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VIENNA

TERMINOLOGY AND INFORMATION ON DRUGS

Second edition

Prepared by the
Laboratory and Scientific Section
United Nations Office on Drugs and Crime

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This publication has been produced without formal editing.
PREFACE

This publication is intended to give a brief description of the drugs most frequently manufactured/processed and/or abused, as well as definitions of the most relevant scientific terms used in this context. It is by no means exhaustive, nor is it meant to replace any of the more comprehensive textbooks and encyclopedias on drugs of abuse. Rather, it is an attempt on the part of the Laboratory and Scientific Section to provide to the interested reader some basic, generally accepted information on selected drugs of abuse, their abuse patterns, pharmacological effects and medical use, if any. As the dynamic global drug abuse situation is increasingly characterized by the appearance of new drugs and/or new “marketing” concepts for drugs, these new trends will be reported on as they appear and will be incorporated into updated versions of this publication. This second edition has been amended by inclusion of sections on gamma-hydroxybutyric acid (GHB) and tryptamines. Other sections have been revised where necessary.

The format of this publication is kept simple to allow for brevity, and to elicit discussion. Comments and suggestions for improving content and/or format of this publication by readers are welcome.

INFORMATION FOR READERS:

1. Lists of common substances, illicit forms and street names are not exhaustive listings, but selections. Street names are highly ambiguous, and should never be relied upon to characterize a given drug.

2. The sections on chemical constituents of cannabis plant, coca bush and opium poppy are not comprehensive listings, but focus on those substances which are of interest from a drug control point of view.

3. Average doses are highly dependent on the past drug experience of the user, i.e. in extreme cases they may strongly surpass the dose range given.

4. The lists of pharmacological effects are an attempt to summarize the most widely accepted sought-after, short-term and long-term effects of a given drug or group of drugs. However, since drug abuse implies the use of a given drug in excessive dose levels, over an unjustified long period of time, or outside therapeutic indications, there is little sound scientific data, if any, on the pharmacological effects especially the long-term effects of those substances.
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<th>Substance</th>
<th>Page</th>
</tr>
</thead>
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<td>Phencyclidine (PCP)</td>
<td>56</td>
</tr>
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<td>65</td>
</tr>
</tbody>
</table>
CANNABIS

*Cannabis sativa* L.
Chemical constituents of cannabis

CANNABINOIDS (APPROXIMATELY 60)

- Tetrahydrocannabinol
- Cannabinol
- Cannabidiol
- Cannabigerol
- Cannabichromene
- Cannabinoid acids etc.

MAIN PSYCHOACTIVE SUBSTANCE

(-)-trans-delta-9-tetrahydrocannabinol (THC)

\[
\begin{align*}
\text{CH}_3 & \\
\text{OH} & \\
\text{CH}_3 & \\
\text{CH}_3 & \\
\text{H}_3\text{C} & \\
\text{H}_3\text{C} & \\
\text{O} & \\
\text{CH}_3 & 
\end{align*}
\]

TETRAHYDROCANNABINOL CONTENT

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbal cannabis</td>
<td>0.5-5 (25)</td>
</tr>
<tr>
<td>Cannabis resin</td>
<td>2-10 (40)</td>
</tr>
<tr>
<td>Cannabis oil</td>
<td>10-30 (80)</td>
</tr>
</tbody>
</table>

Note: Numbers in brackets indicate upper THC contents in cannabis cultivated indoor. As a result of advances in plant selection and cultivation, such as the use of cloning and indoor hydroponic cultivation (growing plants without soil in water or sand), the level of THC in herbal cannabis may be increased to more than 25%, yielding, in turn, resin which contains up to 40% THC. Also, greenhouse cultivation allows some four harvests per year, thus increasing the profits of clandestine operators.

Cannabis products

CANNABIS PLANT

Definition

“Cannabis plant” means any plant of the genus *Cannabis* (1961 Convention, art. 1, para. 1).
The cannabis (or hemp) plant, *Cannabis sativa* L. (Cannabinaceae) is a single plant species, but exists in many different biological, chemical and/or morphological varieties. It is a cosmopolite, annual plant/bush growing widely throughout the temperate and tropical zones of the world.

**CANNABIS**

**Definition**

“Cannabis” means the flowering or fruiting tops of the cannabis plant\(^1\) (excluding the seeds and leaves when not accompanied by the tops) from which the resin has not been extracted, by whatever name they may be designated. (1961 Convention, art. 1, para. 1). The term “cannabis” is also used to generally describe different products obtained from the cannabis plant.

**Description**

Cannabis is a tobacco-like greenish or brownish material consisting of the dried flowering, fruiting tops and leaves of the cannabis plant.

**Illicit production**

- Air drying of herbal material

**Common illicit forms**

- Loose herbal material
- Blocks of compressed herbal material
- Corn-cob shaped herbal material wrapped in coarse vegetable fibre
- Herbal material tied using twine around a central bamboo cane
- Herbal material in a small roll wrapped in paper

**Certain common street names**

Bongo
Buddha-sticks
Ganja

\(^1\)Cannabis prepared from the unpollinated (seedless) female plant is called “sinsemilla” (Spanish for “without seeds”). Its average THC content ranges from 5 to 14%.
CANNABIS

Grass
Hemp
Joint-sticks
Kif
Marie-Jeanne
Marihuana
Marijuana
Pot
Sinsemilla
Thai-sticks

Abuse pattern

Usually smoked (0.5 to 1 gram of plant material)
CANNABIS RESIN

Definition

“Cannabis resin” means the separated resin, whether crude or purified, obtained from the cannabis plant (1961 Convention, art. 1 para. 1).

Description

The dried brown or black resinous secretion of the flowering tops of the cannabis plant.

Illicit production

- Threshing herbal material against a wall
- Rubbing herbal material between the palms of the hands or against a rubber sheeting
- Crushing dried herbal material to a powder which is later kneaded
- Immersing the plant material in boiling water and removing the resin from the surface
Common illicit forms

- Fine powder
- Fine powder compressed into slabs
- Material placed in cloth bags and compressed
- Material wrapped in cellulose and compressed
- Resin pressed or rolled into slabs, rods, balls or other shapes

Certain common street names

Charas
H
Hash
Khif
Pot
Shit

Abuse pattern

- Smoked (alone, or mixed with tobacco; approximately 1/10 of a gram)
- Orally ingested (food, tea)

CANNABIS OIL

Definition

Concentrate of cannabis obtained by extraction of cannabis or cannabis resin.

Description

Tar-like reddish to brown or green viscous liquid.

Illicit production

- Extracting cannabis plant or resin in a process similar to that used to percolate coffee.

