7. Other drugs

Apart from the major illicit drugs discussed in the preceding chapters there are a number drugs and substances, licit and illicit, that are abused in the community. Each of these drugs or substances poses a challenge for law enforcement: among them are analgesics, anabolic and androgenic steroids, DHEA (dehydroepiandrosterone), kava and ketamine.

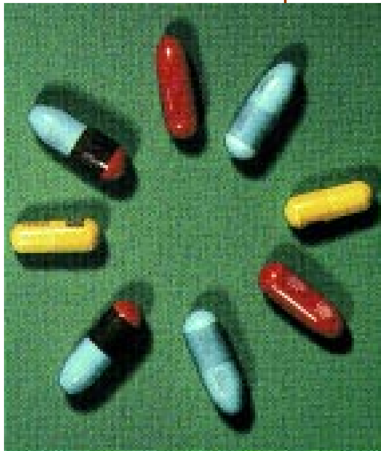


Plate 7.1: Depressants
Source: USDEA.

Pharmaceuticals

In Australia the most commonly abused types of pharmaceuticals are narcotic analgesics, benzodiazepines, and the drugs Ritalin (methylphenidate) and dexamphetamine. Narcotic analgesics—also called opiates—are very strong painkillers and as a result are an important medical drug. Benzodiazepines belong to a group of drugs medically classified as hypnotic sedatives, or tranquillisers; they were first synthesised in the 1950s. Licitly used for treating psychiatric complaints such as severe anxiety and sleeping problems, they are also known as anti-anxiety, or anxiolytic, drugs. Ritalin and dexamphetamine are used for treating attention deficit hyperactivity disorder.

Narcotic analgesics

Morphine, codeine, pethidine and methadone belong to the narcotic analgesic, or opioid, group of drugs. They are commercially manufactured by a number of companies, come within Schedule 8 or 4 of the National Drugs and Poisons Schedule, and are marketed under a number of trade names, as follows:

- Schedule 8—Anamorph, codeine phosphate, codeine phosphate injection USP, Durogesic, Endone, Fentanyl, Fetanyl Citrate Injection USP, Fortral (except New South Wales, where it is a Schedule 4 drug), Kapanol, Morphalgin, morphine sulfate injection, morphine sulphate injection BP, morphine tartrate injection, MS Contin, Operidine, Ordine, Palfium, Papaveretum and Hyoscine injection, Papaveretum injection, pethidine hydrochloride, pethidine injection BP, Physeptone, Proladone, Rapifen, Sublimaze, Temgesic;
- Schedule 4—Capadex, Codalgin Forte, Codral Forte, Di-Gesic, Doloxene, Dymadon Forte, Mersyndol Forte, Panadeine Forte, Paradex, Prodeine 15 (*MIMS on CD*, 1 August 1998 – 31 October 1998).

Morphine

Morphine is the principal constituent of opium and was the first drug extracted from the opium poppy. Discovered early in the nineteenth century in Germany, it has been widely used in medicine. The refining process makes it about five times more powerful than opium. Morphine is generally available in tablets, in slow-release capsules, as a clear liquid contained in ampoules, and as a powder. It is known to drug users as ‘dreamer’, ‘hard stuff’, ‘M’, ‘monkey’, ‘morph’, and ‘Miss Emma’.

...In Australia the most commonly abused types of pharmaceuticals are narcotic analgesics, benzodiazepines, and the drugs Ritalin (methylphenidate) and dexamphetamine...

Codeine

Codeine is a narcotic analgesic also extracted from the opium poppy. It is similar to morphine but neither as strong nor as addictive. Codeine is generally available in tablets or as a syrup or injectable liquid.

Pethidine

Pethidine is a synthetic opiate that stimulates the brain’s opioid receptors; it is widely used in medicine, primarily as a pain reliever. Although chemically similar to morphine, it is a milder drug and is often prescribed during childbirth and for other severe pain. Pethidine is usually available as a white tablet or as a clear liquid in ampoules. In the drug trade it is known as ‘peth’.

Methadone

The chemical structure of methadone is similar to that of morphine, but methadone is less potent. A synthesised drug used primarily for the treatment of heroin addiction, it has been available in Australia for the last two decades and is available licitly in most States and Territories. It is distributed through some drug-treatment agencies. Methadone is available as a powder, as a tablet, and as a liquid for injection or drinking. It is known in the drug trade as ‘meth’, ‘metho’, and ‘done’.

Effects

The opioids are fast-acting drugs, although their effects vary with purity, dose, form and administration method. Their effects can last from two to 24 hours and include euphoria, pain relief, sleepiness, contraction of the pupils, shallow breathing, nausea and vomiting, and unconsciousness and death (CEIDA 1989).

Benzodiazepines

Benzodiazepines are sold under a wide range of trade names, in tablet, capsule and liquid form; Table 7.1 provides details.

Table 7.1: Benzodiazepines and their trade names

Chemical name	Trade names	Comments
Temazepam	Normison Temaze Euhypnos Nocturne Nomapam Temtabs	Fluid from capsules is injectable. This route of administration can lead to gangrene
Triazolam	Halcion	Used in the treatment of insomnia
Bromazepam	Lexotan	Used in the treatment of tension, anxiety and agitation
Oxazepam	Serepax Alepam Murelax	Prescribed for short-term treatment under the Pharmaceutical Benefits Scheme for anxiety and sleep disorders
Clonazepam	Rivotril Paxam	Prescribed in the treatment of epilepsy; anti-convulsant. Known as 'Super Valium' in the United States
Diazepam	Valium Antenax Diazemuls Ducene Diazepam injection USP	Prescribed for short-term treatment under the PBS for anxiety and sleep disorders
Flunitrazepam	Rohypnol Hypnodorm	Not available under the PBS. The favoured drug of benzodiazepine users
Nitrazepam	Mogadon Alodorm	Prescribed for short-term treatment under the PBS for anxiety and sleep disorders
Alprazolam	Kalma Xanax Ralozam	Used in the treatment of anxiety and panic disorders

Effects

Benzodiazepines are prescribed by doctors in tablet, capsule or injectable form. Once absorbed into the bloodstream, they relax muscles and affect the central nervous system by slowing down physical, mental and emotional responses.

Many side-effects are associated with the misuse of benzodiazepines—drowsiness, lethargy, confusion, euphoria, mood swings, headaches, nausea, dizziness and slurred speech, for example. Tolerance occurs quickly, usually after three to 14 days (CEIDA 1988). The National Health and Medical Research Council suggests that, apart from dependence, the dangers associated with over-prescribing benzodiazepines include impairment of psychomotor performance, memory and concentration; mental confusion; lack of coordination; depression; and the 'stupefying' of emotions. Some individuals, however, experience increased anxiety, irritability, hostility, aggressive behaviour, and lack of inhibition. When mixed with other drugs, tranquillisers greatly reduce alertness and judgment of time, space and distance. Combining alcohol and benzodiazepines may result in death.

The National Drugs and Poisons Schedule Committee included flunitrazepam in Schedule 8 of the Standard for the Scheduling of Drugs and Poisons with effect from 19 June 1998. Following this decision, which was in November 1997 and confirmed in February 1998, the Committee agreed to review the scheduling of the benzodiazepine class. The review was considered at the August 1998 meeting of the Committee, when it was decided that there should be no change to the scheduling of other benzodiazepines; that is, Schedule 4 was considered appropriate for all benzodiazepines other than flunitrazepam.

Methods of administration

Depending on the drug prescribed, pharmaceuticals are generally taken either orally or injected—they may also be taken in other ways such as through the skin (for example, nicorette patches) or as nasal sprays or suppositories. Many pharmaceutical drugs, such as Temazepam, are supplied in fluid-filled capsules referred to as 'jellies'. These are designed to be taken orally, but people often remove the fluid and inject it. This is extremely dangerous.

...Benzodiazepines are prescribed by doctors in tablet, capsule or injectable form. Once absorbed into the bloodstream, they relax muscles and affect the central nervous system by slowing down physical, mental and emotional responses...

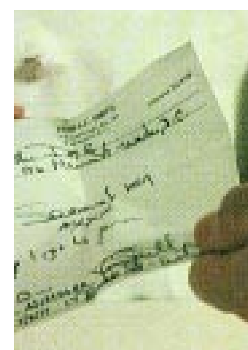
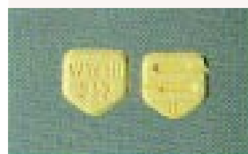


Plate 7.2: Prescription
Source: USDEA.

Plate 7.3: Types of pharmaceuticals
Source: USDEA.



Current situation

Misuse of pharmaceuticals remains very prevalent among injecting drug users, who often use benzodiazepines to supplement other illicit drugs or to control related problems. Police from the Kimberley in Western Australia to Burnie in Tasmania report pharmaceutical misuse at varying levels. In areas where the supply of heroin is occasionally interrupted—for example, in Tasmania, far north Queensland and the Northern Territory—pharmaceutical misuse is reported by police to be high, particularly during periods of heroin shortage.

The primary pharmaceutical drugs encountered by police are morphine (Anamorph and MS Contin), pethidine, diazepam (Valium), flunitrazepam (Rohypnol), oxazepam (Serepax) and temazepam.

Most jurisdictions reported either a stable or an increased level of pharmaceutical misuse. Tasmania reported a dramatic increase in detection. Agencies reported spending very little time investigating pharmaceutical misuse and offences with the exception of the Tasmania Police Drug Squad, which spends a quarter of its time investigating these matters.

Domestic abuse of pharmaceuticals

Pharmaceuticals continue to be abused by a wide cross-section of the Australian community. Law-enforcement officers primarily encounter users who are often users of other drugs, occupational users (using stimulants), young people experimenting with drugs, people involved in the 'rave scene', and people who may use pharmaceuticals to 'stupefy' victims—in some sexual assault cases, for example.

