

5. Hallucinogens

(2021 version)

Contents	Page No.
Introduction	2
LSD	2
Magic Mushrooms	6
Statistics	9

Introduction

The drugs in this section are LSD and magic mushrooms.

Our brains have filtering mechanisms, which help to distinguish what is real from what is imaginary. Hallucinogens interfere with this filtering system and the familiar becomes distorted in curious, fascinating or frightening ways. The mind-altering effects of these drugs could result in 'feeling' colours or 'tasting' smells (synaesthesia). The most trivial details take on enormous importance and things which are important for personal or social well-being can be ignored.

All this may sound an interesting experience but acting on mis-information could place the user, or others, in danger. Imagine trying to drive a car with the controls mixed up. When you turn the steering wheel, the lights come on; if you change gears, the doors open and when you apply the brake, the horn sounds. That's what hallucinogens do. They scramble the routes between the senses and the brain - as though all the controls were wrongly connected. Users may panic and suffer from paranoia.

What is a hallucination?

'Hallucinogenic' is a term used to describe a group of drugs which can produce hallucinations for the user. These are mental distortions of reality. To 'hallucinate' means experiencing a happening or object which seems real but is not - rather like living through a vivid dream or nightmare while awake.

"A hallucination is perception through one of the senses which does not correspond to any stimulus in the outside world; whereas an illusion is a simple perception, which, although produced by an external stimulus, is misinterpreted by the patient in purely subjective terms."

(Psychiatry for Students by D David Stafford-Clark)

LSD — Lysergic Acid Diethylamide

Introduction

LSD was discovered in 1938 by a Swiss chemist called Albert Hofmann. He was trying to find a new stimulant drug for therapeutic purposes. Hofmann's work was based upon ergot, a parasitic fungus, which grows on rye grasses. A few years later, the chemist accidentally swallowed a minute portion of the 25th chemical he made from Lysergic Acid. He then had history's first 'acid' trip...

'Last Friday, April 16th, 1943, I was forced to interrupt my work in the laboratory in the middle of the afternoon and proceed home, being affected by a remarkable restlessness, combined with a slight dizziness. At home I lay down and sank into a not unpleasant intoxicated-like condition, characterised by an extremely

stimulated imagination. In a dream-like state, with eyes closed, I perceived an interrupted stream of fantastic pictures, extraordinary shapes with an intense kaleidoscopic play of colours. After some two hours the condition faded away.'

Medical opinion was divided over the usefulness of LSD. In the UK, the 1950s saw it used in the treatment of alcohol and other drug addictions and to ease pain in terminal illness, and it was also used as a brainwashing agent by United States' security forces. Many psychiatrists believed LSD would be useful in helping their patients vocalise their inner feelings and psychoses. This inevitably led to the US government experimenting with the possibility of it being used as a 'truth' drug.

In order to get away from this link with mental illness, a new name was found to describe the LSD family - psychedelic drugs. Now the escape from reality was clothed in 'love, light and beauty'. The media portrayed the 'swinging sixties' as a time of student demonstrations, 'flower power' and mind-expanding drugs including LSD, and its dangers were played down.

How it is taken

The pure form of LSD is small colourless crystals, but it is not used in this form on the streets. Today, LSD comes in a liquid form that can be dropped onto a sugar cube, in capsules, in gelatine sheets or in strips, tablets, tiny tablets called microdots and on blotting paper. The paper or tablets are then put on the tongue, dissolved and transported into the blood stream via the blood vessels in the tongue. LSD in the UK is usually sold as squares of blotting paper with printed images.



Using a ruler, measure 1.5 square mm of ordinary writing paper. This will weigh approximately 120 micrograms, which is the size of dose needed to experience the full effects of an LSD trip. However, a solution containing just a single microgram on a tiny square of blotting paper is sufficient for a psychedelic experience.