Common illicit forms

- Dark viscous oil
Certain common street names

Honey oil
Red oil

Abuse pattern

- Smoked (1-2 drops put on tobacco or wiped on paper)
- Orally ingested

Pharmacological effects

Sought-after effects

- Sense of well being, euphoria—a “high” feeling
- Pleasurable state of relaxation
- Enhancement of sensory experiences; more vivid sense of sight, smell, taste and hearing

Note: The World Health Organization (WHO) has published a report on “Cannabis: a health perspective and research agenda” (WHO/MSA/PSA/97.4), which concludes that despite significant advances in research over the past years, there is still a need for further research in several important areas including clinical and epidemiological research on human health effects, chemistry and pharmacology and research into the therapeutic uses of cannabinoids.
Short-term effects

- Increased appetite
- Increased pulse rate
- Reddening of the eyes
- While effects last, intellectual (e.g. short-term memory, logical thinking) and physical performance (e.g. driving a car or performing other complex tasks) are impaired
- At a later stage the user becomes quiet, reflective and sleepy
- With larger doses, perceptions of sound, colour, and other sensations may be sharpened or distorted and thinking becomes slow and confused
- In very large doses, the effects of cannabis are similar to those of a hallucinogen (confusion, restlessness, excitement, and hallucinations) which may cause anxiety and panic, or may even precipitate a psychotic episode.

Long-term effects

- Development of moderate tolerance
- Possible psychological dependence
- Loss of drive and of interest in sustained activity
- Cannabis smoke has been shown to contain 50% more tar than smoke from a high-tar cigarette; with regular use, risk of lung cancer, chronic bronchitis, and other lung diseases increases.

Medical use

THC (manufactured synthetically, dronabinol)

- Anti-emetic substance (against nausea and vomiting) in cancer chemotherapy
- To stimulate appetite, especially in AIDS patients to counter HIV related “wasting”

Possible therapeutic uses of cannabis (plant material)

- To ease nausea and vomiting, for instance, from cancer chemotherapy

3See footnote on page 8.
• To stimulate appetite, especially in AIDS patients to counter HIV related “wasting”
• To lower intraocular pressure associated with glaucoma
• To decrease muscle spasms, for instance, associated with generalized epilepsy
COCA

Coca bush (*Erythroxylon*)
Chemical constituents of coca

ALKALOIDS (APPROXIMATELY 20)

Cocaine
Benzoylecgonine
Methylecgonine
Ecgonine
Cinnamoylcocaines etc.

MAIN PSYCHOACTIVE SUBSTANCE

Cocaine

\[
\text{N} \quad \text{O} \quad \text{CH}_3
\]

COCAINENE CONTENT

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coca leaves</td>
</tr>
<tr>
<td>Coca paste</td>
</tr>
<tr>
<td>Crack</td>
</tr>
</tbody>
</table>

Coca products

Coca Bush

Definition

“Coca bush” means the plant of any species of the genus *Erythroxylon* (1961 Convention, art 1. para 1). The coca plant (e.g. *Erythroxylon coca, Erythroxylon novogranatense*) grows in tropical climates (500-2000 metres above sea level) as a bush or tree. Its leaves can be harvested for about 20 years.
COCA LEAF

Definition

“Coca leaf” means the leaf of the coca bush except leaf from which all eegonine, cocaine and any other eegonine alkaloids have been removed. (1961 Convention, art. 1, para. 1).

Description

Green to yellow-greenish elliptical leaves of different Erythroxylon species varying in size and appearance. Characteristic are the two lines parallel to the midrib on the underside of the leaf.
**Pattern of use/abuse**

Chewed  
Brewed as tea

**Average dose**

12 to 15 grams, 3-4 times a day (when chewed)

**COCA PASTE**

**Definition**

Coca paste is an extract of the leaves of the coca bush. It contains mainly coca alkaloids and is also referred to as cocaine base. Purification of coca paste yields cocaine.

**Description**

Coca paste can vary from a brown gummy material to an off-white creamy or beige coloured coarse powder which often contains aggregates and is generally damp. Its odour is characteristic.

**Certain common street names**

Bazuco

**Abuse pattern**

- Smoked/inhaled (alone, or mixed with tobacco)  
- Orally ingested

**Average dose**

50-300 mg

**COCAINNE, CRACK, FREEBASE**

**Definition**

Cocaine is the main psychoactive alkaloid prepared from coca leaves. It can also be synthesized in a laboratory. It is generally encountered as the hydrochloride salt.  

Crack and cocaine freebase are cocaine base obtained from cocaine hydrochloride through specific conversion
processes to make it suitable for smoking. The common process of cocaine “free basing” has today been largely replaced by the specific crack process which offers the following advantages:

- It does not require organic solvents; and
- There is consequently no danger of explosion/fire.

**Description/common illicit forms**

- Cocaine base: white or off-white crystalline powder with a characteristic odour;
- Cocaine hydrochloride: white or off-white crystalline powder
- Crack: hard white rocks or flaky material;
- Free base: powdery product.

**Certain common street names**

Bazooka
Big C
Blanche
Cake
Coco
Coke
Crack
Flake
Koks
Lady
Mister Coffee
Snow
Star dust
Abuse pattern

Cocaine
- Sniffed/snorted
- Injected

Crack/Free base
- Smoked

Average dose
- Cocaine hydrochloride: 10-35 mg per line, when sniffed (typical users would repeat the dose in both nostrils); 10-20 mg when injected
- Crack/free base: 50-200 mg

Pharmacological effects

Sought-after effects
- Feelings of physical and mental well being, exhilaration, euphoria
- Increased alertness and energy
- Postponement of hunger and fatigue

Short-term effects
- Loss of appetite
- Faster breathing, increased heart rate and blood pressure, increased body temperature, sweating
- Dilation of pupils
- Bizarre, erratic, sometimes violent behaviour
- With larger doses: hallucinations, talkativeness, sense of power and superiority, restlessness, hyperexcitability, irritability which can lead to panic and paranoid psychosis (disappears if discontinued)
- Excessive doses may lead to convulsions, seizures, stroke, cerebral hemorrhage or heart failure

Long-term effects
- Destruction of tissues in nose if sniffed
- Respiratory problems if smoked
- Infectious diseases, abscesses, if injected
- Malnutrition, weight loss
• Disorientation, apathy, confused exhaustion due to lack of sleep
• Development of tolerance
• Strong psychological dependence
• With continued use a state similar to paranoid psychosis may develop
• After stopping, there usually follows a long period of sleep and then depression; during the crash, death from respiratory failure may occur

Medical use

As a local anaesthetic, in particular in surgery of the ear, nose and throat.

Illicit production of cocaine*

*The illicit production process may vary from one laboratory to another, there is no one method for obtaining coca paste, cocaine base, or cocaine hydrochloride.
OPIUM

*Opium poppy (Papaver somniferum L.)*
Chemical constituents of opium

ALKALOIDS (APPROXIMATELY 40)
Morphine
Codeine
Thebaine
Papaverine
Noscapine (narcotine), etc.

MAIN PSYCHOACTIVE SUBSTANCES

<table>
<thead>
<tr>
<th>ALKALOID CONTENT Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine 4-21</td>
</tr>
<tr>
<td>Codeine 0.7-3</td>
</tr>
<tr>
<td>Thebaine 0.2-1</td>
</tr>
<tr>
<td>Papaverine 0.5-1.3</td>
</tr>
<tr>
<td>Noscapine 2-8</td>
</tr>
</tbody>
</table>

Definitions

“Opium” means the coagulated juice of the opium poppy.
“Opium poppy” means the plant of the species *Papaver somniferum* L. (1961 Convention, art. 1, para. 1).