Dr Alex Wodak, Director of the Alcohol and Drug Service at St Vincent's Hospital in Sydney, claims that pethidine is the pharmaceutical drug that causes the greatest problem and that the majority of people using it have been prescribed the drug legally. Problems include 'doctor shopping', self-administration, steadily increasing dose requirements and behavioural difficulties. Pethidine is implicated in the majority of doctor deregistrations because of self-prescribing. Because there are often problems with pethidine and because the range of alternative medications has been expanded and improved in recent years, Dr Wodak would like to see the place of the pethidine in modern medical practice reconsidered.

Methods used to obtain pharmaceuticals illegally

Pharmaceuticals are illegally obtained in four ways: through stealing and forging prescriptions; by robbing or burgling doctors' surgeries and pharmacies; through 'doctor shopping'; and by purchasing them on the domestic black market. The most common method in Australia is doctor shopping—attending multiple doctors and obtaining prescriptions from as many as possible.

Doctor shoppers regularly fail to inform practitioners that they are seeing other practitioners. They are usually bulk-billed because they have some form of entitlement, or they seek out practitioners that bulk bill. Thus the cost to the doctor shopper is minimal—nothing for the consultation and A$3.20 or nothing (if over the safety net limit) for each supply of medication (HIC 1998). For the purposes of the Health Insurance Commission Doctor Shopper Project, a 'doctor shopper' is defined as someone who sees 15 or more different general practitioners in a 12-month period and obtains more than 50 Pharmaceutical Benefits Scheme prescriptions.

The Health Insurance Commission reports that doctor shopping is concentrated around major capital cities and tends to occur in geographic clusters such as Kings Cross, Darlinghurst, Redfern, Newtown and Waterloo in Sydney, Inala and Fortitude Valley in Brisbane, and Frankston, St Kilda and Collingwood in Melbourne. Proportionally, the area with the highest concentration of doctor shoppers is Salisbury in northern Adelaide. There appears to be a correlation between the socio-economic status of an area and the probability of doctor shopping occurring.

Health Insurance Commission data show that most doctor shoppers are between 20 and 40 years old and that their mean age is approximately 36 years. Less than a quarter of all doctor shoppers are over 50; around 60 per cent are female. Seventy-nine per cent of doctor shoppers are seeking benzodiazepines, codeine compounds and narcotics (HIC 1998).

Although many doctor shoppers do not fit the 'junkie' stereotype there are a number who, when distressed, are violent and disruptive in doctors' surgeries. Aggressive doctor shoppers are of particular concern to female practitioners—some might prescribe out of fear. It is estimated that 80 per cent of the scripts provided to doctor shoppers are written by approximately 20 per cent of general practitioners.[1]

Combating doctor shoppers

The 1996–97 Federal Budget made provision for the Health Insurance Commission to receive an additional A$5.25 million over three-and-a-half years to combat doctor shopping. The Commission identifies people suspected to be doctor shoppers from Medicare and Pharmaceutical Benefits Scheme data.

The Commission's pharmacists identify and counsel people visiting abnormally high numbers of general practitioners in a calendar year to:

- facilitate better health outcomes;
- reduce the number of unnecessary visits made to medical practitioners;
- reduce the volume of medications supplied to patients in excess of their therapeutic need. (HIC 1998, p. 20)

An important innovation of the Commission's Doctor Shopper Project is the encouragement of medical practitioners to obtain patients' signatures on privacy release forms. Once a patient's release is processed, a report is produced for the treating practitioner, who is selected by the patient. This report shows the patient's PBS medication profile for the past six months and the number of other practitioners who have prescribed to that patient. From the Project's implementation on 5 February 1997 until July 1998 some 2661 patients signed privacy release forms—1266 doctor shoppers and 1395 non–doctor shoppers.

The Health Insurance Commission provides a free-call telephone service—the Dr Shopper Hotline, 1800 631 181—to allow practitioners to

- determine whether a patient has been identified by the Commission for the purposes of the Project;
- obtain information about the Project;
- obtain advice about how to deal with a patient who is a suspected doctor shopper;
- obtain information about the privacy release scheme and receive a privacy release kit.

In 1995–96, 13 240 people were identified as doctor shoppers. In the following year the figure was 10 114. In 1997–98 it was down to 8584. The most active doctor shopper identified to date attended 620 different medical practitioners in 1997–98.

The Kirketon Road Centre in Kings Cross reports that there appears to be less benzodiazepine in the area, possibly due to the success of the Doctor Shopper Project.

International diversion

There are two motivations behind international pharmaceutical diversion: humanitarian assistance and profit.

Australian citizens are fortunate that the pharmaceuticals available in this country are of very high quality and are reasonably accessible to all people who legitimately require them. There are countries in the world where pharmaceuticals are not readily available and where quality varies greatly. Often people from these countries ask family and friends who are resident in Australia to obtain pharmaceuticals and divert them overseas. This is of concern to Australian authorities for two reasons: diversion of pharmaceuticals from this country costs Australia dearly; and most often the diverted pharmaceuticals are not used under the guidance of a medical practitioner so use may be harmful.

As noted, the other reason for pharmaceutical diversion is profit. Commodity-based diversion, where the only motivation is selling the drugs on the black market in foreign countries, is occurring in Australia. The most commonly involved drug is the analgesic paracetamol, in the form of Panamax 500-milligram tablets[2]; other often diverted drugs are antibiotics and peptic ulcer drugs such as Zantac.[3] The Health Insurance Commission estimates that A$25 million worth of PBS pharmaceuticals are illegally being moved overseas each year.[4]

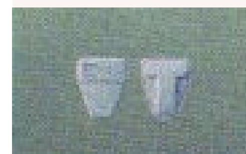
Intelligence suggests that some pharmacists are aware of what is occurring and continue dispensing to people despite their involvement in this type of abuse. Such abuse can occur when members of a family or group doctor shop, pool all the drugs they obtain under the Pharmaceutical Benefits Scheme, and then send the drugs, either with a member of the family or group or by mail, to the foreign country. They then return to Australia with the financial reward. Among the foreign destinations that the Health Insurance Commission has identified for diverted PBS items are Vietnam, Hong Kong, Egypt, Cambodia, Indonesia and Lebanon. The Commission has planned three strategies to combat this:

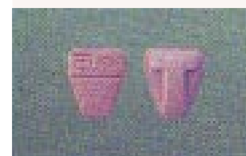
- new legislation relating to couriers;
- education and awareness campaigns targeting the groups most likely to be involved;
- enforcement action against providers and couriers.

Diversion for the manufacture of illicit substances

Pharmaceuticals are also diverted to clandestine drug laboratories, where they are used as ingredients in the manufacture of drugs such as heroin and amphetamines. Most of the pharmaceuticals diverted for this purpose contain pseudoephedrine, which can be extracted from cold and 'flu tablets, and are used in the manufacture of amphetamines. Diversion of pseudoephedrine continues to be detected by law-enforcement agencies: this may be because recognised precursors are becoming harder to obtain under current legislation. Several States report a continued increase in mass purchases of Sudafed; there are records of offenders driving hundreds of kilometres to obtain as many packets of pseudoephedrine-containing tablets from as many chemist outlets as possible in an attempt to disguise their purchases.

Plate 7.4: Types of pharmaceuticals
Source: USDEA.





Pharmaceuticals and sexual assaults

Pharmaceuticals—in particular Rohypnol, which is a very powerful sedative—have been implicated in a number of sexual assaults. Twenty-one sexual assaults against women in Melbourne alone have been attributed to a serial rapist. He has been dubbed by the media as 'the hot chocolate rapist'. This person would offer women a lift home and on the way proffer a cup of hot chocolate laced with Rohypnol. Because of Rohypnol's nature some victims are unsure whether or not they were assaulted.

Rohypnol is manufactured as 2-milligram white tablets that are cross-scored. It is tasteless, odourless and colourless when mixed in liquids. It is prescribed as a sedative for terminally ill patients and insomniacs. Once ingested, the drug can take effect in 10 to 30 minutes. Long-term blackouts lasting up to 20 hours may result from an overdose. Confusion, drowsiness, disorientation, amnesia and immobilising effects may also be experienced.

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Subject to dosage, Rohypnol can be detected by urinalysis up to 18 hours after ingestion and in the bloodstream up to 12 hours after ingestion. Suspected victims should be encouraged to have blood and urine samples as soon as possible.

Most jurisdictions reported drug-related incidents where people were sexually assaulted and Rohypnol is thought to have been used. The Northern Territory is investigating 10 to 15 unconfirmed reports of people having their drinks spiked in city nightclubs over a three-month period. All victims displayed symptoms similar to those seen after the use of Rohypnol.

The international manufacturer of Rohypnol, Hoffmann–La Roche, has modified the tablet so that it dissolves less rapidly, turns the liquid to a shade of blue, and allows bits of the tablet to float to the top (Dinnison 1998). These changes will not reach Australia until 1999. The National Drugs and Poisons Scheduling Committee rescheduled Rohypnol to a Schedule 8 drug on 19 June 1998. The decision to do this has been challenged by the manufacturer, and an appeal against the drug's new status is being considered by the Australian Health Minister's Advisory Council (Woodhead 1998). The grounds for the challenge are thought to concern a restriction on the manufacturer's ability to trade.

Conclusion

Pharmaceutical misuse affects everyone in the Australian community, whether it be through direct contact with drug abusers, the crimes abusers commit to obtain drugs, or the tax paid to support the abuse of and illicit trade in pharmaceuticals.

More and more people are recognising the potential for financial gain from international diversion of pharmaceuticals. Further review needs to be contemplated in relation to the rescheduling of some pharmaceutical drugs such as the benzodiazepines. The rescheduling of these drugs would probably not occur without some community or manufacturing industry resistance, as is the case with Rohypnol.

A national approach to reducing the level of abuse is essential. The assistance of medical practitioners and pharmacists is integral to this: they should be encouraged to adhere to their respective codes of conduct, and those that fail to do so should be censured.

