

[Ecstasy] 3,4- Methylendioxydioxy- Methamphetamine [MDMA]

Slang/ Street names for AMPHETAMINES:

ECSTASY, XTC, E, X, SEX, BEANS, ADAMS, HUG DRUG, DISCO BISCUIT, GO, EKKIES, BIKKIES, HUG, LOVE DRUG

Ecstasy is a synthetic drug and is usually taken in the form of a tablet.

Used a lot in the rave scene as it 'jacks you up' and gives you an artificial stamina that masks fatigue. Typically ravers say it helps them dance longer without getting a stitch or muscle soreness.

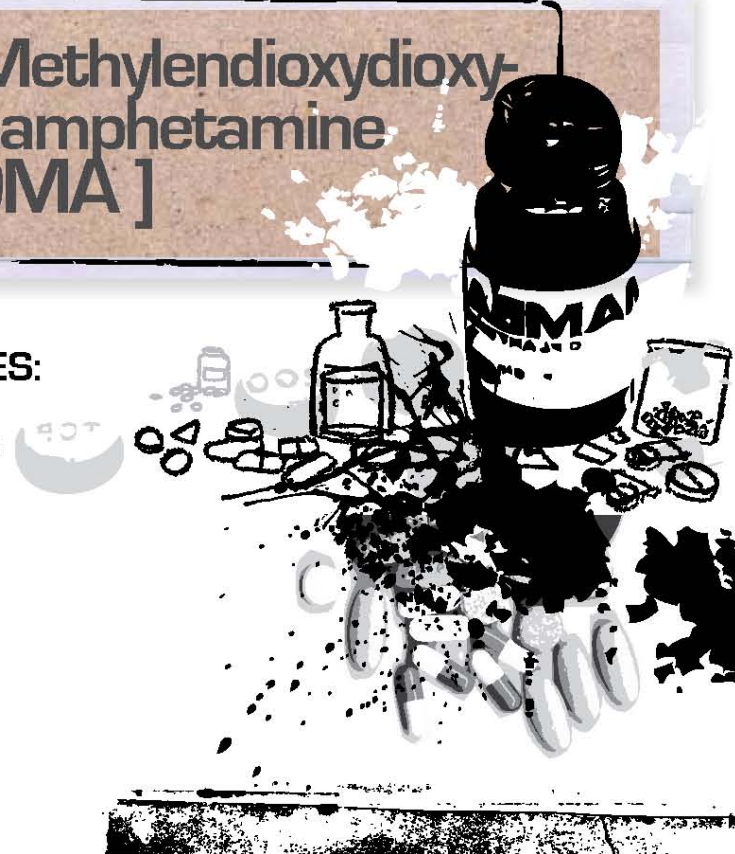
It works by causing the brain to dump all its 'feel good chemicals' at once causing intense pleasure.

But it's a bit like 'NOS' (Nitrous Oxide) on an old motor, it may give you one good 'race' but then that's it, the motor's rendered completely useless (Some sad souls think it won't matter now, but it sure as hell will matter in a few years!)

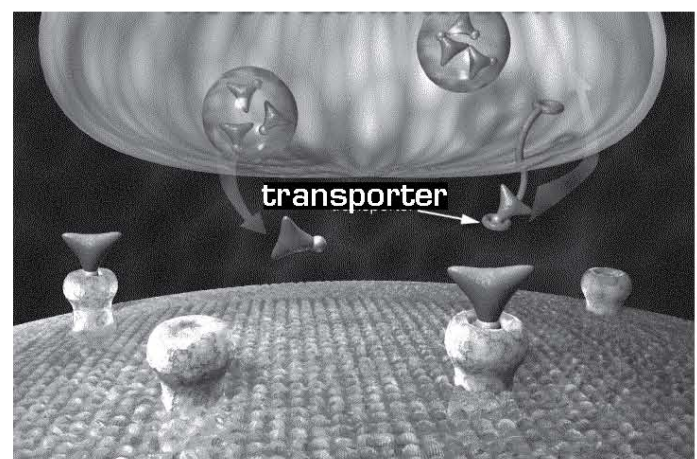
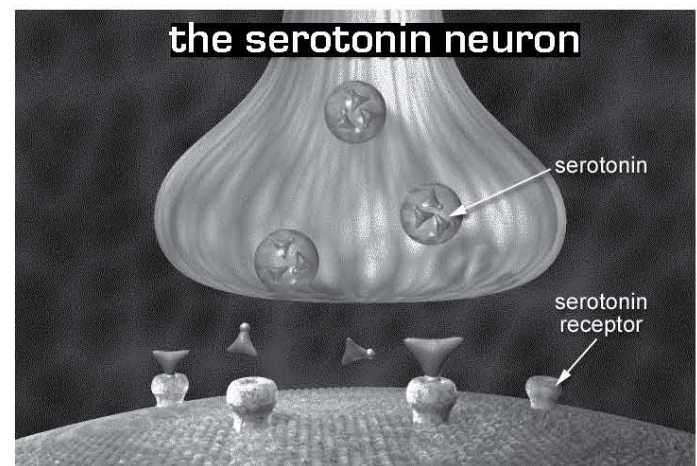
Ecstasy is easily absorbed into the brain. The drug predominantly works by increasing the Serotonin levels in the brain and it also affects cognition, mood and memory.(1)