*Papaver somniferum* L. is an annual plant growing in many countries around the world with moderate climate. It has white to red flowers and round to elongated capsules with dark violet seeds.
Opium products

RAW OPIUM

Description

Raw opium is a non-homogeneous material containing poppy capsule fragments. It is sticky, tar-like and dark brown when fresh, and becomes brittle and hard as it ages. Raw opium is produced by air drying of opium.

Common illicit forms

- Sticky or hard, dark brown material in any form or shape
- Blocks wrapped in vegetable leaves followed by plastic wrapping

Certain common street names

Ah-pen-yen
Hop
Noir(e)
O

Abuse pattern

- Smoked
- Chewed
- Eaten
**Average daily dose**

5-10 grams (when eaten, chewed)

**PREPARED OPIUM**

**Description**

Prepared opium is a sticky dark product obtained as a result of various treatments of raw opium, e.g. water extraction, in order to make it suitable for smoking.

**Common illicit forms**

- Sticky or hard, dark brown material in any form or shape
- Sticks in the form of cigarettes

**Certain common street names**

Chandu
Sukhteh

**Abuse pattern**

Smoked

**OPIUM DROSS**

**Description**

Opium dross is the product that remains in the pipe after opium has been smoked; it still contains morphine.

**Common illicit forms**

- Cindered pellet
- Scrapings from opium pipe

**MEDICINAL OPIUM**

**Definition**

“Medicinal Opium” means opium which has undergone the processes necessary to adapt it for medicinal use (1961 Convention, art. 1. para.1).
**Description**

Light yellowish-brown powder consisting of yellowish or reddish-brown particles.

**Production**

Pulverizing of raw opium, drying at 60°C, adjusting morphine content to 10%

**Common forms**

Fine brown powder
Pastilles
Syrup

**CRUDE MORPHINE**

**Description**

Morphine is an alkaloid extracted from opium or poppy straw; the colour ranges from off-white to dark brown.

**Common illicit forms**

- Finely ground powder
- Compressed blocks, in many cases with “999” trade mark
- Tablets

**Abuse pattern**

Injected
**Average dose**

10-20 mg

**POPPY STRAW**

**Description**

“Poppy straw” means all parts (except the seeds) of the opium poppy, after mowing (1961 Convention, art. 1, para. 1).
The dried upper part of the stem and the capsules of the poppy plant.

**CONCENTRATE OF POPPY STRAW**

**Description**

The material arising when poppy straw has entered into a process for the concentration of its alkaloids, when such material is made available in trade (1961 Convention, Schedule I)

**HEROIN**

Heroin is a semi-synthetic opiate synthesized from morphine.

**Description**

Four types of South-East Asian heroin can be distinguished:

**Heroin No. 1**

Crude morphine is sometimes called Heroin No. 1.

**Heroin No. 2**

Heroin base prior to its conversion to the hydrochloric salt: white to off-white, pale grey or dark brown, solid or powdered.
**Heroin No. 3**

Smokable form of heroin, not as highly refined as Heroin No. 4: hard granular material from light brown to dark grey, sometimes red or pink coloured, containing 25-45% of heroin hydrochloride and other substances such as caffeine, etc.

**Heroin No. 4**

Injectable form of heroin: white powder with little odour and without adulterants, purity up to 98% heroin hydrochloride.

Other types of heroin include:

**Brown heroin**

Crude heroin base: medium-brown, hard chunks with vinegar-like odour produced in a process without purification step (purity level, when uncut: 40-60%).

**Black tar heroin**

Crudely processed heroin, mainly of Mexican origin: dark brown to near black material, sticky like roofing tar or hard like coal, with a strong vinegar-like odour (purity level: 30-60% heroin hydrochloride); it appears to “melt” in the presence of heat or humidity.

**Certain common street names**

Boy  
H  
Hairy  
Harry  
Horse  
Joy powder  
Junk  
Smack  
White lady  
White stuff  

**Abuse pattern**

- Injected  
- Inhaled ("chasing the dragon")  
- Sniffed/snorted  
- Smoked
**Average dose**

5-15 mg, up to 250 mg a day

**CHEMICAL STRUCTURE OF HEROIN**

![Chemical structure of heroin]

**Pharmacological effects (opium, morphine, heroin⁴)**

**Sought-after effects**

- Sense of well being by reducing tension, anxiety and depression; euphoria, in large doses
- Warmth, contentment, relaxed detachment from emotional as well as physical distress
- Relief from pain (analgesia)

**Short-term effects**

- Sometimes nausea and vomiting
- Constricted pupils
- Drowsiness, inability to concentrate, apathy, lessened physical activity
- Acute overdose can result in death due to respiratory depression

**Long-term effects**

- Rapid development of tolerance and physical and psychological dependence
- Constipation

⁴Heroin is up to 10 times more potent than morphine.
• Menstrual irregularity
• Infectious diseases, abscesses, if injected
• Damage of structures in nose, if sniffed/snorted
• Respiratory problems, if smoked
• Decreased appetite leading to malnutrition, weight loss
• Chronic sedation, apathy leading to self-neglect
• Abrupt withdrawal results in moderate to severe withdrawal syndrome which is generally comparable to a bout of influenza (with cramps, diarrhoea, running nose, tremors, panic, chills and sweating, etc.)

Medical use

Opium and opiates are still widely used in medicine:
• As analgesic (pain killer, e.g. morphine)
• As cough suppressant (e.g. codeine)
• Against diarrhoea
• In some countries, heroin is under investigation for the maintenance therapy for heroin addicts

Illicit production of morphine and heroin

```
<table>
<thead>
<tr>
<th>Poppy straw</th>
<th>Opium/raw opium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crude morphine</td>
</tr>
<tr>
<td></td>
<td>Codeine</td>
</tr>
<tr>
<td></td>
<td>Morphine</td>
</tr>
<tr>
<td></td>
<td>Heroin</td>
</tr>
<tr>
<td></td>
<td>Heroin hydrochloride</td>
</tr>
</tbody>
</table>
```
OPIOIDS

Opioid is a generic term applied to opiates and their synthetic analogues, with actions similar to those of morphine, in particular the capacity to relieve pain. They include substances such as fentanyls, dextropropoxyphene, methadone, and pethidine (meperidine).

FENTANYLS

Fentanyls are short-acting highly potent narcotic analgesics (pain killers). Several substances of the group have been synthesized specifically for sale on the illicit market and to circumvent regulations on controlled substances (i.e. designer fentanyls).