Performance-enhancing substances

In the past year the use of steroids and other performance-enhancing drugs has received considerable media attention. Among the reasons for this are incidents such as the Chinese swimmers being disqualified from the World Championships and Australian Rugby League players testing positive to banned drugs.

Although the testing of individuals using performance-enhancing substances in sport is largely the responsibility of agencies such as the Australian Sports Drug Agency, law-enforcement agencies do have a role to play. Generally, they become involved in investigating the use, or trafficking, or both, of such substances, among them steroids and DHEA (dehydroepiandrosterone).

The Australian Sports Drug Agency is an independent statutory authority established under the *Australian Sports Drug Agency Act 1990*. The Agency's primary role is conducting a comprehensive drug-testing program, with the aim of deterring elite athletes from taking prohibited substances. It also works in partnership with sports organisations at the State, national and international levels to develop a comprehensive response to matters associated with drugs in sports. The Agency supplies a handbook on substances that are and are not permitted in sport and has a hotline (1800 020 506) and website (www.asda.org.au) to answer questions relating to drugs in sport (ASDA 1998a).

Plate 7.5: Testosterone
Source: USDEA.

Anabolic and androgenic substances

Anabolic and androgenic substances, known as steroids, are synthetic versions of hormones produced in the sex organs and cortex of humans and animals. These drugs induce anabolic activity, which leads to greater muscular bulk by increasing protein synthesis, and androgenic activity, which leads to enhanced secondary sexual characteristics.

The first synthetically produced androgenic steroid, Dianabol, was produced in the United States in the 1950s (National Criminal Intelligence Service 1994). Since then, anabolic and androgenic steroids have been used illicitly mainly by athletes and licitly for medical therapies. Colloquially, they are known as 'gas', 'roids', 'juice', 'gear', 'HGH', 'vets drugs' and 'Caseys'.

Anabolic and androgenic steroids are also used for veterinary purposes—to treat dogs, cats, horses and other animals for conditions such as loss of appetite, recovery from parasite infections, catabolism (tissue breakdown), and muscle wastage or damage. In Australia they are manufactured by a number of companies for the domestic and international market. Compared with steroids produced elsewhere in the world, Australian veterinary steroids are produced to an extremely high standard. They are also cheaper and more easily obtained in Australia than human steroids and consequently are more often used by people seeking an 'edge'. Human anabolic and androgenic steroids are designed primarily to treat conditions that require clinical intervention—examples are advanced breast, cervical and endometrial cancers; hormonal conditions; and aplastic anaemia.

Among the anabolic and androgenic steroids listed in Appendix D to the Poisons and Therapeutic Goods Regulation 1994 are boldenone, drostanolone, ethyloestrenol, fluoxymesterone, mestanolone, mesterolone, methandienone, methandriol, methenolone, methylandrostanolone, methyltestosterone, mibolerone, nandrolone, norethandrolone, oxandrolone, oxymesterone, oxymetholone, stanolone, stanozolol, and trenbolone.

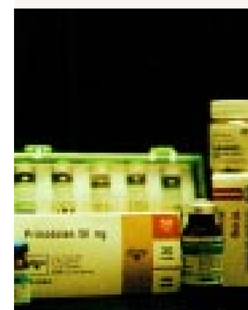
MIMS on CD (1 August – 31 October 1998) lists human anabolic and androgenic steroid products (with their generic description) found in Australia:

- Andriol (testosterone undecanoate);
- Deca or Deca-durabolin (nandrolone decanoate);
- Halotestin (fluoxymesterone);
- Lonavar (oxandrolone);
- Primobolan (methenolone acetate);
- Primoteston Depot (testosterone enanthate, methenolone enanthate);
- Proviron (mesterolone);
- Sustanon (testosterone decanoate+, testosterone isocaproate+, testosterone phenylpropionate+, testosterone propionate+);

The Australian Veterinary Association issued a media release on 30 July 1998 listing the following anabolic and androgenic steroids that were registered stock medicines as at May 1998 (registration number in parentheses) and are found in Australia:

- Ilium Anadiol Depot sterile injection minimal virilising anabolic steroid (38589);
- Ilium Anadiol Depot injection (50802);
- Androbol androgen anabolic combination for geldings (37946);
- Ilium Boldebal-H sterile injection long-acting anabolic steroid for horses (38592);
- Ilium Boldebal-H injection (50444);
- VR Boldenone 50 anabolic steroid oily injection (47811);
- RWR Deca 50 sterile oily injection (38205);
- RWR Deca 50 oily injection (49855);
- VR Depobol 50 sterile injection Boldenone undecenoate 50 mg/ml (36181):
- RWR Drive sterile oily injection (36181);
- VR Dynabol 50 injection (47678);
- Filybol anabolic injection for fillies, mares and colts (37981);
- Filydoc deoxycortone–anabolic combination for fillies and colts (37951);
- Laurabolin 25mg/mL anabolic steroid for intramuscular or subcutaneous injection (37215);
- Laurabolin 50mg/mL anabolic steroid for intramuscular or subcutaneous injection (37219);
- RWR Libriol sterile oily injection (38209);
- VR Nandrabolin anabolic steroid oily injection (47783);
- Nandrolin 25 mg/mL anabolic steroid for intramuscular or subcutaneous injection (37216);
- Nandrolin 50 mg/ml anabolic steroid for intramuscular or subcutaneous injection (37212);

Plate 7.6: Examples of steroid packaging
Source: USDEA.



- Norabolin 50 (37299);
- RWR Novatrol sterile oily injection (38203);
- VR Probolin-50 anabolic injection (47347);
- RWR Protabol oily injection (49861);
- RWR Protabol sterile oily injection (38208);
- Reepair sterile oily injection anabolic steroid (37313);
- Reepair anabolic steroid oily injection (50151);
- RWR Spectriol sterile oily injection (38204);
- Ilium Stanabolic androgenic–anabolic steroid injection (38652);
- RWR sterile suspension Stanazol (38185);
- VR Stanosus 50 anabolic steroid suspension (48473);
- AVP Superbolin sterile injection long-acting anabolic steroid for horses and dogs (41055);
- Sybolin anabolic steroid for horses (37982);
- Tribolin 75 potent long-acting anabolic for geldings (37974).

In the same media release the Association also listed examples of testosterone or testosterone compounds that were registered stock medicines as at May 1998 (registration number in parentheses):

- Androbol androgenic–anabolic combination for geldings (37946);
- Durateston injection of mixed testosterone esters intervet (37230);
- RWR Spectriol sterile oily injection (38204);
- AVP Supertest sterile injection anabolic–androgenic steroid for horses (41056);
- AVP SUPERTEST injection anabolic–androgenic steroid for horses (50480);
- VR Testo LA long-acting androgenic steroid oily injection (47786);
- VR Testoprop short-acting androgenic steroid oily injection (47787);
- Testosus 100 sterile androgenic steroid suspension (37342);
- RWR testosterone suspension 100 sterile injection (38189);
- VR Virabol sterile injection of testosterone (36209).

Methods of administration

Anabolic and androgenic steroids are available as capsules, injections and creams. They are deliberately designed for the human or the veterinary market and can be taken orally, injected intravenously or intramuscularly, inhaled or absorbed through the skin. It has recently been reported that some are being taken rectally.

Effects

Abuse of anabolic and androgenic steroids can lead to psychological addiction. People who become dependent can experience withdrawal symptoms such as severe depression (including suicidal thoughts), mood swings, insomnia, loss of energy or appetite, sweating, nausea, headaches, and a craving for more steroids. These symptoms can last from one to three weeks. In addition, if a user stops taking steroids and their level of aggression declines and their body size decreases—in addition to other withdrawal symptoms—they often resume consumption. Acne, changes to the way the blood clots, liver disease or tumours, paranoia, high blood cholesterol, and an increased risk of heart attack are other possible consequences of the abuse of anabolic and androgenic steroids.

...Abuse of anabolic and androgenic steroids can lead to psychological addiction. People who become dependent can experience withdrawal symptoms such as severe depression (including suicidal thoughts), mood swings, insomnia, loss of energy or appetite, sweating, nausea, headaches, and a craving for more steroids...

Being a hormone that naturally occurs in different levels in males and females, anabolic and androgenic steroids affect the sexes differently. Some of the side-effects of abuse specific to females are clitoral enlargement, increased masculinity, irreversible baldness, jaundice, increased body hair, and menstrual problems. For men, the side-effects include breast development, testicular shrinkage, priapism and impotence, aggressive and violent behaviour, infertility, and psychological problems such as schizophrenia.

The side-effects appear to escalate with prolonged use. Among the early effects are changes in mood; euphoria; increases in confidence, energy and self-esteem; enhanced motivation and enthusiasm; diminished fatigue; and an increased ability to ‘train through pain’. Libido often increases, sometimes markedly. Irritability, anger, agitation and an ‘edgy feeling’ can then become common. Larger doses can cause loss of inhibition, impaired judgment, mood swings, and grandiose ideas. People who use the drug for prolonged periods can become suspicious, quarrelsome and aggressive; continued high-dose use can cause behaviour known as ‘roid rage’, which may lead to property damage, assault, domestic violence, child abuse, suicide, murder and attempted murder.

Current situation

Veterinary products continue be the most abused steroids. The majority of Australian-produced veterinary steroids come from New South Wales, where sale requirements have traditionally not been as strict as those relating to the sale of steroids designed for human use. Changes have recently been made to regulations controlling the distribution of veterinary steroids, but it is too early to comment on their effectiveness.

In Australia, human growth hormone, or HGH, is manufactured primarily in South Australia. Although it is very expensive, it is regarded as the 'Rolls Royce' of performance-enhancing substances. Its use is now relatively common in South Australia, although still limited by the high cost—about A$2500 for an eight-week course. Most users 'stack', or combine HGH with steroids, for greater effect. HGH is also available in Sydney, costing between A$800 and A$1500 for a one-month course (Cumming & Dasey 1998).