The Serotonin cycle usually works as follows:
An electrical impulse travels down the Serotonin producing neuron and causes the terminal to release Serotonin into the neural synapse (gap between terminal and receptor). In the synapse the Serotonin is 'caught' by a special protein called a receptor. The receptors are on the surface of the receiving neuron. If the Serotonin is not 'caught' by them another protein known as a 'transporter' will latch onto them and take them back into the neuron it came out of.

Ecstasy binds the Serotonin transporters and causes two things to happen. First it blocks the transporter from taking Serotonin back into the terminal. Second, it reverses the function of the transporter and causes it to bring Serotonin from the terminal into the synaptic space.(2)



This increase of Serotonin floating around between the two neurons causes the person to feel 'euphoria'.





HOW IT MESSES YOU UP... SHORT TERM :

This excessive amount of artificially stimulated Serotonin will 'push' the person into then 'feeling good' initially.

Because of the resulting mass chemical dump, the brains stored levels of neurotransmitters such as Dopamine, Adrenaline, Serotonin and Endorphins are severely depleted causing the user to feel very low and depressed after use. It can take weeks for these chemicals to get back to normal levels. So in the short term the brain's lack of these 'feel good' chemicals can make the user feel very low and energy-less and this can lead to depression. (Scott, Tom; Grice, Trevor. Great Brain Robbery 2005).

Because the drug causes the neuron to 'short circuit' in a sense by stopping its normal function the neuron terminal can also 'burn out'. (3)

Exhaustion, dehydration, overheating (hyperthermia) are some of the possible immediate dangers.

At higher doses results can include, fits, vomiting, hallucinations, bizarre behaviour, sleep & coma especially when mixed with Alcohol.



HOW IT MESSES YOU UP... LONG TERM :

Every time ecstasy enters the brain it damages neurons making them incapable of producing and storing the 'feel good chemicals'. Long term use can leave the user with a permanent low.

Tests done on monkeys have shown that Serotonin levels are vastly different in a monkey brain that had no ecstasy compared to a monkey that had ecstasy for just 4 days twice a day. Even after 7 years the Serotonin levels were still less than the non ecstasy affected brain. (4)