<table>
<thead>
<tr>
<th>Common pharmaceutical and designer fentanyls</th>
<th>Potency compared to morphine*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fentanyl (Sublimaze)</td>
<td>80-200</td>
</tr>
<tr>
<td>alpha-methylfentanyl</td>
<td>200-1000</td>
</tr>
<tr>
<td>Carfentanil</td>
<td>3000</td>
</tr>
<tr>
<td>Lofentanil</td>
<td>6000</td>
</tr>
<tr>
<td>3-methylfentanyl</td>
<td>7000</td>
</tr>
</tbody>
</table>

*Heroin: 10

Certain common street names

China white
Synthetic heroin

Common forms

- Liquid pharmaceutical preparations for injection
- White/off-white to brown powders

Abuse pattern

- Injected intravenously
- Smoked
- Snorted

Average dose

1-50 µg (microgram (!!!), i.e. a thousandth of a milligram)
Pharmacological effects

Sought-after, short-term and long-term effects of the fentanyl are indistinguishable from those of heroin, but they are up to hundreds of times more potent.

Medical use

Fentanyl are mainly used:
- As pain killers
- As anaesthetic during surgery

CHEMICAL STRUCTURES

Fentanyl

\[
\text{\begin{align*}
\text{O} & \text{N} \\
\text{CH}_3 & \text{N} \\
\text{CH}_3 & \text{O} \\
\text{CH}_3 & \text{N}
\end{align*}}
\]

Alpha-methylfentanyl

\[
\text{\begin{align*}
\text{O} & \text{N} \\
\text{CH}_3 & \text{N} \\
\text{CH}_3 & \text{O} \\
\text{CH}_3 & \text{N}
\end{align*}}
\]

3-Methylfentanyl

\[
\text{\begin{align*}
\text{O} & \text{N} \\
\text{CH}_3 & \text{N} \\
\text{CH}_3 & \text{O} \\
\text{CH}_3 & \text{N}
\end{align*}}
\]
CNS DEPRESSANTS
CNS DEPRESSANTS

The group of central nervous system (CNS) depressants includes benzodiazepines, barbiturates, methaqualone, meprobamate, and others. Depressant effects may be dangerously augmented if more than one depressant drug is taken at a time, or if depressant drugs are taken together with alcohol or opiate-type drugs.

BENZODIAZEPINES

Benzodiazepines are a group of CNS depressants which are closely related in their chemical structures. They are among the most frequently prescribed medicines worldwide (for daytime anxiety relief and to promote sleep). Individual benzodiazepines differ in speed of onset, duration of action and potency. About 2,000 benzodiazepines have been synthesized by the pharmaceutical industry. Benzodiazepines encountered on the illicit market are usually diverted from legitimate trade rather than synthesized in clandestine laboratories.
CNS DEPRESSANTS

Common pharmaceutical substances

<table>
<thead>
<tr>
<th>Substance</th>
<th>Duration of action*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprazolam (Xanax)</td>
<td>Short</td>
</tr>
<tr>
<td>Diazepam (Valium)</td>
<td>Long</td>
</tr>
<tr>
<td>Chlordiazepoxide (Librium)</td>
<td>Long</td>
</tr>
<tr>
<td>Flunitrazepam (Rohypnol)</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Temazepam (Restoril)</td>
<td>Short</td>
</tr>
</tbody>
</table>

*Short: half-life < 10 hours
Intermediate: 10-24 hours
Long: > 24 hours

Certain common street names

Nerve pills
Canasson rouge
Blue bomb

Common forms

- Tablets and capsules
- Liquids (gel) in capsules, for injection

Abuse pattern

- Orally ingested
- Injected

Average dose

0.25-30 (100) mg

Pharmacological effects

Sought-after effects

- Relief of tension, mental stress and anxiety
- Positive feelings of calmness, relaxation and well being in anxious individuals
- Improved coping with situational pressures or psychological problems
- Enhancement of the “high” induced by other drugs, or relief of side effects associated with over-stimulation or withdrawal of other drugs (i.e. as part of a pattern of multiple drug use)
**Short-term effects**

- Diminished emotional responses to external stimuli, e.g. pain
- Reduced inhibition, mental activity and alertness; drowsiness, lethargy and impairment of clarity of thought and impaired judgement may occur, but not as much as with barbiturates
- Initial increase of risk of accidental injury due to depressant effects, e.g. driving a car or performing other complex tasks
- With larger doses, possible impairment of muscle coordination, dizziness, low blood pressure, and/or fainting
- However, unlike barbiturates, large doses of benzodiazepines are rarely fatal unless combined with other drugs or alcohol

**Long-term effects**

- Headache, irritability, confusion, memory impairment, depression, insomnia and tremor as a result of chronic high dose use of benzodiazepines
- Risks associated with injecting drugs
- Development of tolerance with frequently repeated doses: after approximately two weeks, benzodiazepines may become ineffective as sleeping pills, after a few months, they become ineffective against anxiety
- Development of psychological and physical dependence
- Abrupt cessation after prolonged use leads to withdrawal syndrome which can include insomnia, anxiety, perceptual hypersensitivity, tremor, irritability, nausea and vomiting, and even mental confusion and life-threatening convulsions (after unusually high doses)

**Medical use**

Various benzodiazepines are used in medicine:

- As anxiolytic (treatment of anxiety and stress)
- As sedative-hypnotic
- In the premedication and induction of general anaesthesia
- As anti-epileptic and muscle relaxant
CHEMICAL STRUCTURE OF DIAZEPAM

BARBITURATES

Barbiturates are a group of CNS depressants which are closely related in their chemical structure. Individual barbiturates differ in speed of onset, duration of action and potency. Today they have been largely replaced on both the licit and illicit market by benzodiazepines (see above). Similar to benzodiazepines, barbiturates encountered on the illicit market are usually diverted from legitimate trade rather than synthesized in clandestine laboratories.

<table>
<thead>
<tr>
<th>Common pharmaceutical substances</th>
<th>Duration of action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amobarbital (Amytal)</td>
<td>3-6 hours</td>
</tr>
<tr>
<td>Pentobarbital (Nembutal)</td>
<td>3 hours</td>
</tr>
<tr>
<td>Phenobarbital (Luminal)</td>
<td>6-12 hours</td>
</tr>
<tr>
<td>Secobarbital (Seconal)</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

Certain common street names

Barbiturates in general

Barbitos  
Barbs  
Candy  
Downers  
Goofballs  
Peanuts  
Sleepers  
Sleeping pills

Amobarbital sodium

Double trouble  
Rainbows  
Reds and blues
Pentobarbital sodium
Nimbies
Yellow jackets

Secobarbital sodium
Pinks
Red birds
Red devils
Reds
Seggy

Common forms of barbiturates
- White powders
- Capsules or tablets
- Liquid pharmaceutical preparations
- Suppositories

Abuse pattern
- Orally ingested
- Injected

Average dose
75-200 mg

Pharmacological effects

Sought-after effects
- Relief of tension, mental stress and anxiety
- Positive feelings of pleasure, calmness, relaxation and sociability

Short-term effects
- Loss of motor coordination, clumsiness, decreased self-control
- Increased risk of accidental injury due to depressant effects and poor bodily coordination, e.g. by driving a car or performing other complex tasks
- Slurred speech, poor control of speech, impaired judgement
• Extreme, unpredictable emotional reactions and mental confusion, disorientation
• Respiratory depression, suppression of cough reflex
• Dilated pupils, weak and rapid pulse
• In higher doses there can be “drunken” behaviour, drowsiness, stupor, unconsciousness, coma
• Acute overdose can be fatal due to respiratory failure

**Long-term effects**

• Development of tolerance, strong physical and psychological dependence
• Severe depression and amnesia after chronic use
• Bronchitis, pneumonia (due to depressed cough reflex)
• Infectious diseases and skin abscesses, if injected
• Abrupt cessation of use leads to withdrawal syndrome which can include irritability, nervousness, progressive restlessness, temporary sleep disturbances, faintness and nausea, anxiety, tremors, possible delirium and convulsions

**Medical use**

While barbiturates were formerly widely used as hypnotics (to induce sleep) and sedatives (for daytime sedation), their medical use is today limited to the use:

• As anti-epileptics (long-acting substances)
• As adjuncts to anaesthesia (ultrashort-acting substances)
METHAQUALONE

Methaqualone is a non-barbiturate synthetic central nervous system (CNS) depressant.