Investigation of the abuse and distribution of performance-enhancing drugs is something that seldom involves police: users are not on the street 'shooting up' and so are not highly visible to law-enforcement officers. And although the sale and use of steroids is regulated these drugs are not a regular target for police. Health agencies and sporting bodies have more exposure to the problem than do police and are consequently more often involved in investigating steroid abuse.

In 1997–98 the Australian Sports Drug Agency conducted 4313 tests. The tests returned 15 positives for stimulants, including amphetamine and pseudoephedrine, 14 positives for anabolic agents, and three for the manipulation-class drug Probenecid (ASDA 1998b).

Steroid abuse should be of concern to the Australian community because of the severe impact it can have on people's health. Among the broader health concerns are the potential for the spread of communicable diseases as a result of sharing or re-using needles, or injecting drugs from a shared container, and injecting drugs other than steroids.

Plate 7.7: Steroid abuse (increased muscle bulk)
Source: USDEA.

Users

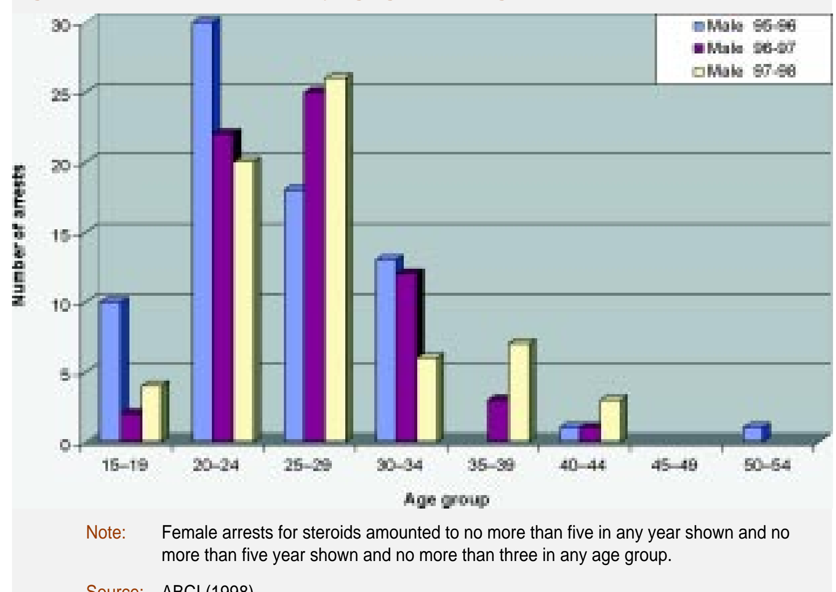
The National Drug and Alcohol Research Centre has identified the main user groups of anabolic and androgenic steroids:

- competitive athletes—the desire to succeed in sport;
- body-image enhancers—to look good and increase confidence through physical appearance;
- body builders—to increase body bulk for this competitive sport;
- occupational users—in occupations where it is perceived that strength and body appearance will assist in their daily functions. Examples are bodyguards, security personnel, construction workers, police and members of the armed services;
- male adolescents—to enhance physical stature and increase athletic performance (Peters et al. 1997).

The largest group of users are those who want to look good and feel confident in their appearance. The use of steroids by adolescent males, some of whom have not reached physical maturity, has been noted by both the Gold Coast Drug Council and the Queensland Intravenous AIDS Association.

Arrest data for the period 1995–96 to 1997–98 (see Figure 7.1) show that the majority of arrests involve males in the 20–24 and 25–29 age groups, which is when body image is most important and when athletes are at their prime.

Figure 7.1: Steroids arrests, by age group and gender, 1995–96 to 1997–98



Note: Female arrests for steroids amounted to no more than five in any year shown and no more than five year shown and no more than three in any age group.

Source: ABCI (1998).

Detections

Steroids were detected being imported to and exported from Australia during 1997–98. Customs made 128 detections of imported steroid products at the border; in 39 per cent of cases the steroids were thought to have been imported from the United States and in 24 per cent of cases they were thought to have come from Thailand. The remainder involved detections from another 23 countries.

Regulatory changes

In 1997–98 the New South Wales Government tightened up the legislation relating to diversion of animal steroid products.[6] In support of the new requirements, the Australian Equine Veterinary Association issued a media release on 30 July 1998 calling for national adoption of the tough new New South Wales requirements governing the distribution of injectable veterinary anabolics.

Plate 7.8: DHEA spray
Source: Australian Customs Service.

In summary, some of the new provisions for injectable anabolics and testosterones are as follows.

- Veterinary surgeons are not permitted to supply injectable steroids to anyone other than another veterinary surgeon and they must return surplus product to the supplier.
- In general, animals requiring treatment with an injectable steroid must be injected by a veterinary surgeon. Another person may carry out the injection if they are in the immediate presence of a veterinary surgeon who supplies the product to them for that purpose.
- All injectable steroids must be kept in a locked container (cupboard, case, vehicle, and so on) when not in use.
- Detailed records of all steroid use must be kept, clearly identifying the animal and client, the date and the amount used. Records of purchase (source, quantities and date) must also be kept. Precisely how the records are kept is a matter for each veterinary surgeon, but they must clearly account for all purchases and use and the records must be kept for at least two years.
- Records of stock on hand must be developed immediately, and all purchases and uses must be recorded within 24 hours.
- Inspectors authorised under the *Stock Medicines Act 1989* may request access to all such records. Suitable consolidated records, accounting for all purchases and uses, must be produced within a reasonable time.
- Any loss or theft greater than 50 millilitres must be reported.

The penalties for offences against this new legislation are up to A$22 000 for individuals and up to A$44 000 for corporations. The legislation applies only in New South Wales.

Apart from individual State and national legislation, two other avenues available to law enforcement may assist in bringing heavier penalties than are currently provided for. The first is to contact the National Registration Authority, which is responsible for the registration of all agricultural and veterinary products. If products are being misused or sold inappropriately the Authority may be able to assist local police by enforcing federal regulations. Second, if the contents of a steroid container are being misrepresented by the use of fraudulent or forged labels the manufacturer may wish to proceed against the offenders for misrepresentation. This has occurred in the past.

Steroids: significant seizures, 1997–98

[Note: There were no significant detections in Queensland, Western Australia, Tasmania, the Australian Capital Territory and the Northern Territory.]

Jurisdiction/date	Quantity	Narrative
New South Wales		
4 September 1997	2000 tablets, 145 ampoules	A male returning to Sydney from Bangkok was apprehended by Customs at Sydney International Airport.
2 October 1997	10 000 tablets	Customs in Sydney intercepted two packages from Thailand destined for Mermaid Waters, Queensland. The tablets were pink and pentagon-shaped, with a fracture line on one side.
15 November 1997	2200 tablets	A male was apprehended by Customs with 2000 Anabol tablets and 200 Andriol tablets at Sydney International Airport.
Victoria		
17 July 1997	4000 tablets	Customs detected steroid tablets in a mail parcel from Thailand.
8 February 1998	178 425 tablets, 140 ampoules	Customs apprehended two males at Melbourne International Airport returning from Thailand in possession of steroid tablets and steroid ampoules.
10 March 1998	2000 tablets	Customs intercepted tablets at Melbourne Mail Exchange from Thailand.
3 June 1998	1.13 kilograms	Customs apprehended a male body builder returning from Thailand with 10 000 tablets hidden in his underwear.
South Australia		
14 May 1998	20 000 tablets	Customs intercepted two mail packages at Adelaide Mail Exchange from Thailand.

DHEA

A hormone produced by the adrenal gland, DHEA (dehydroepiandrosterone) has been advertised on the Internet as a ‘wonder supplement’. The advertisments claim, without proof, that this substance combats ageing, helps with weight control (Atlas Operations 1997), supports healthy cardiovascular function, boosts energy production, promotes healthy mental function, increases libido, and reduces stress (Lifelink 1998). DHEA is an androgenic steroid and its importation is prohibited unless specific permission has been granted. In other countries, including the United States and New Zealand, it is legally available as an over-the-counter product.

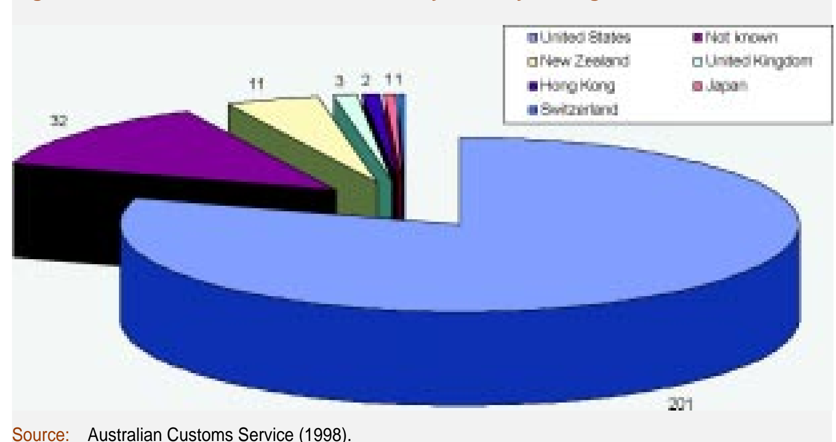
DHEA is available in tablets and capsules and as a powder or cream; it has recently been seized in spray form. According to one Internet website it is available as a tea or a gum (Mother Nature 1998).

Current situation

Customs detected more DHEA in 1997–98 than in previous years: 251 detections compared with 101 in 1996–97. Seventy-nine per cent of the detections came from the United States; most of the remainder came from New Zealand, the United Kingdom and Hong Kong.

Figure 7.2 shows 1997–98 Customs detections of DHEA by country of origin; Figure 7.3 shows 1997–98 Customs detections of DHEA by State.

Figure 7.2: DHEA Customs detections, by country of origin, 1997–98



Source: Australian Customs Service (1998).