Some of the street names for LSD are:

• Dots	• Flash
• Smilies	• Strawberries
• Tabs	• Acid
• Dust	• Trips

Health

Short-term effects

The user's perception will start to alter approximately 40 minutes after taking the drug. The experience feeds off the imagination and will gradually rise to a peak and then fade over a period of 12 to 20 hours. Even more so than with other drugs, the type of experience under LSD will depend upon a number of factors including size and quality of dose, user's expectations, mental and physical state, circumstances and companions. The physical effects of the drug are:

- dilated pupils, raised blood sugar levels and a small increase in blood pressure and pulse rate

However there are also several psychological effects. Some of the positive effects can be:

- A trip can speed up and slow down time and movement
- Trips can make a happy person happier
- Intensified colours and sound
- Heightened mood

Some of the negative short-term effects can be:

- Colours, sound and objects can get distorted. Think dancing wallpaper, angry traffic cones and double vision
- If panic sets in the experience can be scary and confusing
- Bad trips can be terrifying

Experimenting with LSD is risky and there is no way to stop a bad trip. Someone with emotional problems or lack of social skills may be prone to particularly bad acid trips. In fact, both 'good' and 'bad' experiences may be included in the same trip.

Someone using LSD can behave in different ways depending on whether it's a good or bad trip, but it is not uncommon for a user to injure themselves trying to physically escape the hallucination, for example by running away across a busy road or jumping from a window. Very powerful trips can induce the user to take risks because they might believe they can fly or breathe under water, and trying these can lead to serious injury or death.

Long-term effects

The possible long-term consequences of use will be particularly severe on people who have actual or potential mental instability, as LSD affects the brain in the long term. Some of these effects may be:

Flashback - A curious phenomenon, which may follow an acid trip is known as 'flashback'. This is the vivid reliving of a trip months after the drug was last used. Someone who is emotionally unstable or extremely stressed may interpret the flashback as a sign of madness. At the very least it leaves feelings of disorientation and fear.

Precipitated psychosis - There is a condition called 'LSD precipitated psychosis', which has been experienced by both first time and long-term users. This psychosis may last for several hours and in many ways it resembles paranoid schizophrenia. It is characterised by hallucinations, dis-illusional thinking and bizarre behaviour. This behaviour is similar to acid casualty, where the user has used so much acid in a short space of time that he or she does not quite ever seem to return to normal. It is as though one fragment or more of the brain ceases to function and there are gaps in logic. One reason could be that the user always had this predisposition towards a mental illness but LSD may well cause it on its own, or be the trigger in such predisposed people. People who are prone to mental instability are more likely to have bad or frightening LSD experiences. This is particularly difficult for people already confused and frightened.

The LSD Experience – some 'insights'

Dependence

There is little risk of physical dependence with LSD although some users do develop psychological dependence.

Tolerance

Tolerance develops rapidly with LSD, so after increasing the size of the dose over three or four days, the body adjusts and there is no psychedelic effect.

"It came sudden and irresistible. An endless deep swamp marsh of some other planet teeming and steaming with energy and life, and in the swamp an enormous tree whose branches were foliated out miles high and miles wide. And then this tree, like a cosmic vacuum cleaner, went suck, and every cell in my body was swept into the roots, twigs, branches and leaves..."
Timothy Leary (former Harvard professor and LSD-propagandist of the 60s who re-entered the headlines after his co-operation with Billy Idol on the 1993 album 'Cyberpunk')

"John was crying and banging his head against the wall. It was like a nightmare that wouldn't stop."
Cynthia Lennon (first wife of John Lennon)

"I lost all account of time. I noticed with dismay that my environment was undergoing progressive changes. My visual field wavered and everything appeared deformed as in a faulty mirror. I was overcome with fear that I was going out of my mind. Occasionally I felt as if I were out of my body. I thought I had died. My ego seemed suspended somewhere in space from where I saw my dead body lying on the sofa. It was particularly striking how acoustic perceptions such as the noise of water gushing from a tap or the spoken word were transformed into optical illusions."
Albert Hofmann (Swiss scientist who discovered the hallucinogenic qualities of LSD)

"This is wonderful no doubt. But it is fake. I solved the secret of the universe last night, but this morning I forgot it."
Arthur Koestler (writer)

He favours plant-based psychedelics and claims to have been contacted by 'the machine elves of hyperspace' while under the influence.
Terrence McKenna (writer and honorary member of The Shamen pop group)

The Law

LSD is a Class A, Schedule 1 drug.

Magic Mushrooms

Introduction

Throughout history, many tribes and civilisations have cultivated fungi (including mushrooms) for their healing and hallucinogenic properties. Their use has also been incorporated into religious rituals in order to create artificial mystical experiences.

There are two main types of magic mushroom found in the UK:

Liberty Cap (*Psilocybe Semilanceata*)

This mushroom is the most commonly used magic mushroom and contains two chemicals called psilocybin and psilosin, which have been used for centuries by tribes in Central America for occult purposes. A relatively small amount of Liberty cap can cause damage to the body, and even be lethal.



