.

# References

## References

### REFERENCES

- Adams, C. & Cercarelli, R. 2003, *Crash Involvement of Children aged 0-20 years, 1996-2000*, Injury Research Centre, School of Population Health, The University of Western Australia, Perth.
- Al Yaman, F., Bryant, M. et al. 2002, *Australia's Children: Their Health and Well-being 2002*, Australia Institute of Health and Welfare, Canberra.
- ARRB Transport Research 1999, *Increasing Seatbelt/Restraint Wearing On Remote Area Roads*, Austroads, Victoria.
- Ashwell, M. Pander, T. & Thomson, N. 1996, *An Overview of Injury in Western Australia: 1985-1994*, Health Department of Western Australia, Perth.
- ATSB 2005, March Report.
- ATSB 2005, *Road Deaths Bulletin*, March.
- Data Analysis Australia 2000, *Analysis of Road Crash Statistics 1990-1999*, Road Safety Council of Western Australia, Perth.
- Driving in the Northern Territory - Road User's Handbook*, Department of Planning and Infrastructure, December 2007.
- Elliott, B. 2000, *A review of good practice: children and road safety education*. Western Australian Department of Transport, Office of Road Safety, Perth.
- Foot, H., Tolmie, A., Thomson, J., McLaren, B. & Whelan, K. 1999, 'Recognising the hazards' in *The Psychologist*, 12, 8, 400-402.
- Henderson, M. 1996, *The Effectiveness of Bicycle Helmets - A Review*, Motor Accidents Authority of NSW, Sydney.
- Legge, M., Gavin, A. L., et. al. 2004, *Reported Road Crashes in Western Australia 2001*, Injury Research Centre, University of Western Australia Perth, Publisher.
- NISU 1999, *National Data Set (Injury Surveillance) Cause Categories*.
- Pettit, F. 1996, *Children's Competence as Road Users: The Relevance of Child Development Theory and Research*, Road Safety and Traffic Management Directorate Research Note RN7/94, Roads and Traffic Authority, NSW.
- Rivara, F.P. et. al. 1999, 'Fit of bicycle safety helmets and risk of head injuries in children' in *Injury Prevention*, pp. 194-7.
- Road User's Handbook - Driving in the Northern Territory* (2009), Department of Planning and Infrastructure, Northern Territory Government
- School Drug Education and Road Aware (SDERA) (2009) *Getting it together, A whole-school approach to road safety education*, Government of Western Australia.
- School Drug Education and Road Aware, *Challenges and Choices, Early Childhood Resource for resilience, drug and road safety education*, Government of Western Australia, 2005.
- Thomas, S. et. al. 1994, 'Effectiveness of bicycle helmets in preventing head injury in children: a case-control study' in *British Medical Journal*, 308, pp. 173-6.

### WEBSITES

- <http://www.kidsafewa.com.au/welcometoroadsafety.html>
- <http://www.kidsafewa.com.au/bicyclesandotherdevices.html#helmets>
- <http://www.kidsafewa.com.au/factsheets.htm>
- <http://www.kidsafewa.com.au/factsheets/Skateboarding%20Rollerblading%20&%20Rollerskating.pdf> (facts and information about skateboarding, roller blading and roller skating)
- <http://www.atsb.gov.au/road/stats/pdf/mrf032005.pdf> (ATSB Road Deaths Bulletin March 2005)
- [www.maa.nsw.gov.au/campaigns](http://www.maa.nsw.gov.au/campaigns)
- [www.nrma.com.au/reversing](http://www.nrma.com.au/reversing) (results of a reversing visibility index study in relation to Australian cars and wagons)
- [www.roadwise.asn.au](http://www.roadwise.asn.au) Western Australian Local Government Association (RoadWise program and in particular Safe Routes to Schools)