LSD

LSD (lysergic acid diethylamide) comes in liquid form, in capsules or as tablets but is most often sold on blotting paper, which is usually imprinted with a colourful cartoon or design. LSD is known colloquially as 'acid', 'trips', 'blotters', 'mellow' or 'tabs', or it can be named after the design found on the blotting paper. A very small amount of the synthesised crystalline drug is effective: 10 kilograms would satisfy the reported current annual world demand.

LSD's popularity has varied in recent decades, depending on supply, users' experiences, and new generations' interest in experimenting with the drug. It was originally synthesised in 1938 by a Swiss chemist, Dr Albert Hoffman, although its hallucinogenic properties were not realised until 1943, when Hoffman accidentally consumed the equivalent of a couple of grains of salt (USDEA 1996).

Characteristically, LSD users in Australia are young people who take a variety of drugs in social situations such as dance parties. The principal user group appears to be people aged between 20 and 34 years, although anecdotal evidence suggests that an increasing number of young people, in particular males aged 18 and under, are using LSD. It would seem that this younger group's interest diminishes when they reach their early twenties.[7]

The increase in the popularity of LSD and other hallucinogens may be partly a consequence of their low price in comparison with the price of most other drugs: according to police services, the price of LSD during 1997–98 was around A$20–40 a tab in most parts of Australia, an increase on the A$10–30 range reported for 1996–97.

Effects

LSD is generally taken orally, although the tabs of blotting paper can also be placed on skin areas that readily absorb the drug into the bloodstream; under the eyelid, for example.

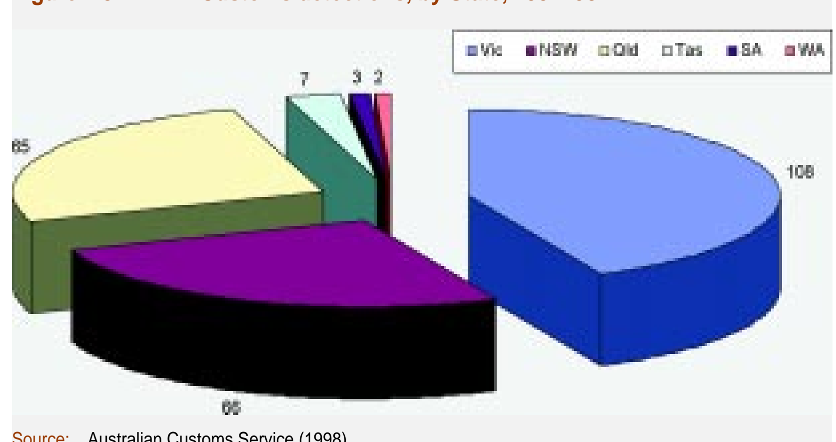
Because LSD is very potent, touching impregnated materials can lead to the drug entering the bloodstream: police should be mindful of this when handling the drug.

When ingested, LSD takes effect within 30 minutes. Its effects are strongest after three to five hours and can last up to 12 hours. Bad 'trips' can trigger severe panic, paranoia and confusion. Sometimes users take extreme risks—such as running across a busy street or jumping from a window—to escape imagined threats. Among LSD's other effects are distorted self-image, the sense of 'floating', intense thoughts, increased heart rate and breathing, dilated pupils, increased body temperature, and numbness. After a 'trip' the user may feel depressed. Tolerance of LSD's effects builds up rapidly if the drug is used daily (CEIDA 1995). In Australia, as elsewhere, LSD is not a significant cause of death, and long-term hospitalisation resulting from its use is rare.

Current situation

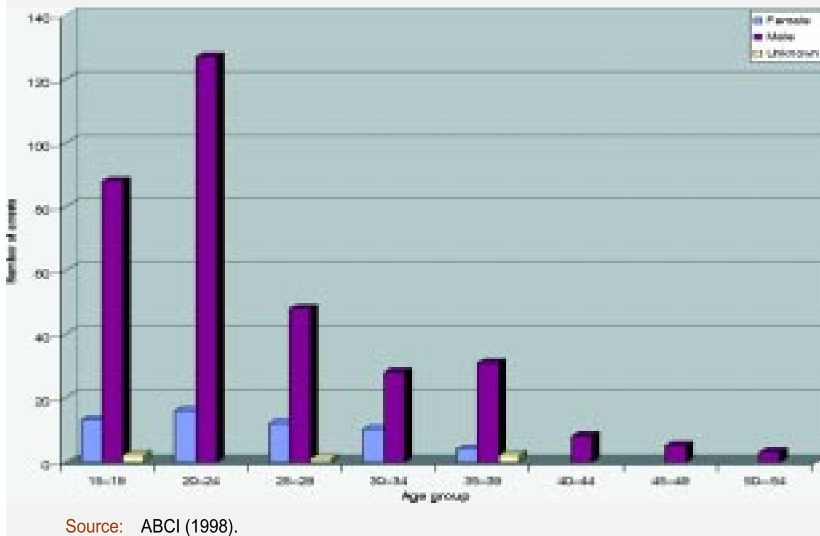
There has been no apparent change in the level of use or the user groups in the reporting period. Two matters of concern to law enforcement and health have, however, emerged. The first is the appearance of LSD-type tabs with no LSD component but instead containing the insecticide N, N-diethyl-m-toluamide (DEET).[8] The second involves unconfirmed reports of the practice of 'coding'. It would seem that coding is a process whereby people who are 'tripping' expose themselves to differing experiences—such as a variety of colours, music, screensavers, or flashing lights—

Figure 7.3: DHEA Customs detections, by State, 1997–98



Source: Australian Customs Service (1998).

Figure 7.4: LSD arrests, by age group and sex, 1995–96 to 1997–98



Source: ABCI (1998).

and in so doing believe that they will 'code' their mind to have a flashback to the trip experience whenever they again encounter these stimulators.

The Bureau is unable to provide accurate information on LSD detections because law-enforcement agencies' recording procedures for detections of LSD and other hallucinogenic drugs differ. Some agencies group all hallucinogenic drugs under one code, so it is not possible to single out detections of LSD. Nevertheless, the available records for LSD-related arrests show that the great majority of offenders arrested in the last three years are males in the 15–24 age group (see Figure 7.4).

The Victoria Forensic Science Centre collects all new LSD logos on behalf of the other State and Territory forensic services. During the reporting period the logos that appear in Plate 7.1 were detected in Australia and New Zealand.

LSD: significant seizures, 1997–98

Jurisdiction/date	Quantity	Narrative
Victoria		
30 December 1997	1220 tabs	Two males were arrested after a Victoria Police operation uncovered LSD tabs, 200 ecstasy tablets and 15 grams of amphetamine.
New South Wales		
27 February 1998	3387 tabs	Three offenders were arrested after a two-month New South Wales Police operation located LSD tabs, 862 grams of amphetamine and 4178 grams of ecstasy.
		South Australia
23 September 1997	5000 tabs	Customs located tabs in the mail. One male was arrested and an additional 43 grams of heroin was seized.
Western Australia		
14 November 1997	525 tabs	Western Australia Police executed search warrants, locating LSD tabs; an additional 8.5 kilograms of cannabis, 285 grams of amphetamine, 171 ecstasy tablets and 52 cannabis plants were also detected.

Inhalants and solvents

A wide range of products that can be obtained legally and easily contain readily absorbed compounds that affect the brain and the central nervous system. Esters, ketones, and chlorinated and fluorinated hydrocarbons are examples.

The most common inhalants and solvents that are abused are adhesives, thinners, Liquid Paper, dry-cleaning products, aerosol sprays (deodorants, hair sprays and furniture polish), gas (particularly butane in cigarette lighter refill canisters), petrol, antifreeze, burning plastics and fire extinguisher fluids. Amyl and butyl nitrates, known as 'rush' or 'poppers', are also used.

Reports of isolated incidents of petrol abuse in northern Australia date back to the 1940s. By the late 1960s and early 1970s the problem was serious enough to warrant the attention of the authorities (Brady & Torzillo 1994). Solvent abuse has also occurred for many decades.

Methods of administration

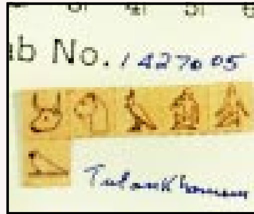
The main methods of solvent abuse involve directly inhaling the product from its container, pouring the substance into a plastic bag and inhaling from the bag, and spraying aerosol sprays directly into the mouth. Volatile substances are readily absorbed into the bloodstream. The effects of inhalants and solvents vary, depending on the amount inhaled, the history of use, and the mood the user is in. The effects can be very similar to those produced by drinking alcohol.

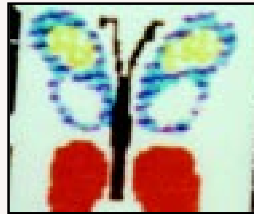
In Central Australia petrol is usually sniffed from petrol-soaked rags hidden in soft-drink cans and paint is sniffed by spraying the paint into empty wine bladders and then inhaling by mouth.

