

# **Ecstasy/MDMA**

## **Profile**

MDMA (3,4-Methylenedioxymethamphetamine) is the chemical found in the synthetic “club drug” ecstasy, a drug with stimulant and hallucinogenic effects. It is currently a Schedule I drug.

## **History**

In 1912, a German pharmaceutical company first synthesized MDMA in an attempt to create an appetite suppressant. In the late 1970’s, it was rediscovered by a small group of U.S. therapists hoping to utilize it in psychotherapy and marriage counseling. MDMA became illegal in 1988 and was categorized as a Schedule I drug.

Recreational, illicit use of the drug started becoming popular in the United States in the late 1980’s and early 1990’s.<sup>1</sup> Ecstasy soon became popular at ‘raves’ – large dance parties with throbbing electronic music and pulsating lights. Currently, however, raves are not the only setting where ecstasy is used; abuse at house parties, college dorms, and various other places has become more widespread.

## **Methods of Use**

Ecstasy is most often available in tablet form and is usually ingested orally, although some users have reported taking it anally (known as “plugging” or “shafting”). Users have also been known to “parachute” the tablet, by placing the pill in a napkin, crushing it, and then swallowing the piece of napkin in an attempt to speed up the drug’s onset. MDMA is also available in powder form, often contained in geltabs, and is sometimes snorted and occasionally smoked, but rarely injected.

## **Purity**

Today, a high percentage of pills contain other drugs; some pills marketed as ecstasy may not even contain any MDMA. These adulterants can include other club drugs such as MDA, PMA, Ketamine, PCP, and DXM, while some pills are cut with ephedrine, pseudoephedrine, and even caffeine and over-the-counter medications. It is believed that the contents of a pill can be identified based on its logo or color (e.g.- red pills are believed to contain mescaline, brown pills assumed to contain heroin, etc.), but a pill’s color and logo say nothing about its ingredients, as pill manufacturers often add food coloring to dye the tablets.<sup>2</sup>

## **MDMA’s Effects on the Brain**

MDMA affects levels of serotonin, a neurotransmitter in the brain that is related to mood (and pleasure), sleep, and heart rate. When ingested in the body, MDMA causes the brain to flood itself with serotonin, causing the body to have heightened sensitivity and the individual to be intensely emotional and empathetic. However, when the effects of

ecstasy wear off, the brain is depleted of much of its supply of serotonin. Because of this substantial loss, depression is a common after-effect of MDMA use. MDMA has also been shown to damage some critical thought and memory functions of the brain, along with contributing to the degeneration of serotonin-producing neurons and dopamine transmitters. This damage may be long-term.<sup>3</sup>

### **MDMA's Effects on the User**

About 20 to 40 minutes after taking a tablet, the user experiences small rushes of exhilaration, often accompanied by nausea. Sixty to 90 minutes after taking the drug, the user feels the peak effects. Users may continue to experience effects for up to 6 hours, and can feel "cracked-out" (drained, burned-out) for up to 2 days later, due to the heavy loss of serotonin and the great strain that the drug causes on the user's body.<sup>4</sup>

### **Short-Term Effects**

Short-term effects of ecstasy use can include:

- Muscle tension
- Heightened senses
- Hallucinations
- Euphoria
- Empathy for others/emotional warmth
- Anxiety or paranoia
- Involuntary teeth or jaw clenching
- Nausea
- Extreme relaxation
- Severe dehydration (especially when mixed with alcohol)
- Heat exhaustion
- Increased body temperature up to 108° (especially when dancing)
- Increased blood pressure, breathing rate, and heart rate
- Faintness
- Chills or sweating
- Blurred vision or nystagmus – rapid quivering of the pupils (while the user is feeling peak effects)

### **Long-Term Effects**

Long-term effects of ecstasy use can include:

- Confusion
- Depression
- Sleep problems
- Drug craving
- Severe anxiety<sup>5</sup>
- Possible depletion of serotonin and memory<sup>6</sup>
- Death

Ecstasy-related deaths have been reported, usually as a result of heatstroke from dancing in hot clubs for long hours without replenishing lost body fluids. Dehydration and heat exhaustion are the two biggest dangers when under the influence of MDMA.<sup>7</sup>

It is important to note that there are many other side effects that can occur from other unknown drugs/substances that could be in the ecstasy tablet. These can include addiction, overdose, and death.

