



Australian Government



# ECSTASY OR METHYLENEDIOSYMMETHAMPHETAMINE (MDMA)

Methylenedioxymethamphetamine (MDMA) is supposed to be the primary ingredient in most ecstasy tablets, but as the ingredients required to make synthetic drugs are becoming more difficult to obtain, the formulation of pills marketed as ecstasy can vary greatly. They are more likely to contain methamphetamine (speed) combined with a synthetic hallucinogen or para-methoxyamphetamine (PMA).

Ecstasy is known by a variety of other names, including E, pills, Ex, pingers, E n C, eccy, MDMA, XTC, eggs and disco biscuits.

## Ecstasy facts at a glance

### The signs and symptoms of using ecstasy can include:

- increased blood pressure and pulse rate
- dilated pupils
- raised body temperature
- sweating
- loss of appetite
- jaw clenching
- nausea
- nervousness
- confusion
- teeth grinding
- vomiting
- hallucinations
- tremors
- insomnia
- panic
- visual distortions.

### The consequences of using ecstasy may include:

- chronic sleep problems
- cracked teeth through grinding
- high blood pressure
- dehydration
- anxiety
- decreased emotional control
- lethargy
- severe depression
- memory impairment
- nerve cell damage
- serotonin syndrome
- death from heart failure
- rhabdomyolysis – overheating to the point of organs liquefying.

## Physical effects of ecstasy

The MDMA or other stimulants in ecstasy are actually speeding up the activity in the central nervous system. Where hallucinogens are present the drug can also affect perception, causing things to appear distorted, or the user may hear or see things that don't actually exist.

There are usually three phases experienced when taking ecstasy:

**Coming up** – the user may experience tightening of muscles, especially in the jaw, dilated pupils, visual distortions, nausea or vomiting, strong pulse, increased temperature, confusion and panic.

**Plateauing** – where the user may experience feeling happy, more awake, relaxed, open, confident, talkative and have decreased urine output and increased thirst.

**Coming down** – the user can feel physically exhausted, depressed, anxious, paranoid, irritable and unable to sleep. The comedown will be more intense if they have taken other drugs, including alcohol.

## Problems from using ecstasy

In the short term, ecstasy can produce increased heart rate and blood pressure, overheating, jaw clenching, teeth grinding, tremors, nausea, enlarged pupils and anxiety.

Taking ecstasy in a hot or humid environment, like a dance party or nightclub, can also cause dehydration and raise the body's temperature to dangerous levels. This increases the risk of the body heating up to levels that cause organs to fail and breakdown and eventually the heart to stop.

There is also a risk of serotonin syndrome or toxicity, which is an excess of the neurotransmitter serotonin (a brain chemical). It typically results from mixing ecstasy with various, but not all, antidepressants or simply taking an overdose. The symptoms include agitation, confusion, headache, tachycardia (rapid heart rate), hypertension, hyperpyrexia (abnormally high fever) and muscle twitches. It can result in coma and death.

There are a number of psychological problems associated with ecstasy including the 'hangover effect', depression that can last for days after using ecstasy. This is because serotonin in the brain is reduced by ecstasy use. Research in animals shows that this serotonin loss is long lasting (up to three years) and may even be permanent.

There is a greater risk of physical and psychological harm as a result of taking ecstasy for those with the following conditions: heart disease, diabetes, epilepsy, liver problems, hypertension, panic attacks or a history of mental illness.

At this stage, longer-term effects of using ecstasy are inconclusive, but potential problems include cracked teeth through clenching and grinding, high blood pressure, memory and attention impairment, lethargy, decreased emotional control, severe depression and possible nerve cell damage.