Certain common street names (former trade names)
Mandrax
Parest
Quaalude

Common forms (manufactured illicitly, or diverted from licit trade)
- Brown, grey or black tacky powder
- Tablets or capsules

Abuse pattern
Orally ingested

Average dose
75-300 mg (up to 3 grams per day)
Pharmacological effects

Sought-after effects

- Similar to other CNS depressants:
  - Relief of tension, mental stress and anxiety
  - Relief of side effects associated with over-stimulation or withdrawal of other drugs (i.e. as part of a pattern of multiple drug use)

Short-term and long-term effects

Similar to those of other CNS depressants and include reduction of mental activity, cardiac and respiratory depression as well as the development of tolerance, psychological and physical dependence

Medical use

As a sedative-hypnotic. Because of problems of abuse, methaqualone has been withdrawn from the pharmaceutical market in a number of countries.

\[
\text{gamma-HYDROXYBUTYRIC ACID (GHB)}
\]

\(\text{gamma-}\)Hydroxybutyric acid is a CNS depressant, producing sedation and anesthesia. Its effects are different from those produced by barbiturates and benzodiazepines.
Certain common street names

Cloud-9
GHB
Liquid Ecstasy
Liquid E
Liquid X
Scoop

Common illicit forms

Clear liquid
White powder (as a salt)
Tablets or capsules

Abuse pattern

Orally ingested

Average dose

Highly variable: 1-30 g of powder (depending on the purity, this can be several teaspoons or tablespoons) mixed in a beverage

Pharmacological effects

Sought-after effects

• Similar to other CNS depressants:
  Positive feelings of relaxation, reduced inhibition, euphoria and mild hallucinations
• Sedation in cases of sexual assault (“date rape”)
• GHB is also abused by body builders for its alleged role to stimulate muscle growth

Short-term and long-term effects

Similar to those of other CNS depressants, including the development of psychological and physical dependence, and a withdrawal syndrome after discontinuation of prolonged use of large doses
Medical use

- GHB has been used as an adjunct in anesthesia and as an aid to alcohol/opiate withdrawal
- It is currently under investigation for the treatment of narcolepsy

CHEMICAL STRUCTURE OF GHB

\[
\text{HO-} \quad \text{O} \quad \text{OH}
\]
AMPHEMINE-TYPE STIMULANTS

Including

“Ecstasy” group substances
AMPHETAMINE-TYPE STIMULANTS
including
“Ecstasy” group substances

Amphetamine-type stimulants and “ecstasy” group substances are closely related in their chemical structure. Another structurally related group of substances is the hallucinogenic amphetamines (see below). Different substances of these groups differ in their capacity to modify mood with or without producing hallucinations, as well as in the speed of onset, duration of action and potency.

SYNTHETIC CNS STIMULANTS

The predominant effect of synthetic stimulants (at common dose levels) is CNS stimulation, usually without producing hallucinations. While today amphetamine, methamphetamine and methcathinone are generally manufactured clandestinely, other members of the group, such as pemoline, are usually diverted from legitimate trade.

Common substances (in brackets: trade names)

Amphetamine (Benzedrine)
Methamphetamine (Pervitin, Philopon)
Methcathinone
Pemoline (Cylert)
Fenetylline (Captagon)
Methylphenidate (Ritalin), etc.

Common illicit forms

- White to light brown powder
- Colourless crystals
- Tablets and capsules in different shapes and colours
- Solutions for injection

Certain common street names

Amphetamine
Amp
Bennies
Browns
Dexies
Footballs
Greenies
Hearts
Oranges
Pep pills
Rippers
Wake ups

*Methamphetamine*
Black beauties
Crack meth
Crystal meth
Ice
Shabu
Yaba

*Note:* “Speed” is a common street name for both methamphetamine (in the United States/North America) and amphetamine (in Europe).

*Methcathinone*
Cat
Ephedrone
Jeff
Abuse pattern

- Injected
- Orally ingested
- Sniffed/snorted
- Smoked

Average dose

Amphetamine, methamphetamine: 5-15 mg, up to 200 mg per day in frequent users

Pharmacological effects

Sought-after effects

Similar to cocaine:

- Feelings of physical and mental well being, exhilaration, euphoria
- Increased alertness and energy
- Postponement of hunger and fatigue
- Improved performance at manual or intellectual tasks

Short-term effects

- Loss of appetite
- Faster breathing, increased heart rate and blood pressure, increased body temperature, sweating
- Dilation of pupils
- Bizarre, erratic, sometimes violent behaviour
- With larger doses: hallucinations, talkativeness, sense of power and superiority, restlessness, hyperexcitability, irritability which can lead to panic and paranoid psychosis (disappears if discontinued)
- Excessive doses may lead to convulsions, seizures and death from respiratory failure, stroke, cerebral haemorrhage or heart failure

Long-term effects

- Destruction of tissues in nose if sniffed
- Respiratory problems if smoked
- Infectious diseases, abscesses, if injected
- Malnutrition, weight loss
• Disorientation, apathy, confused exhaustion due to lack of sleep
• Development of tolerance
• Strong psychological dependence
• With continued use, a state similar to paranoid psychosis may develop
• After stopping, there usually follows a long period of sleep and then depression

**Medical use**

Formerly widely used in medicine, the therapeutic use of certain amphetamine-type stimulants is today limited to:

• The treatment of attention deficit disorder (ADD)
• The treatment of narcolepsy (sudden uncontrolled fits of sleep)
• The use as appetite suppressant ("slimming pills")
• The treatment of nasal congestion

**CHEMICAL STRUCTURES**

Amphetamine

\[
\text{NH}_2 \quad \text{CH}_3
\]

Methamphetamine

\[
\text{H} \quad \text{CH}_3
\]

Methcathinone

\[
\text{O} \quad \text{CH}_3
\]

**“ECSTASY” GROUP**

The “ecstasy” group comprises synthetic substances which are related to amphetamine in their chemical structure. Their predominant pharmacological effect is, however, somewhat different to amphetamine; they are also referred to as entactogens.
Common substances

Tenamfetamine (MDA)
3,4-methylenedioxymethamphetamine (MDMA)
N-ethyl-3,4-tenamfetamine (MDE)
4-methylthioamphetamine (4-MTA)

Common illicit forms

- White to off-white powders
- Tablets and capsules

Certain common street names

3,4-methylenedioxymethamphetamine
Adam
Ecstasy
Essence
MDM
MDMA
XTC

N-ethyl-3,4-tenamfetamine
Eve
MDE
MDEA

Abuse pattern

- Orally ingested
- Sometimes snorted, rarely injected
**Average dose**

75-100 mg

---

**Pharmacological effects**

**Sought-after effects**

-Feelings of emotional closeness to others (empathy), facilitation of communication and increased sociability (use at so-called “rave” parties)
-Increased physical and emotional energy

**Short-term effects**

- Fatigue and perhaps depression after the drug is stopped
- Restlessness, anxiety and pronounced visual and auditory hallucinations at larger doses
- Nausea and vomiting
- A rise in blood pressure and heart rate, death from heatstroke

**Long-term effects**

- Prolonged regular use can lead to the same long-term effects as with synthetic stimulants, including a potential for neurotoxicity and brain damage as well as liver damage

---

**Medical use**

“Ecstasy”-group substances have no currently accepted medical use.