Traditionally, petrol abuse occurs in groups, with each member inhaling from his or her own bag, cloth or can until the desired level of intoxication is achieved. Repeated inhalations can occur over many hours to maintain

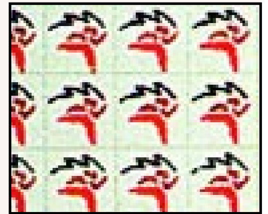
Plate 7.9: New designs appearing on LSD tabs, 1997–98

L107303
oriental smiley face

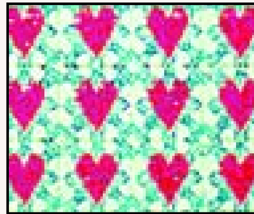

L107602
Egyptian hieroglyphics 2


L107901
butterfly (multi coloured)

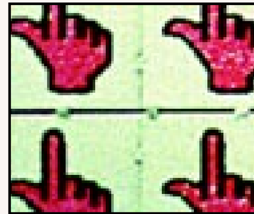
L109101
face with sunglasses


L109301
Olympics 2000

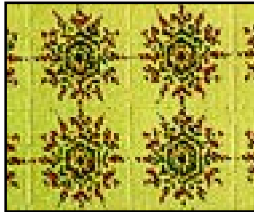
L109401
Beavis and Butthead

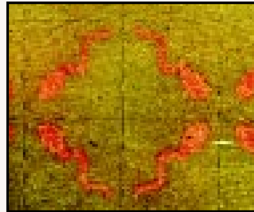

L109501
Pink heart

L109601
Bulldog


L109701
Pink pointing finger

L109801
decanter (multi-coloured)

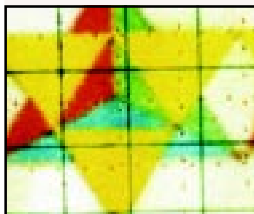

L109901
Snowflake

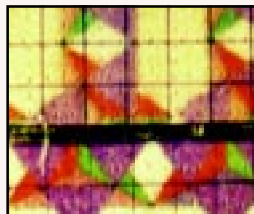

L110001
Pink sperm

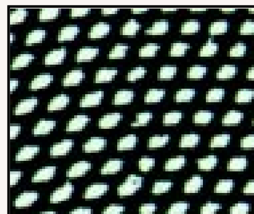
L110101
Bilbi twins in a spaceship

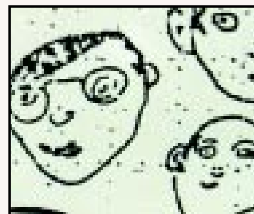
L110201
Uncle Sam

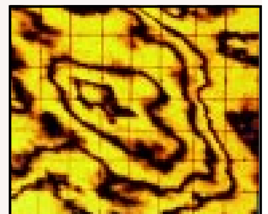
L110301
Angelica (Rug Rat)

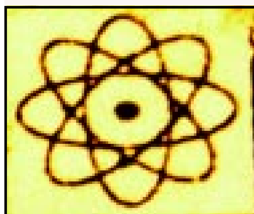

L110401
multi-coloured triangles


L110402
multi-coloured purple triangles


L110501
optical circles


L110601
potato heads

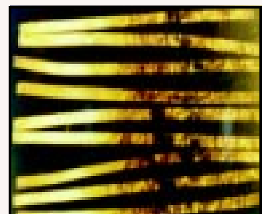

L110701
watermark


L110801
Atom with electrons

L110901
irregular star shape

L111001
Union Jack

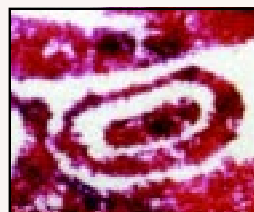
L111101
Fat Freddy's cat

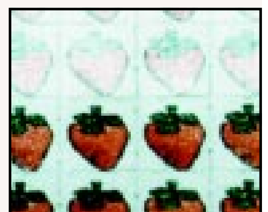

L111201
irregular design

L111301
dollar signs

L111401
purple wheel

L111501
yin and yang


L111601
red and orange design


L111701
strawberry 98

L105703
Ranger (black routine)

Note: Reference numbers are those allocated by the Victorian Forensic Science Centre. Seizure details are those on hand at the Australian Bureau of Criminal Intelligence at 25 September 1998. Some jurisdictions may not be represented in the table. Often there is a time lapse between the date of seizure and the reporting of seizure details to the Bureau by police and forensic services.

Source: Victoria Forensic Science Centre.

the intoxication. Inhalation stops when the supply is exhausted or the user becomes too fatigued or drowsy to continue. Levels of use vary from experimental and occasional to chronic.

Effects

Among the immediate effects of small amounts of inhalants are intoxication, lack of inhibition, drowsiness, disorientation, lack of coordination, agitation, nausea and diarrhoea. The after-effects include depression, hangover, memory loss, and uncharacteristic behaviour. Long-term use causes anaemia, weight loss, and sores around the nose and mouth.

As with inhalants, petrol abuse causes intoxication similar to that produced by alcohol. Ten to 15 breaths are enough to produce intoxication lasting for three to six hours. Among the short-term effects are euphoria, dizziness, sensations of numbness and weightlessness, and dissociation from the environment. These may be followed by giddiness, gregariousness, emotionality, reduced sexual inhibition, impaired motor coordination, muscle weakness, slowed reflexes, slurred speech, impaired judgment, abnormal sensitivity to light, double vision, dilated pupils, and ringing in the ears. Ringing in the ears can mimic deafness and photosensitivity will cause people to flee bright lights. These effects have obvious implications for professionals dealing with 'sniffers' (Macgregor 1997).

Abusers of petrol who re-inhale expired breath after falling into a stupor or sleep with a can or bag close to their mouth often experience hypoxia, occasionally leading to unconsciousness.

Current situation

Petrol sniffing is a problem in the Northern Territory, South Australia, Queensland and Western Australia. Generally, it occurs among young Aboriginal children from low socio-economic backgrounds living in remote localities. In some communities the rate of use is extremely high, with generations of young children addicted. Nationally, however, the level of inhalant use is low: it is estimated that in 1995 only 0.4 per cent of the Australian population had recently used inhalants (Department of Health and Family Services 1995).

Petrol sniffing is not an offence anywhere in Australia, although South Australia, Victoria and the Northern Territory have enacted legislation that prohibits the sale or supply of 'inhalants' or 'volatile substances' to anyone if it is believed they intend to misuse them. Higher rates of crime are associated with 'sniffers', who often steal from or break into premises to obtain their inhalants.

Community-based methods are used to combat petrol and paint sniffing, which is viewed as a health concern more than a criminal offence. Children found sniffing are deemed to be 'in need of care', and health and welfare departments are given details for follow-up.

Naturally occurring substances

Mushrooms

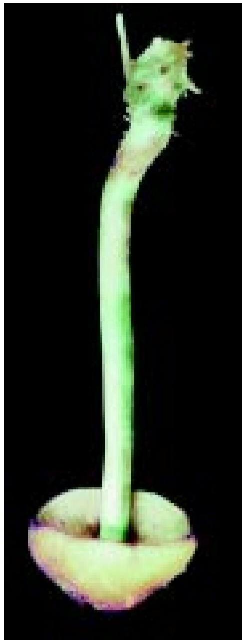


Plate 7.10: 'Magic mushroom'
Source: Victoria Police Department.

In many parts of the world, including Australia, mushrooms that produce hallucinogenic effects grow naturally. Most of them contain alkaloids, such as psiliocin and psylocibin. Colloquially, these mushrooms are known as 'magic mushrooms', 'gold tops' or 'blue meanies'.

Methods of administration

Mushrooms are often prepared for consumption by drying or boiling. Occasionally they are finely diced and incorporated in food or drink such as pasta dishes, sandwiches and milk shakes. Boiling appears to be the preferred preparation method.

Effects

Mushrooms' effects are similar to those produced by LSD and can last for up to six hours (CEIDA 1995). The danger is that if the wrong mushrooms are picked poisoning can result.

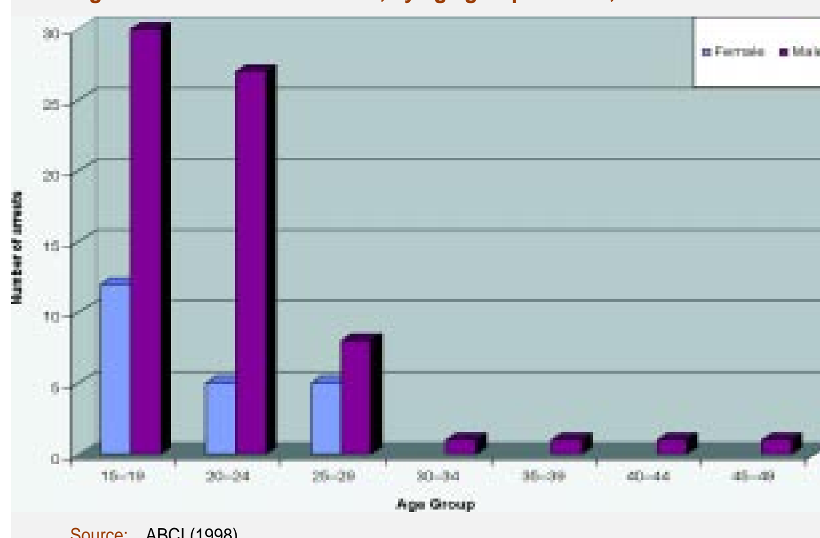
Current situation

Other than in isolated incidents law-enforcement agencies generally do not encounter this type of drug. Small seizures occur each year in the south-west of Western Australia, and Tasmania Police report that it is not unusual to find the odd mushroom during searches. There have, however, been no significant domestic seizures of mushrooms.

The Australian Customs Service reported nine incidents of mushrooms, or the active ingredient psylocibin, being imported into Australia in 1997–98 and, interestingly, one seizure of mushrooms being exported from Western Australia. The importations detected by Customs primarily occurred in New South Wales and originated in the United States, the United Kingdom, Ireland and the Netherlands. Seven of the detections were in the post and the other two were in air passengers' baggage.

As Figure 7.5 shows, the primary users of mushrooms would appear to be males in the 15–29 age group. The numbers of arrests in the last three years are very low compared with other types of drugs.

Figure 7.5: Mushrooms arrests, by age group and sex, 1995–96 to 1997–98



Source: ABCI (1998).

Kava

Kava kava, or simply kava, is a drug extracted from the roots of the plant *Piper methysticum,* which is a member of the pepper family Piperceae. It is colloquially known by the names 'yaqona' (pronounced *yang-gona*), 'ava', and 'awa'.