Serotonin present in Cerebral Cortex Neurons

control

2 weeks after Ecstasy

7 years after Ecstasy

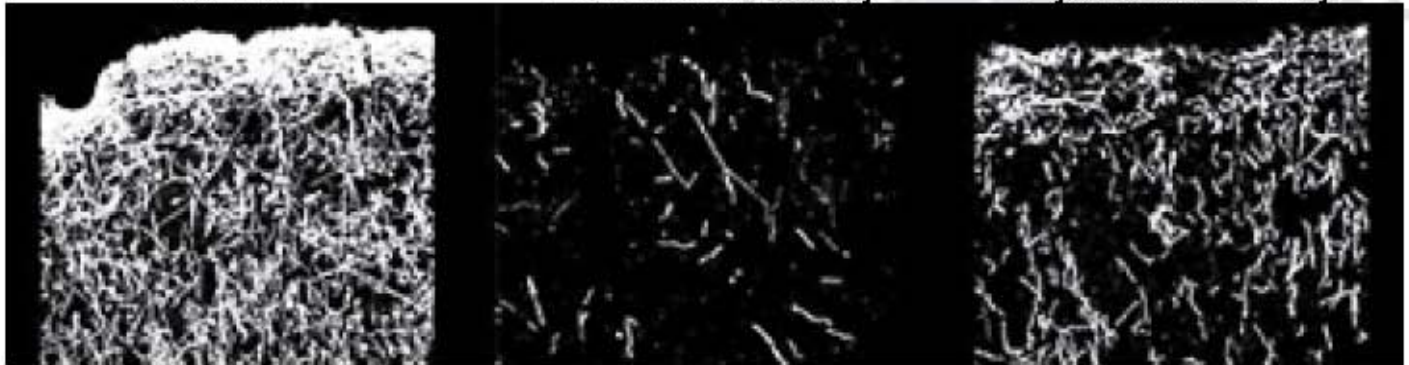


Image courtesy of Dr. G A Ricaurte, Johns Hopkins University School of medicine



UNUSUAL FACTS :

Experienced users tend to drink more fluids when using this drug to counteract the dangers of dehydration however they run the risk of hyponatremia (5) which is a condition that causes the sodium levels in the blood to decrease due to the increased levels of fluid intake.

This condition most often affects athletes who compete in endurance events because the fluid intake is greater than the expected rate of fluid excretion. The condition can lead to death. (6)





HOW IT'S INTRODUCED INTO THE BODY :

[The skull indicates the most used methods of ingestion of the drug described in this Fact Sheet]

- **Injected/Intravenously**
- **Injected/Intramuscularly**
- **Sniffed/Snorted** (powder) 
- **Inhaled** (vapour)
- **Smoked**
- **Swallowed** 
- **Eaten**
- **Absorbed through skin**



myths

Ecstasy is an aphrodisiac – FALSE!

This myth is probably due to the fact that some ecstasy users say they experience feelings of wellbeing and loving feelings towards others and they may demonstrate this by hugging each other (hence the name 'hug drug'). Whilst Ecstasy causes increased feelings of pleasure in most cases it also causes sexual dysfunction. Males have reported difficulty in gaining an erection while both males and females have difficulty in achieving an orgasm. [8]

Ecstasy is safe to use especially if it's short term – FALSE!

One study conducted on Non-Human Primates (NHP's e.g. monkeys) showed that the subjects exposed to Ecstasy for just 4 days caused damage to the Serotonin producing nerve terminals. According to the study this damage was still evident 6-7 years later. [9]



OTHER DATA THAT'S RELEVANT :

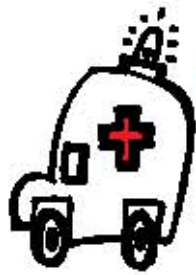
- Some recent research has shown that MDMA can have an effect on sleep patterns with Insomnia like symptoms as much as seven years after the user has stopped taking the drug
- Cited in the same article was a separate study that gave a group of MDMA users and non users 5 minutes to write as many words that they could think of starting with the letter 'C'. On average those taking MDMA came up with 10 words whilst those that didn't use came up with 16 words. (10)

Ecstasy is most commonly taken in tablet form although it can be smoked, snorted and even injected, however this last method is extremely rare. (11)

MDMA

Ecstasy tablets with various brand marks. Branding is used by the manufacturers to give users a misguided sense that they are getting a 'quality/product!'





FIRST AID:

A **Ecstasy overdose can kill you**, especially if you do not access emergency medical treatment. If you suspect someone has overdosed, check to see if they are breathing, put them on their side and gently tilt their head back to open their windpipe.

Call an ambulance immediately (dial 000) and follow the operator's instructions.

The patient should be made as comfortable as possible, preferably by a qualified medical or first aid person, until paramedics arrive. If breathing stops give mouth to mouth resuscitation. If there is no pulse give CPR. (7)

BEST AID:

never touch it



WHERE TO GET HELP: medical and other

- DirectLine Alcohol and Drug Counselling and Referral Line 1800 888 236
- The Australian Drug Foundation Drug Info Line 1300 85 85 84
- Live Free Victoria 03 58523777



REFERENCES:

1. <http://www.drugabuse.gov/pubs/>
2. Ibid.
3. <http://www.nida.nih.gov/>
4. Ibid.
5. http://en.wikipedia.org/wiki/MDMA#Short-term_health_concerns
6. http://en.wikipedia.org/wiki/Leah_Betts
7. <http://www.druginfo.adf.org.au/>
8. <http://www.idmu.co.uk/>
9. <http://www.nida.nih.gov/Infofacts>
10. <http://www.mdma.net/uk/britain>
11. <http://www.wichita.gov/CityOffices/Police/Investigations>



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