**CHEMICAL STRUCTURES**

Tenamfetamine (MDA) 3,4-Methylenedioxy-methamphetamine (MDMA)

![Chemical structures](image)
HALUCINOGENS
Hallucinogens under international control include LSD, phencyclidine (PCP), hallucinogenic amphetamines, mescaline (the active principle of the peyote cactus), psilocybin (naturally occurring in certain mushrooms) and some tryptamines. Hallucinogens produce altered states of consciousness with different degrees of auditory and/or visual perceptions that are not shared by observers; they are also referred to as “psychedelics”, i.e. they act as catalysts to further feelings and thoughts (not merely hallucinogenic).

**D-LYSERGIC ACID DIETHYLAMIDE (LSD)**

*Description*

LSD is a semi-synthetic drug derived from lysergic acid, an alkaloid found in *Claviceps purpurea*, a fungus which grows on rye and other grains. Also known as Lysergide or LSD-25, it is a colourless, tasteless, odourless, crystalline substance which is soluble in water or alcohol.

*Common illicit forms*

- Impregnated on paper (blotter papers)
- Mini tablets (“microdots”) and capsules
- Gelatine sheets

*Certain common street names*

Hippie
Acid

*Abuse pattern*

Orally ingested
**Average dose**

25-200 µg (micrograms (!!!), i.e. a thousandth of a milligram)

**Pharmacological effects**

The effects of LSD are extremely variable and strongly depend on the mental state of the user and the environment when taking the drug: the same dose in the same user may produce good and bad “trips”, depending on circumstances of use.

**Sought-after effects**

- Alterations in thought, mood and sensory perception, “mind expansion”, as a key to quasi-religious transcendental experiences
- Similar to “ecstasy”-type substances: feelings of empathy, facilitation of communication and increased sociability (use at so-called “rave” parties)

**Short-term effects**

- Distorted perception of depth and time, size and shape of objects; movements of stationary objects; intensified colours, sound and touch; generally the user knows these effects to be unreal; true hallucinations are relatively rare
- Increased risk of injuries due to perceptual and emotional effects, especially when driving, or performing other complex tasks such as operating machinery
- Unpleasant reactions may include anxiety, depression, dizziness, disorientation and paranoia
- Physical effects are very slight compared with psychological or emotional effects; they may include dilated pupils, lowered body temperature, nausea and vomiting, profuse sweating, and rapid heart rate; occasionally convulsions occur

**Long-term effects**

- Physical dangers attributable to long-term LSD use are not known
• Rapid development of tolerance which disappears rapidly after cessation of use; no physical dependence
• “Flashbacks” (i.e. short-lived, vivid re-experiences of part of a previous trip) can occur days or even months after taking the last dose, leading to disorientation, anxiety and distress
• Occasionally prolonged anxiety and depression follow use of LSD

CHEMICAL STRUCTURE

Phencyclidine is a synthetic drug with anaesthetic and hallucinogenic properties.

**Common illicit forms**

• White to grey or brown crystalline powder or gummy mass
• Tablets or capsules
• Liquid

**Certain common street names**

Angel dust
DOA (dead on arrival)
Hoy
Killer weed
Magic dust
Peace pills
Rocket fuel
Space basing (mixture of PCP with crack)
Abuse pattern

- Smoked, often applied to leafy material
- Sniffed/snorted
- Orally ingested

Average dose

1-100 mg

Pharmacological effects

PCP’s effects are as varied as its appearance.

Sought-after effects

- Alterations in thought, mood and sensory perception
- Out-of-the-body experiences, changes in body awareness, feelings of detachment and distance

Short-term effects

- Loss of comprehension of the immediate environment, often accompanied by a sense of strength and invulnerability
- Hallucinations, image distortion, severe mood disorders, mental confusion, and amnesia may occur
- In some users, PCP may cause acute anxiety, paranoia and violent hostility, or schizophrenia-like psychoses
- Generalized numbness of the extremities, slurred speech and loss of coordination, increasing the risk of injuries and fatal accidents, especially when driving or performing other complex tasks such as operating machinery
- Physical effects may also include shallow respiration, an increase in the rate of breathing, blood pressure and pulse rate, flushing and profuse sweating, blank stare, rapid and involuntary eye movements, and watering of eyes
- Large amount can cause convulsions, coma, and sometimes death

Long-term effects

- Development of tolerance and strong psychological dependence
“Flashbacks” (i.e. short-lived, vivid re-experiences of part of a previous trip) can occur days or even months after taking the last dose, leading to disorientation, anxiety and distress.

Medical use

As a general anaesthetic to immobilize large animals.

CHEMICAL STRUCTURE

HALLUCINOGENIC AMPHETAMINES

Hallucinogenic amphetamines are synthetic substances which are related to amphetamine and mescaline (see below) in their chemical structure. Today, they are not frequently encountered on the illicit market.

Common substances

DOB (Brolamfetamine)
STP/DOM (2,5-dimethoxy-4-methylamphetamine)
TMA (3,4,5-trimethoxyamphetamine)

Common illicit forms

- White to off-white powders
- Tablets and capsules
- Impregnated on paper (DOB)

Certain common street names

STP: Serenity, Tranquillity, Peace

Abuse pattern

- Orally ingested
- Sometimes snorted, rarely injected
**Average dose**

0.8 mg (DOB) to 200 mg (TMA); average dose: 15-25 mg

**Pharmacological effects**

Pharmacological effects of hallucinogenic amphetamines are closely related to both amphetamine, and LSD and other hallucinogenic substances.

**Medical use**

Hallucinogenic amphetamines have no approved medical use.

**CHEMICAL STRUCTURE OF BRO-LAMFETAMINE (DOB)**

![Chemical Structure of Bro-Lamfetamine (DOB)](image)

**PEYOTE CACTUS/ MESCALINE**

Mescaline is a hallucinogenic substance of the peyote cactus (*Lophophora williamsii*). It can also be synthesized.