Most Australians become aware of kava when visiting the Pacific Islands, where it has been used for centuries for spiritual, medicinal and recreational purposes. In Australia, it is primarily used by Pacific Islanders and by Aboriginal communities in the Northern Territory. The Islander communities use it as a beverage, with minimal detrimental effects. But kava abuse is common in some Aboriginal communities, especially those in Eastern Arnhem Land, where it was initially introduced as a substitute for alcohol.

Although the intention may have been sound, the potential for abuse was not foreseen. Research by health agencies in the Northern Territory has found that Aboriginal people consume kava at 100 times the rate at which Pacific Islanders do, partly because the social constraints applied to its use among the Islanders are lacking (Munday 1997). Consequently, the financial drain on these communities is great and essentials such as food are neglected.

In recent years kava has gained popularity around the world because of its reputed therapeutic benefits. It is being advertised on the Internet and sold at herbal shops and pharmacies as a muscle relaxant, sedative and stress reliever.

In the Pacific Islands kava is sold in its original root form or as a powder. In Australia it is sold in powder form, in plastic bags of varying sizes. When sold as herbal medicine, it is generally sold in capsules, although it is advertised on the Internet as being available in liquid form. In Australia kava is classified as a food, except in preparations or presentations designed specifically for therapeutic use.

Plate 7.11: Kava capsules
Source: Victoria Police Department.

Methods of administration

In the Pacific Islands people drink kava as they would alcohol. Traditional preparation involves chewing the roots of the plant, which are then spat into a bowl and allowed to ferment before being mixed with water. Modern preparation involves grinding the roots and then mixing the powder with water in a large ceremonial kava bowl known as a *tanoa*. People then drink the kava from the 'bowl', using half a coconut shell. In Northern Australia a plastic bucket usually replaces the *tanoa* and cups are used.

Effects

Among the short-term effects of kava are numbing of the mouth and skin, sedation, euphoria, nausea, muscle weakness, and signs typical of intoxication (such as loss of coordination). Users feel lethargic and sleepy. Although the effects of short-term or controlled use are minor, long-term abuse of kava has been linked to a range of health problems: chest pains, shortness of breath, loss of weight, fitting, scabies, and swollen facial features, for example. There are also a number of potentially toxic side-effects, including liver and kidney damage. Social problems linked with kava include poor hygiene, malnutrition, neglect of children, and diversion of funds to buy the drug.

Current situation

During the reporting period a number of important legislative changes were made in relation to kava.

On 8 October 1997 it was gazetted as a prohibited import under the Customs (Prohibited Imports) Regulations. In recognition of its cultural significance to Pacific Islanders living in Australia, however, an exemption was made for travellers to bring in small amounts of kava for personal use. The allowance covers travellers aged 18 years or more and arriving in Australia: they may bring up to 2 kilograms of kava ingredients in the form of roots or powder as part of their baggage. Travellers carrying therapeutic goods containing kava are able to import up to three months' supply, at the maximum recommended dose, for their personal use. Understandably, Fijians expressed their disappointment at the ban (Stott 1997).

In March 1998, 400 kilograms of kava, in bags containing about 100 grams each, bound for a remote Aboriginal community was seized. It was reported in the *Northern Territory News* on 5 March that this kava would have fetched between $30 and $50 a bag in the Aboriginal communities. This seizure led to calls in the Northern Territory for an outright ban on kava.

On 28 April 1998 the Kava Management Bill was introduced and passed in the Northern Territory Legislative Assembly; the Act came into effect on 21 May. Basically, the Act bans the unlicensed possession of kava in the Territory. Communities can apply to the Northern Territory Liquor Commission for a licence to allow members of the community to possess and consume kava in that area. The Act also allows for retail and wholesaler licences, which again must be granted by the Liquor Commission. As at 22 September 1998 the Commission had received 29 inquiries about wholesaler licences (with four applications submitted), 21 inquiries about retail licences (with no applications submitted) and 14 inquiries about licensed areas (with only one application).[9]

Since the restrictions, police in north-eastern Arnhem Land report an apparent resurgence in alcohol abuse and alcohol-related offences, although kava is still used in some of the more isolated communities. Maningrida police report that kava has disappeared from their area and that initial indications suggest that a majority of the adults in the community have turned instead to cannabis. Maningrida has not seen the resurgence in alcohol-type offences because permits are required to possess and consume alcohol. This has limited the ability of kava users to turn back to alcohol: the community recently reduced its number of permit holders from 700 to 136. Females in the community feared increased domestic violence after the banning of kava, but at this stage their fears do not appear to have been realised.[10]

Plate 7.12: Khat plant
Source: ABCI.

Khat

Khat (pronounced *cot*) is the narcotic plant *Catha edulis*, an evergreen shrub or tree that grows to around 4 metres. Amongst its active constituents are the alkaloids cathinone and cathine, which stimulate the central nervous system in a way similar to amphetamine. Cathinone is several times more potent than cathine but is unstable and deteriorates on keeping. Khat has oval, serrated leaves between 8 and 10 centimetres long and small white flowers with five petals. The young leaves and buds are reddish-green. The fruit is an oblong three-angled capsule containing one to three seeds.

Importation of khat without necessary government permits, is illegal.

Generally, khat is cultivated in East Africa and on the Arabian Peninsula. Its active constituents are alkaloids that stimulate the central nervous system in a way similar to the action of amphetamine. The most potent parts of the plant are the young shoots and the leaves from the tips of the branches. Khat is perishable: freshly picked leaves give the maximum effect (National Criminal Intelligence Service 1995).

Methods of administration

Most khat users chew or smoke the leaves or prepare them as an infusion. Daily consumption of 250–400 grams is common in the countries of origin, where chewing sessions can last about four hours.

Effects

The effects of khat consumption can last up to 24 hours and are similar to those resulting from a 5-milligram dose of amphetamine. Among the side-effects of regular use are anorexia, disorientation, euphoria, excitation, hallucinations, hyperactivity, hypertension, impotence, insomnia, and outbreaks of irrational violence. A number of medical problems can result—peptic ulceration, chronic constipation and mental illness, for example. In exceptional cases, khat consumption can result in toxic psychosis. Habitual chewers often have brownish stains on their teeth, have a 'staring' look, and are likely to complain of a dry mouth and thirst.

Current situation

The Australian Customs Service reported an increase in khat importations, mostly through Melbourne and from Ethiopia, Djibouti and the United Kingdom. It reported seizing 350.2 kilograms of khat in Victoria, 24.9 kilograms in Western Australia, and 18.5 kilograms in New South Wales. These importations occurred via air cargo, the post, and air passengers' baggage. Somali migrants residing in Australia and couriers recruited by Somali–Australian organisers are believed to be responsible.

Australian law-enforcement agencies have not reported any criminal activity or apparent social problems linked to the use of khat, which appears to be restricted to a small number of ethnic communities. Indications for the past year confirm that its use is unlikely to spread to other sectors of the community.

The increase in khat importation and subsequent detection in recent years may be purely a consequence of a higher rate of Customs targeting, increased awareness on the part of Customs officers, and a growing Somali and Ethiopian community in Australia. A possible consequence of the increased detections is an increase in cultivation of the plant in Australia by the communities involved, although there has been no evidence of this in 1997–98.

DMT

DMT (dimethyltryptamine) whilst not common in Australia, is gaining popularity among a small group best described as 'risk takers'—people willing to experiment with any new or unusual drug. DMT has been nicknamed 'the businessman's lunch' because of its rapid reaction time.

According to an Internet article authored by Dr Alexander T. Shulgin[11], DMT was first synthesised in 1931 and demonstrated to be hallucinogenic in 1956. It is extracted from a variety of plants, some of which are native to Australia. Brown and white powdered versions have been discovered in New South Wales.

Methods of administration

DMT is either smoked or injected. It produces no apparent effects if taken orally.

Effects

DMT is described as the 'weirdest thing you can try this side of the grave'. It is reported to be very strong and to have fast-acting hallucinogenic properties, the strongest effects lasting up to 10 minutes and residual effects lasting up to an hour. Apart from its powerful hallucinogenic effects, it dramatically increases heart rate and blood pressure.

Current situation

The popularity of the Internet as an information source is allowing drug experimenters to learn about new drugs quickly and easily. The recent rise in popularity of DMT in Australia has undoubtedly been in response to reports about it on the Internet. News reports in Sydney and Melbourne in May 1998 called DMT a 'dangerous "natural" drug' and a 'new club drug'. There were also reports of teenagers smoking parts of a very common native tree in ritual ceremonies (Doherty 1998).

...The popularity of the Internet as an information source is allowing drug experimenters to learn about new drugs quickly and easily. The recent rise in popularity of DMT in Australia has undoubtedly been in response to reports about it on the Internet...

To date DMT has been identified only in a handful of cases in Australia. It will probably fall into the category of other trendy, natural-type drugs that come and go from time to time. There are, however, some concerns in relation to this drug, primarily the abundant literature publicising the manufacturing process for it and the apparent lack of literature available for health and law-enforcement agencies to treat and deal with users.

DMT is a prohibited substance under the Customs (Prohibited Imports) Regulations.

Other substances

GHB

GHB (gamma hydroxybutyrate, commonly known as sodium oxybate) is known colloquially as 'GBH' (for grievous bodily harm), 'liquid E', 'liquid X', 'fantasy', 'easy lay', 'g', 'salty water', 'love potion', 'scoop', 'Georgia home boy' and the 'date rape drug'. There is conflicting information about the term 'fantasy': Queensland Police has suggested that a cocktail of GHB and amphetamine is known as fantasy; other sources nominate GHB itself as fantasy.

Usually the drug is an odourless, colourless liquid with a slightly salty taste, although it is also available as a very fine white powder that is soluble in water. Often the liquid is coloured with a food dye to disguise its true nature and enhance its selling potential.

GHB was originally used as a surgical anaesthetic, but its use declined because of unwanted side-effects. It has also been used for treating narcolepsy (a condition that causes people to fall asleep suddenly), for weight control, and for the relief of symptoms when withdrawing from alcohol abuse. More recently, GHB has been injected intravenously by body builders because it is believed to initiate the release of growth hormone and stored body fat, thus increasing muscle growth.