Liberty Cap is a small, elegant mushroom with a yellow-brown conical cap and grows in long lines. However, this can also describe roughly 230 species of fungi, so establishing their identity is very important.

Fly Agaric (*Amanita muscaria*)

This species of mushroom takes its name because it contains the chemical muscarine, which kills flies. The British species of fly agaric has a bright red cap and mottled, warty skin but they can vary greatly in appearance. Only an expert can safely tell the difference between fly agaric and some of its more dangerous cousins, which can be lethal. The Amanita genus includes the mushrooms known as the Death Cap and the Destroying Angel, responsible for 90% of UK mushroom deaths, so as with Liberty Cap, correct identification is essential.

How they are taken

Magic Mushrooms can be eaten raw, dried or cooked in food or tea. Working out a dosage is difficult as the mushrooms come in different sizes and the user's weight and stomach contents affect the outcome. The effects of the mushrooms are also heightened if taken with alcohol.

Some street names for magic mushrooms are:

• Shrooms	• Mushies	• Liberties
• Magics	• Amani	

Health

Liberty Cap

The short-term effects of Liberty Cap start about half an hour later and can last up to 9 hours. Initially a user may laugh a lot and feel more confident. The physical effects are:

- Nausea
- Vomiting
- Stomach ache

The positive and negative effects on the brain are:

- Vivid visual 'pseudo-hallucinations' (known by the user to be unreal)
- Confusion of the senses (synaesthesia)
- Users may feel they are undergoing a profound mystical, religious or 'cosmic' experience
- Changes in how people perceive space and time (for example, minutes seem like hours)
- Confusion and disorientation
- Fear of non-existence or disintegration of self
- Paranoia
- Severe agitation, depression and panic

In the long-term the drug may have an effect on the brain causing the user to experience flashbacks.

Fly Agaric

Within half an hour of eating fly agaric, physical effects begin to be experienced. These short-term effects may include

- Dizziness
- Nervousness
- Dry mouth
- Diarrhoea
- Nausea and vomiting
- Stiff joints

Strong doses (more than one mushroom) may cause convulsions, disorientation and, in some cases, even death.

These effects are followed by a light sleep and vivid dreams. Upon awakening, the user may experience more positive effects on the brain – they may perceive things differently and may have a sense of well-being and excitement accompanied by complete self absorption. The mind-altering effects of Fly Agaric are significantly less than that of Liberty Cap.

The symptoms of poisoning from some of these other members of the Amanita family may not commence until more than ten hours after eating. These can include delirium, convulsions, deep coma and death from cardiac arrest.

Hospitals see significant numbers of teenagers coming in during the October 'mushroom season' with temporary psychotic problems.

Long-term effects may include flashbacks but these fade after a while and currently no studies show long lasting effects from the use of magic mushrooms. However there have not been any recent studies to try and prove otherwise.

Dependence

Magic mushrooms do not cause physical dependency.

Tolerance

Tolerance develops quickly with repeated use. A user could need twice as many the next day to experience the same effects. As with LSD, a rest period helps the user regain the original effects when taken again.

The Law

The Drugs Act 2005 changed the law so that now both fresh and prepared (e.g. dried or stewed) magic mushrooms are classified as Class A, Schedule 1 drugs. As this law covers the chemicals contained in the mushroom (psilocybin and psilosin), the Fly Agaric mushroom is not covered by this law.

Hallucinogens Statistics

Last updated December 2020

Use of LSD

In 2019/20, LSD use was at 0.3% among adults aged 16 to 59. In 2010/11, 0.2% of this age group reported using it in the last year.

1% of young people aged 16-24 say they had used it in the last year, which is an increase on 2010/11 when 0.6% of this age group said they had used it.

(ONS Drug Misuse in England and Wales, 2019/20; British Crime Survey 2010/11)

Use of Magic Mushrooms

The current survey shows that 0.5% of adults aged 16-59 had used magic mushrooms in the last year. In 2010/11, 0.5% of people also said they used the drug, so this hasn't changed.

1.2% of young people aged 16-24 said they had used magic mushrooms in the last year compared with 1.3% in 2010/11, showing that there hasn't been much change in this age group either.

(ONS Drug Misuse in England and Wales, 2019/20; British Crime Survey, 2010/11)