## **MDMA and Sex**

Many users will abuse ecstasy simply for the ‘body high’ – the senses of feeling and touch that become intensely pleasurable. This physical sensitivity, paired with the feelings of self-acceptance and empathy for others, can often lead to an increased sex drive and feelings of intimacy. This is why some people consider ecstasy to be an aphrodisiac, or even one of the date-rape drugs. Nevertheless, while MDMA may enhance sexual desire, it also impairs sexual performance. Males may be unable to achieve erection under the peak effects of ecstasy, while both sexes have great difficulty in achieving orgasm. In addition, due to the effects of dehydration and heat exhaustion, both sexes can encounter a lack of lubrication – the number one cause of condom breakage. And because ecstasy lowers inhibitions and can heighten arousal, it can easily lead to risky behavior in which the user would not generally participate.

## **Sextasy**

Throughout the country, and in Maryland, there have been reports of a new combination of drugs that has been hitting the streets and club scenes. Ecstasy (a drug with stimulant and hallucinogenic effects) and Viagra (a prescription drug for erectile dysfunction) are being used as one, a combination known as “sextasy” or “trail mix<sup>8</sup>.” Together they produce a synergistic effect where the effects of the two drugs are greater than the effect of each drug individually.<sup>9</sup>

Ecstasy, which research has shown to negatively effect serotonin levels in the brain, has been found to increase the senses of feeling and touch. This physical sensitivity can often lead to an increased sex drive and feelings of intimacy. However, ecstasy can also impair sexual performance, making it more difficult for males to achieve an erection.<sup>10</sup> Viagra on the other hand relaxes muscles within the penis allowing for increased blood flow necessary to achieve and maintain an erection.<sup>11</sup>

By combining the two drugs users are attempting to defeat the impotence side effect of ecstasy in order to increase sexual performance and functioning. Although having sex may not be the intention in combining Viagra with ecstasy, sex often occurs in these instances leaving both partners open to increased risks of sexually transmitted diseases.<sup>12</sup> Even without the involvement of sex, the mixture of these two drugs can produce severe side effects. One of the most well-known and frequent is known as “priapism,” a condition in which an erection can last for four hours, which can lead to permanent damage.<sup>13</sup>

The most current research involving these two drugs took place in San Francisco where researchers found that about 43% of gay men surveyed were using ecstasy in combination with Viagra.<sup>14</sup>

## **Paraphernalia**

Users can often be seen with water and pacifiers – items used to counteract side effects of MDMA such as dry-mouth, dehydration, and jaw or teeth-clenching. Lollipops and chewing gum may also be used for the same reasons. Dancers at raves often use glowsticks and small handheld lights used to enhance the visual effects of ecstasy, although glowsticks are also a common feature of this style of dancing. Other paraphernalia includes Vick’s Vapo-Rub<sup>®</sup>, Vick’s Inhaler<sup>®</sup>, other menthol products, and nearly anything else that can be used to stimulate the senses. Users can often be seen hugging or massaging one another, as physical sensitivity is extremely heightened.

## **Terminology**

- Slang Terms for Ecstasy:  
E, X, XTC, Pills, Rolls, E-tarts, ADAM, Go, Speed for Lovers, Love Drug, Hug Drug, Scooby Snacks
- Slang Terms Related to Dosage or Effects:  
Some pills are believed to be two or three times more potent than others, and are referred to as “double- or “triple-stacked”  
“Speedy” or “Dopey” – depending on the ingredients of the pill, a tablet of ecstasy can have stimulant or depressant effects
- Common “Brand Names” of Ecstasy Pills:  
Mercedes, Mitsubishis, Ferraris, Volkswagons, Red Devils, Blue Nikes, 007s, Playboys, Batmans, Supermans, Rolexes, Pokemons, Red Stop Signs, Buddhas, Butterflies, X-Files, White Diamonds, Yin Yangs, Armanis, etc.
- Use and Users:  
Roll/Rolling – under the influence of ecstasy (like “tripping” on acid)  
E-tard – person who uses a great deal of ecstasy; a burnout  
Candy flipping – using LSD with ecstasy  
Flower flipping/Hippy flipping – using mushrooms with ecstasy  
Elephant flipping – using PCP with ecstasy  
Kitty flipping – using ketamine with ecstasy  
Love flipping – using mescaline with ecstasy