**Common illicit forms**

- Dried, sliced and chopped in the form of a button (mescal button)
- Ground button of the cactus, in capsules
- Mescaline powder, in capsules or tablets

**Certain common street names**

*Mescaline*

Big chief
Mesc
Mescal button

Peyote
Peyotl

Abuse pattern

- Orally ingested (chewed, or soaked in water to produce an intoxicating liquid)
- Inhaled
- Smoked

Average dose

300-500 mg mescaline (5 grams cactus)

Pharmacological effects

Sought-after effects

- Alterations in thought, mood and sensory perception
- Visionary divination, to gain access to the “spirit” world
**Short-term and long-term effects**

Short-term and long-term effects of peyote cactus/mescaline are similar to a mild LSD experience (see above). Unlike LSD, mescaline’s effects include euphoria and hilarity and prominent signs of physiological arousal, such as increased heart rate and blood pressure, dilated pupils, nausea, vomiting and stomach pains.

While at low doses euphoria and detachment from surrounding predominate, at larger doses visual distortions progress to vivid “pseudo-hallucinations” of colour and movement.

**CHEMICAL STRUCTURE OF MESCALINE**

![Chemical Structure of Mescaline](image)

**PSILOCYBE MUSHROOMS/PSILOCYBIN**

Psilocybin is a hallucinogenic substance in the *Psilocybe mexicana* mushroom and some other *Psilocybe* species.
Common illicit forms

- Intact dried brown mushrooms
- Crude mushroom preparation
- Powdered material in capsules

Certain common street names

Sacred mushrooms
Teonanacatl
Divine flesh

Abuse pattern

- Orally ingested (swallowed raw, cooked, or brewed into a beverage)

Average dose

2 grams mushrooms (20-40 mushrooms)

Pharmacological effects

Sought-after effects

- Alterations in thought, mood and sensory perception
- Visionary divination, to gain access to the “spirit” world

Short-term and long-term effects

Short-term and long-term effects of psilocybin-containing mushrooms are similar to a mild LSD experience (see above).
Fatal poisoning may occur due to mistaken identity of the mushrooms.

CHEMICAL STRUCTURE OF PSILOCYBIN

\[
\begin{align*}
\text{HO} & \quad \text{N} & \quad \text{CH}_3 - \text{CH}_3 \\
\text{HO} & \quad \text{O} & \quad \text{P} & \quad \text{O} \\
\text{HO} & \quad \text{O} & \quad \text{N} & \quad \text{CH}_3
\end{align*}
\]
TRYPATMINES

Tryptamines are a group of hallucinogenic substances, which are chemically related to LSD and psilocybin. Several tryptamines occur naturally in a variety of plants, fungi or animals, and have a long history of use as hallucinogenic sniffs or drinks, for example, in the Amazon forest and the Caribbean. They can also be manufactured synthetically.

Common substances

Diethyltryptamine (DET)
Dimethyltryptamine (DMT)

Other tryptamines that are not currently under international control, which have been encountered include:

- \(\text{Alpha}\)-methyltryptamine (AMT)
- \(N,N\)-Dipropyltryptamine (DPT)
- 5-Hydroxytryptamine (5-HT, bufotenine)
- 5-Methoxy-\(N,N\)-diisopropyltryptamine (5-MeO-DIPT)
- 5-Methoxy-\(N,N\)-dimethyltryptamine (5-MeO-DMT)

Common illicit forms

- Dark brown solid material (crude plant preparation)
- Powder
- Oily liquid
- Tablets, capsules

Certain common street names

Businessman’s LSD
Foxy

Abuse pattern

- Smoked
- Sniffed
- Injected
- Except if in tablet or capsule form, tryptamines are rarely orally ingested

Average dose

5-60 mg (depending on mode of administration and specific tryptamine)
Pharmacological effects

Pharmacological effects of tryptamines are similar to LSD, but the impairment of coordination is frequently more pronounced. Effects are dose dependent. Their duration can be extremely short (a few minutes), especially when smoked.

Medical use

Tryptamines have no currently accepted medical use.

CHEMICAL STRUCTURE OF DMT
GLOSSARY OF TERMS

Most definitions are based on those given in the World Health Organization’s (WHO) Lexicon of Alcohol and Drug Terms (Geneva, 1994). They have been modified/adapted to the purpose of this publication. Cross-referenced terms are given in italics.

ABUSE

Because WHO found the term “abuse” ambiguous, it abandoned its use; instead the WHO glossary speaks of “harmful use” and “hazardous use”, which is defined as follows:

Harmful use: A pattern of psychoactive substance use that is causing damage to health, physical or mental. Harmful use commonly, but not invariably, has adverse social consequences.

Hazardous use: A pattern of substance use that increases the risk of harmful consequences for the user. In contrast to harmful use, hazardous use refers to patterns of use that are of public health significance despite the absence of any current disorder in the individual user.

In the context of international drug control, drug abuse constitutes the use of any substance under international control outside therapeutic indications, in excessive dose levels, or over an unjustified period of time.

ABUSE LIABILITY

The propensity of a particular psychoactive substance to be susceptible to abuse, defined in terms of the relative probability that use in the substance will result in social, psychological and physical problems for an individual or for society.

ADDICTION

The terms “addiction” and “habituation” were abandoned by WHO in 1964 in favour of “drug dependence”. However, since those terms are still widely used, below is a definition of “addiction”.

“Addiction” refers to the repeated use of a psychoactive substance or substances, to the extent that the user is periodically or chronically intoxicated, shows a compulsion to take the preferred substance (or substances), has great difficulty in voluntarily ceasing or modifying substance use, and exhibits determination to obtain psychoactive substances by almost any means.

ADVERSE DRUG REACTION

In the general medical and pharmacological fields, “adverse drug reaction” denotes a toxic physical or (less common) psychological reaction to a therapeutic agent. In
the context of drug abuse, the term includes unpleasant psychological and physical reactions to drug taking.

**AMPHETAMINE-TYPE STIMULANTS (ATS)**

A group of substances, mostly synthetic, with closely related chemical structure which have, to varying degrees, a stimulating effect on the central nervous system (CNS). Based on the predominant pharmacological effect (at common dose levels), the group comprises (a) CNS stimulants such as amphetamine, methamphetamine and methylphenidate; (b) anorectics (appetite suppressants) such as phentermine, amfepramone (diethylpropion); and (c) entactogens or “ecstasy”-type substances such as MDMA (“Ecstasy”) and MDA.

**ANALGESIC**

A substance that reduces pain and may or may not have psychoactive properties.

**ANTIDEPRESSANT**

Any of a group of psychoactive agents prescribed for the treatment of depressive disorders. There are three main classes: (a) tricyclic antidepressants, (b) serotonin receptor agonists and uptake blockers, and (c) monoamine oxidase inhibitors. None of the common antidepressants is under international control.

**CENTRAL NERVOUS SYSTEM (CNS)**

The system comprising the brain and spinal cord, together with nerve endings, which is responsible for changing mood and behaviour that is usually under control of the will.

**(DRUG) DEPENDENCE**

The term was introduced in 1964 by a WHO Expert Committee to replace “addiction” and “habituation”.