Currently circulating on the 'rave scene' in the United States, the United Kingdom and Sweden, GHB is used as an alternative to amphetamines and ecstasy. People are taking it for its euphoric and sedating effects rather than as a stimulant for dancing. In the United States during the 1980s it was widely available over the counter in health food stores and was bought largely by body builders. It has since been found that GHB does not in fact assist in muscle growth, but some body builders persist with the drug because of its pleasurable side-effects. In the last few years it has been gaining popularity as a recreational drug.

On 14 October 1996 GHB was placed on Schedule 9 of Australia's Standard for the Uniform Scheduling of Drugs and Poisons and was placed on Schedule 4 of the Customs (Prohibited Imports) Regulations on 24 October 1996. This makes it a prohibited import and allows the States and Territories to prohibit its sale, supply, possession and use. Since it became a prohibited import, suppliers and users have attempted to import kits containing the two chemicals needed to make the substance together with instructions for preparation. One of the substances required is covered by the requirements of the Customs (Prohibited Imports) Regulations and is therefore a prohibited import. As this precursor substance has legitimate uses, industrial permits are issued for its importation for bona fide users.

Effects

GHB begins to take effect about five to 25 minutes after being consumed, although it can take up to an hour. Initially it reduces social inhibitions, in a similar manner to alcohol, and increases libido. As with alcohol, if a person is a 'happy drunk' they are likely to be a happy GHB user; if they are angry or violent when drunk they are likely to be an angry or violent GHB user. Other physical effects are sudden drowsiness, dizziness, loss of muscle control, respiratory problems, amnesia, headaches, nausea, vomiting and short-term coma. Death can occur.

In the United States law-enforcement agencies are finding alcoholics turning to GHB use because they still enjoy the alcoholic effects but do not suffer the hangover associated with alcohol.

Current situation

Nightclub patrons and party goers associated with outlaw motor cycle gangs are currently the most prevalent users of GHB in Australia. The drug's use appears to be restricted but there is potential for the number of users to increase, particularly because it is advertised for sale on a number of Internet sites. Local manufacturing is suspected.

To date there have been limited seizures of GHB in Australia: in the reporting period Customs detected five importations of GHB or gamma-butyrolactone (the GHB precursor), all of which originated in the United States. Those detections constituted 9656 grams of powder and 500 mililitres of liquid precursor. There will probably be an increase in seizures in the future, as law-enforcement agencies become more aware of the problem and focus on the trade.

At present health and ambulance services have experienced more exposure to GHB-affected people than have law-enforcement agencies. Many cases would go undetected by law-enforcement agencies because users generally appear to be intoxicated. It would be only the more serious cases that present to the ambulance services and hospitals. In November 1997 several news articles appeared citing New South Wales Health Minister Andrew Refshauge's claim that St Vincent's Hospital in Sydney received approximately five people a day being treated for GHB overdoses.

On 14 February 1998 five people collapsed in an Adelaide nightclub. Days later South Australian Drug Task Force members attended a flat in West Beach and seized a small quantity of anabolic and androgenic steroids and 1.3 litres of GHB. The user was a gym fanatic who had close affiliations with the body-building fraternity. He was allegedly selling the GHB at A$1 per millilitre. GHB is reported in Queensland to be available for A$300 per 50 millilitres and A$3700 per litre. In Sydney it is reportedly available for between A$25 and A$35 per vial (ABCI 1998).

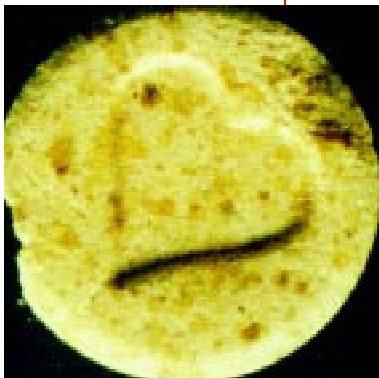
Intelligence suggests that a new 'safer' variant of GHB, called GBA, is available, although there is no firm evidence yet.

It has been reported that GHB has been used as a 'date-rape' drug. In the United States two people were apprehended who were allegedly responsible for some 47 offences where the victims were sexually assaulted or raped whilst under the influence of GHB. The effects of GHB are very similar to those of Rohypnol, discussed earlier in this chapter.

GHB has the potential to have serious ramifications for Australian law enforcement: it is easy and cheap to produce; it can be used to overcome people, leading to rape; it is very hard to detect; and it has intoxicating effects similar to those produced by alcohol. Sexual-assault services should develop protocols specifying that people presenting for assistance have urine and blood samples taken as soon as possible and ensure that the samples are tested for GHB as well as other drugs.

Ketamine

Plate 7.13: Ketamine
Source: ABCI.



Ketamine is used as an anaesthetic by veterinarians and to a lesser extent the medical profession. Among its proprietary names are Ketalar, Ketaject and Ketavet. Ketamine is often sold illegally as ecstasy or used as a cutting agent for other drugs such as cocaine, amphetamines and heroin. The National Drug and Alcohol Research Centre reports that ketamine is occasionally substituted for heroin; is known colloquially as 'Special K', 'vitamin K', 'liquid E', 'Kit Kat' and 'K'.

The drug takes the form of a white crystalline powder, a liquid or a tablet. It is freely soluble in water or alcohol and usually comes in liquid form in a small brown vial. LSD tabs impregnated with ketamine have also been found. Ketamine may be packaged for sale in small plastic bags, aluminium foil, paper folds or gelatin capsules.

Ketamine can be administered by intravenous or intramuscular injection, although most recreational users snort the powdered form in measured doses ('bumps') or take it orally in its tablet or tab form. The National Drug and Alcohol Research Centre reports that ketamine has been distributed in Sydney in snuff containers that give the user a measured 'hit' or 'bump'. The average street dose of ketamine ranges from 0.2 to 0.5 grams.

Effects

Ketamine produces hallucinogenic effects similar to those produced by LSD, although the effects tend to appear rapidly and subside quickly, generally lasting 30 to 40 minutes. The drug also has analgesic effects, reducing a user's response to pain. Overdose is rare, but high doses can cause nausea, vomiting, confusion, numbness, twitching, slurred speech, hallucinations and temporary coma. Respiratory depression can occur if the drug is administered intravenously or intramuscularly. Anxiety attacks can occur if the drug has been taken in the belief that it is ecstasy and unexpected effects result. In the United States users who have taken large doses of ketamine, believing it to be ecstasy, have been hospitalised. Some users have experienced flashbacks, perhaps occurring several weeks after taking the drug. Tolerance to regular ketamine intake develops rapidly and there is a high probability of developing physical dependence (White & Ryan 1995).

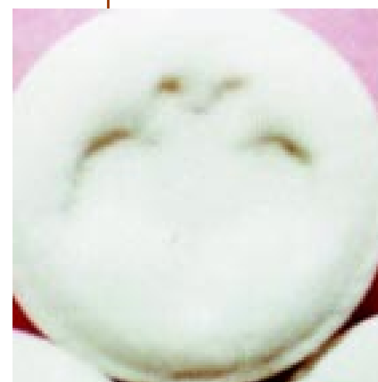


Plate 7.14: Ketamine
Source: ABCI.

Current situation

There is no evidence that ketamine is being manufactured illegally in Australia. It is obtained from the diversion of legitimate supplies (veterinarians and drug companies) or is imported from overseas. Usually a vial of ketamine liquid is obtained from a veterinary source and then converted to the powdered form, which is then sold to the user. Ketamine can be bought over the counter in some Asian countries. The National Drug and Alcohol Research Centre reports that ketamine is available for about A$200 a gram. It is said to be freely available in Sydney and Melbourne. A representative of the Centre informed the Bureau that in a continuing study of 100 ketamine users there appeared to be four primary user groups:

- injecting heroin users;
- members of the gay scene;
- 'ravers' using it in combination with other drugs;
- 'self-exploratory' people who like to take the drug in isolation and 'astro-travel'.

Notes

[1] Interview with Health Insurance Commission, Canberra, 10 September 1998.

[2] Panamax is available by prescription or across the counter. The cost to a patient with a concession card or under the safety net is minimal or nil.

[3] Interview with Health Insurance Commission, Canberra, 10 September 1998.

[4] Health Insurance Commission: questionnaire response 1998. These estimates were as a result of a five-day operation where 12 international flights were checked (hold luggage only) at Melbourne and Sydney Airports. A total of A$10 070 worth of PBS prescription drugs was identified. Use of current data determined a mean average of A$839 worth of PBS items on each flight leaving Australia. This figure does not include pharmaceuticals not covered by the Pharmaceutical Benefits Scheme.

[5] Interview with Queensland Intravenous AIDS Association. The huge increase detected is based on numbers coming into needle and syringe exchanges.

[6] *Stock Medicines ACT 1989*, section 46, Order 1998/1, Injectable Steroids (Anabolic and Other Products).

[7] Interview with Drug Assessment and Aid Panel, South Australia (Mr Noel Twohig, Counsellor).

[8] *The Merck Index* (entry 2912, p. 483) issues a caution in relation to DEET: 'Potential symptoms of toxicity due to acute or chronic overexposure are hypertension, bradycardia … confusion, slurred speech, muscle cramping, insomnia, tremor, chronic jerking, psychosis, seizures and coma.'

[9] Phone interview with Northern Territory Liquor Commission, Darwin.

[10] Phone interviews with Northern Territory police officers, Nhulumbuy and Maningrida.

[11] Dr Alexander Shulgin is a noted chemist who appears to have no qualms about publicising methods of manufacturing illicit drugs. He has written two books, *PiHKAL—Phenethylamines I Have Known and Loved* and *TiHKAL—Tryptamines I Have Known and Loved*. Extracts and complete versions of these books are often found on the Internet.

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