## **Links**

- [NIDA InfoFacts: Ecstasy](#)
- [NIDA Notes: Facts About MDMA](#)
- [ONDCP: Club Drugs](#)
- [DEA: MDMA](#)

- [American Council for Drug Education's Basic Facts About Drugs: Ecstasy](#)

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<sup>1</sup> NIDA Research Report Series. MDMA (Ecstasy) Abuse – A Brief History of MDMA. Retrieved October 18, 2006, from <http://www.drugabuse.gov/ResearchReports/MDMA/MDMA2.html#history>; NIDA Notes. Facts About MDMA (Ecstasy). Retrieved October 18, 2006, from [http://www.nida.nih.gov/NIDA\\_Notes/NNVol14N4/tearoff.html](http://www.nida.nih.gov/NIDA_Notes/NNVol14N4/tearoff.html).

<sup>2</sup> Julie Holland. Ecstasy: The Complete Guide. A comprehensive look at the risks and benefits of MDMA. 2001.

<sup>3</sup> NIDA. (2004, June). InfoFacts: MDMA (Ecstasy). Retrieved October 18, 2006, from <http://www.drugabuse.gov/Infofacts/ecstasy.html>.

<sup>4</sup> NIDA Notes. Facts About MDMA (Ecstasy).

<sup>5</sup> NIDA. InfoFacts: MDMA (Ecstasy).

<sup>6</sup> American Council for Drug Education. Basic Facts About Drugs: Ecstasy. Retrieved October 18, 2006, from <http://www.acde.org/common/ecstasy.htm>.

<sup>7</sup> DEA. (2006, August). MDMA (Ecstasy). Retrieved October 18, 2006, from <http://www.dea.gov/concern/mdma.html>; NIDA Notes. Facts About MDMA (Ecstasy).

<sup>8</sup> WebMD. “New Drug Phenom: Ecstasy + Viagra = 'Trail Mix'.” Retrieved October 18, 2006, from <http://my.webmd.com/content/article/1728.84361>.

<sup>9</sup> Baltimore Sun. “Mixed Drugs Spur Renewed Warnings.”

<sup>10</sup> Centers for Disease Control and Prevention. (2001, August 24). “A Deadly Mix – Viagra and ‘Club Drug’ Use Found Prevalent.” Retrieved October 18, 2006, from [http://www.thebody.com/cdc/news\\_updates\\_archive/aug24\\_01/viagra.html](http://www.thebody.com/cdc/news_updates_archive/aug24_01/viagra.html).

<sup>11</sup> WebMD. “Sildenafil – Oral.” Retrieved October 18, 2006, from <http://www.webmd.com/drugs/mono-297-SILDENAFIL++ORAL.aspx?drugid=7417&drugname=Viagra>.

<sup>12</sup> National Review of Medicine. (2004, April 30). “The Agony and the Sextasy.” Retrieved October 18, 2006, from [http://www.nationalreviewofmedicine.com/issue/2004\\_04\\_30/men03\\_09.html](http://www.nationalreviewofmedicine.com/issue/2004_04_30/men03_09.html).

<sup>13</sup> Centers for Disease Control and Prevention. “A Deadly Mix – Viagra and ‘Club Drugs’ Use Found Prevalent.”

<sup>14</sup> Centers for Disease Control and Prevention. (2002, July 11). “San Francisco: Increased Risk of HIV and Sexually Transmitted Disease Transmission Among Gay or Bisexual Men Who Use Viagra.” Retrieved October 18, 2006, from [http://www.thebody.com/cdc/news\\_updates\\_archive/july11\\_02/viagra.html](http://www.thebody.com/cdc/news_updates_archive/july11_02/viagra.html).