“Drug dependence” comprises a cluster of physiological, behavioural and cognitive phenomena of variable intensity, in which the use of a psychoactive drug (or drugs) takes on a high priority. It implies a need for repeated doses of the drug to feel good or avoid feeling bad.

**PSYCHOLOGICAL or PSYCHIC DEPENDENCE** refers to the experience of impaired control over drug use.

**PHYSIOLOGICAL or PHYSICAL DEPENDENCE** involves the development of tolerance and withdrawal symptoms upon cessation of use of the drug, as a consequence of the body’s adaptation to the continued presence of a drug.
DEPRESSANT

Any agent that suppresses, inhibits, or decreases some aspects of central nervous system (CNS) activity. The main classes of CNS depressants are (a) sedative/hypnotics, (b) opioids, and (c) neuroleptics. The group of “depressants” includes alcohol, barbiturates, benzodiazepines, non-barbiturate drugs such as methaqualone and meprobamate, and opiates. Their effects range from sedation and induction of sleep, through hypnosis to general anaesthesia. The effects produced depend on the specific drug used and the dose taken.

DESIGNER DRUG

Novel chemical substance with psychoactive properties, designed on the basis of the chemical structure of a given parent drug and synthesized specifically for sale on the illicit market and to circumvent regulations on controlled substances. The term was coined in the 1980s. The concept of drug design, however, is not limited to clandestine operations, but is one of the guiding principles of drug development in the pharmaceutical industry.

DOSE

Generally speaking a “dose” is considered that quantity of a drug which is required to elicit the desired response in the individual, both in medicine and for abuse purposes.

DRUG

A term of varied usage. In medicine, it refers to any substance with the potential to prevent or cure disease or enhance physical or mental welfare; in pharmacology it means any chemical agent that alters the biochemical or physiological processes of tissues or organisms. In the context of international drug control, “drug” means any of the substances in Schedule I and II of the 1961 Convention, whether natural or synthetic. Usage of the term “illicit drug” should be avoided, as it is the manufacture, distribution, use etc. of a drug which is illicit, but not the substance itself.

DRUG TESTING

The identification and chemical analysis of drugs in seized material and biological specimens, such as urine, blood, hair, etc.

ECSTASY

Originally, the term “ecstasy” was used as street name for the psychoactive substance MDMA (3,4-methylenedioxy-methamphetamine). This narrow usage has
however widened, and today “ecstasy” is frequently used to describe the whole group of related substances, in particular if marketed in tablet form at so-called “rave” parties. For the user, it is almost impossible to predict which drugs are present in a street preparation sold as “ecstasy”.

**ENTACTOGEN**

Term derived from the Greek “en” (inside) and “gen” (to induce) and the Latin “tactus” (tact). It describes a condition that allows users to “make contact” with their own feelings and those of others. Examples of controlled drugs include MDMA (“ecstasy”).

**HABITUATION**

The terms “addiction” and “habituation” were abandoned by WHO in 1964 in favour of “drug dependence”. However, since those terms are still widely used, below is a definition of “habituation”.

“Habituation” means becoming accustomed to any behaviour or condition.

**HALLUCINOGEN**

Strictly speaking, a chemical agent that induces illusions, hallucinations, delusions, paranoid ideations and other alterations of mood and thinking that are observed in spontaneously occurring psychotic states. The term is generally used to also encompass substances which induce altered states of perception, thought and feeling, even without producing overt hallucinations.

Substances under international control, classified as hallucinogens include LSD, phencyclidine (PCP), mescaline, psilocybin, and some hallucinogenic amphetamine. See also “psychedelic”.

**HYPNOTIC**

Any of a group of central nervous system depressants with the capacity to induce sleep. Major classes of sedatives/hypnotics include the benzodiazepines and barbiturates. See also “sedative”.

**LONG-TERM EFFECTS**

Effects resulting from the frequent repeated use, or prolonged continuous use of a drug.

**NARCOTIC DRUG**

In medicine, a chemical agent that induces stupor, coma, or insensibility to pain (also called narcotic analgesic).
In the context of international drug control, “narcotic drug” means any drug defined as such under the 1961 Convention.

**NEUROLEPTIC**

Any of a group of drugs used for the treatment of acute and chronic psychoses. Also known as major tranquillizers and antipsychotics. Neuroleptics have low abuse potential.

**OPIATE**

Any of a group of alkaloids derived from opium poppy (*Papaver somniferum*), such as morphine and codeine, including their derivatives, such as heroin.

**OPIOID**

A generic term applied to opiates and their synthetic analogues, with actions similar to those of morphine, in particular the capacity to relieve pain.

**OVERDOSE**

The use of any drug in such an amount that acute adverse physical or mental effects are produced.

**PHARMACOLOGY**

Pharmacology is the science of drugs, including their sources, appearance, chemical composition, properties, biological actions, and therapeutic uses. It also covers allied fields such as toxicology and posology.

**POSOLOGY**

“Posology” is the study of dosage and is an important division of pharmacology. Knowledge of the dose of commonly used drugs is essential to acquire confidence in prescribing.

**PSYCHEDELIC**

The distinct feature of “psychedelic” drugs is their capacity to induce states of altered perception, thought and feeling that are not experienced otherwise except in dreams or at times of religious exaltation; they can, but not necessarily, produce overt hallucinations.

**PSYCHOTROPIC SUBSTANCE**

Any chemical agent affecting the mind or mental processes (i.e. any psychoACTIVE drug).
In the context of international drug control, “psychotropic substance” means any substance, natural or synthetic, or any natural material in Schedule I, II, III or IV of the 1971 Convention.

**SEDATIVE**

Any of a group of central nervous system *depressants* with the capacity of relieving anxiety and inducing calmness. Major classes of *sedatives/hypnotics* include the benzodiazepines and barbiturates. See also “*hypnotic*”

**SIDE EFFECTS**

See “*adverse drug reaction*”.

**SHORT-TERM EFFECTS**

Effects produced by a single *dose* or a short period of continuous administration of a drug.

**STIMULANT**

In reference to the *central nervous system (CNS)*, any agent that activates, enhances, or increases neural activity; also called psychostimulants or CNS stimulants. Included are *amphetamine-type stimulants*, cocaine, caffeine, nicotine, etc. Other drugs have stimulant actions which are not their primary effect but which may be manifest in high doses or after chronic use.

**TOLERANCE**

A decrease in response to a drug *dose* that occurs with continued use, i.e. increased drug doses are required to achieve the effects originally produced by lower doses.

**TOXICOLOGY**

“*Toxicology*” is the science of substances as causes of *side effects* and disease in man, including their sources, appearance, chemical composition, properties, biological actions, detection and methods of treatment (antidotes). See also “*pharmacology*”.

**TRANQUILLIZER**

A tranquillizer is a calming agent. The term can be used to differentiate between these drugs and the *sedative/hypnotics*: tranquillizers have a quieting or damping effect on psychomotor processes without—except at high doses—interference with consciousness or thinking.
WITHDRAWAL SYNDROME

A group of symptoms of variable clustering and degree of severity which occur on cessation or reduction of use of a psychoactive substance that has been taken repeatedly, usually for a prolonged period and/or in high doses.