What is MDMA/Ecstasy?

‘Ecstasy’ is the street term commonly used for tablets containing MDMA, or 3, 4-methylenedioxymethamphetamine. MDMA is a stimulant-hallucinogen drug which is known as an empathogen (or entactogen), meaning it increases an individual’s feeling of empathy, friendliness, and social connectedness with others. MDMA may also sometimes contain stimulants and hallucinogens.

Drugs sold as MDMA or ecstasy may not contain only methylenedioxymethamphetamine. They can be a mix of MDMA, caffeine, methamphetamine, ketamine, synthetic cathinones or other substances.

MDMA or ecstasy is often consumed as a tablet/pill or capsule but can come in powder or crystal form. The tablet/pill form is often a bright colour with an imprinted logo or image. It is often used orally (ingested), but can be snorted or injected.

What are the effects?

The effects of MDMA or ecstasy typically take between 20 and 60 minutes to appear after consumption. They tend to peak after one to two hours, plateau after three hours, and diminish over the next four to six hours.

The effects of MDMA/ecstasy depend on the quantity consumed, a person's height and weight, general health, mood, past experience with MDMA/ecstasy, whether they use MDMA/ecstasy on its own or with other drugs and the composition of the drug. Acute effects can include:

- Euphoria
- Feeling energetic and confident
- Feeling close to others and increased empathy
- Dilated pupils
- Jaw clenching and teeth grinding
- Heightened senses (sight, hearing and touch)
- Increased heart rate
- Increased blood pressure
- Dehydration

A large amount or strong batch of MDMA or ecstasy may cause:

- Floating sensations
- Perceptual changes, such as visual and auditory hallucinations
- Out-of-character irrational behaviour
- Anxiety
- Irritability, paranoia and aggression
Mixing MDMA/ecstasy with other drugs

Mixing MDMA or ecstasy with other drugs, including over the counter or prescription medication, can be unpredictable and dangerous. Polydrug use increases risk and can lead to unpredictable adverse effects, severe negative health and mental health outcomes, and death.

Coming down

After MDMA or ecstasy use a person may experience a ‘comedown’, which can leave them feeling physically and emotionally drained.

Symptoms include:

- Lack of appetite
- Restless sleep and exhaustion
- Anxiety, irritability and depression
- Muscle aches
- Difficulty concentrating

Long term effects

Chronic use of MDMA or ecstasy may cause:

- Depression
- Tolerance (needing to use more to get the same effect)
- Dependence
- Memory and concentration problems
- Financial, work and social problems
- Increased risk of stroke
- Liver failure
- Kidney failure
- Lung dysfunction
- Weight loss, dehydration, malnutrition, exhaustion
- Immunosuppression increasing risk of infection

Cardiovascular health

There are a number of acute and chronic cardiovascular conditions associated with psychostimulant use, including:

- Acute risk of heart attack (myocardial infarction)
- Premature heart disease
- Coronary artery disease
- Heart enlargement (cardiomegaly and cardiomyopathy)
  (Darke, Lappin & Farrell, 2019)

Toxicity and overdose

The characteristics of psychostimulant toxicity or overdose are less clearly defined than other drugs. There is no clear dose response that brings on toxicity. It depends on the individual and problems can occur regardless of how the drug was taken, in what form, or the apparent purity of the dose.

Most cases of toxicity and overdose are due to reactions with other drugs. This might be an unknown substance in the MDMA or ecstasy consumed or another known illicit (opioids or methamphetamine) or prescribed (anti-depressants) drug. It is important to note that overdose can be caused by MDMA or ecstasy use on its own (Darke, Lappin & Farrell, 2019).

What are the risks?

- MDMA or ecstasy is potentially a very harmful drug, especially if taken in high doses and on a regular basis.
- Immediate adverse effects can include:
  - Excessive sweating and skin tingles
  - Muscle aches and pains
  - Reduced appetite
  - Increased blood pressure
  - Dehydration
  - Raised body temperature and poorer capacity to regulate temperature (ADF, 2019)

Dependence and withdrawal

The existence of MDMA dependence has been subject to debate but is now well demonstrated. There is a recognised psychostimulant withdrawal syndrome. The acute phase peaks in the first 24 hours and resolves over the course of seven days. Heavier and more severe dependence predicts a more severe withdrawal syndrome. The symptoms of psychostimulant withdrawal syndrome include:

- Pronounced dysphoria
- Agitation
- Anxiety
- Fatigue
- Insomnia followed by long periods of sleep
- Craving for psychostimulants (Darke, Lappin & Farrell, 2019)
Mental health

Psychostimulant use is associated with a variety of psychiatric disorders including psychosis, anxiety, depression and ADHD. Psychostimulant use may lead to the exacerbation of symptoms of pre-existing mental health problems and can impact negatively on the effectiveness of their treatment.

MDMA or ecstasy has been associated with acute and chronic depression, which persists after cessation of use (Darke, Lappin & Farrell, 2019).

How many people use MDMA/ecstasy?

According to the Australian Institute of Health and Welfare, in 2019, ecstasy was the second most commonly used illicit drug among Australians aged 14 and over (4.2 percent). There has also been a shift in the main forms of ecstasy used, with capsules (33 percent in 2016 to 49 percent in 2019) now used more than pills/tablets (from 51 percent in 2016 to 34 percent in 2019) (AIHW, 2020).

Treatment

People do not generally seek treatment for MDMA or ecstasy use and there has been little research in this area.

Evidence from better researched drugs suggests services that provide good social support as well as psychological interventions to help maintain motivation and improve coping skills may be useful (Quick Guide to Drugs and Alcohol, 2017).

Emergency information

If you, or someone around you, is experiencing undesired or distressing psychological or physical symptoms from the intake of alcohol or other drugs please seek immediate medical attention.

If you need urgent help from ambulance services call Triple Zero (000). If a person has been mixing drugs with alcohol or other drugs, tell the paramedic exactly what has been taken.

Services

For free and confidential advice about alcohol and other drugs, call the National Alcohol and Other Drug hotline on 1800 250 015.

The hotline will automatically direct you to the Alcohol and Drug Information Service in your state or territory.

More resources

- The Illicit Drug Reporting System is an Australian monitoring system that identifies emerging trends of local and national interest in illicit drug markets.
- The Ecstasy and Related Drugs Reporting System is an Australian monitoring system for ecstasy and related drugs that identifies emerging trends of local and national interest.
- The Clinician’s Guide to Illicit Drugs and Health examines the health effects of each of the major illicit drugs.
- The Australian Institute of Health and Welfare examines the health effects of each of the major illicit drugs.
- The Australian Bureau of Statistics is Australia’s national statistical agency, providing official statistics on a range of economic, social, population and environmental matters of importance to Australia.

Sources


