Executive Office of the President
Office of National Drug Control Policy

ONDCP
Drug Policy Information Clearinghouse
FACT SHEET
February 2004
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MDMA (Ecstasy)

Background

The designer drug MDMA (3,4-methylenedioxymethamphetamine) or "ecstasy" is a synthetic drug with both psychedelic and stimulant effects. In the past, some therapists in the United States used the drug to facilitate psychotherapy. In 1988, however, MDMA became a Schedule I substance under the Controlled Substances Act.

In response to the Ecstasy Anti-Proliferation Act of 2000, the U.S. Sentencing Commission increased the guideline sentences for trafficking ecstasy. The new amendment, which became effective in May 2001 on an emergency basis, increases the sentence for trafficking 800 pills (approximately 200 grams) of ecstasy by 300%, from 15 months to 5 years. It also increases the penalty for trafficking 8,000 pills by almost 200%, from 41 months to 10 years. This new increase will affect the upper middle-level distributors. The amendment became permanent on November 1, 2001.

Currently, MDMA is predominantly a "club drug" and is commonly used at all-night dance parties known as "raves." However, recent research indicates that the use of MDMA is moving to settings other than nightclubs, such as private homes, high schools, college dorms, and shopping malls.

Effects

MDMA is a stimulant whose psychedelic effects can last between 4 and 6 hours and it is usually taken orally in pill form. The psychological effects of MDMA include confusion, depression, anxiety, sleeplessness, drug craving, and paranoia. Adverse physical effects include muscle tension, involuntary teeth clenching, nausea, blurred vision, feeling faint, tremors, rapid eye movement, and sweating or chills. Because of MDMA's ability to increase heart rate and blood pressure, an extra risk is involved with MDMA ingestion for people with circulatory problems or heart disease.

Rave party attendees who ingest MDMA are at risk of dehydration, hyperthermia, and heart or kidney failure. These risks are due to a combination of the drug's stimulant effect, which allows the user to dance for long periods of time, and the hot, crowded atmosphere of rave parties. The combination of crowded all-night dance parties and MDMA use has been reported to cause fatalities.

Research shows that MDMA causes damage to the parts of the brain that are critical to thought and memory. MDMA increases the activity levels of neurotransmitters such as serotonin, dopamine, and norepinephrine. The drug causes the release of the neurotransmitters from their storage sites, which increases brain activity. By releasing large amounts of the neurotransmitters and also interfering with neurotransmitter synthesis, MDMA causes a significant depletion in the neurotransmitters. It takes the brain a significant length of time to rebuild the amount of serotonin and other neurotransmitters needed to perform important functions.

In addition to the dangers associated with MDMA itself, users are also at risk of being given a substitute drug. For example, PMA (paramethoxyamphetamine) is an illicit, synthetic hallucinogen that has stimulant effects similar to MDMA. However, when users take PMA believing they are ingesting MDMA, they often think they have taken weak ecstasy because PMA's

effects take longer to appear. They then ingest more of the substance to attain a better high, which can result in death by overdose.

Adulterants may be added to ecstasy without the user's knowledge, resulting in additional danger to the user. According to the November 2002 Pulse Check report, ecstasy adulterants in Memphis included mescaline and methamphetamine, while in Los Angeles adulterants included codeine, dextromethorphan (DXM), and PMA.

In 1995, hospitals participating in the Drug Abuse Warning Network (DAWN) reported 421 mentions of MDMA. These mentions document the number of times a reference to MDMA was made during a drug-related emergency department (ED) visit. The number of ED MDMA mentions reported in 2002 reached 4,026 out of more than 1 million total drug mentions.

During 2002, approximately 75% of the ED MDMA mentions were attributed to ED patients age 25 and under. The primary reason for going to the ED after using MDMA was "unexpected reaction," cited in 1,578 of the ED visits involving MDMA. Another 1,215 MDMA-related ED visits were the result of an overdose.

Prevalence Estimates

The number of new MDMA users has risen since 1993, when there were 168,000 initiates. By 2001, the number of MDMA initiates reached 1.8 million. The National Survey on Drug Use and Health found that 15.1% of 18- to 25-year-olds surveyed in 2002 had used MDMA at least once in their lifetime (see table 1). There were 676,000 current MDMA users in 2002, meaning that they had used the drug within the month before being surveyed.

Table 1. MDMA use among U.S. population, 2002

Age Group	Lifetime	Past Year	Past Month
12–17	3.3%	2.2%	0.5%
18–25	15.1	5.8	1.1
26 and older	2.6	0.5	0.1
Total population	4.3	1.3	0.3

Source: National Survey on Drug Use and Health.

The University of Michigan's Monitoring the Future Study found that MDMA use among high school students declined from 2002 to 2003. Among 10th and 12th graders surveyed in 1996, annual prevalence of MDMA use (use in the past year) was 4.6% in both grades. By 2003, annual prevalence had decreased to 3% among 10th graders and 4.5% among 12th graders (see table 2).

Data on MDMA use by college students and young adults from 19 to 28 years old is also captured in the Monitoring the Future Study. In 2002, 12.7% of college students and 14.6% of young adults reported having used MDMA at least once. Approximately 6.8% of college students and 6.2% of young adults reported past year MDMA use (see table 2).

Table 2. Percentage of students and young adults reporting past year MDMA use, 1996–2003

Year	8th Grade	10th Grade	12th Grade	College Students	Young Adults
1996	2.3%	4.6%	4.6%	2.8%	1.7%
1997	2.3	3.9	4.0	2.4	2.1
1998	1.8	3.3	3.6	3.9	2.9
1999	1.7	4.4	5.6	5.5	3.6
2000	3.1	5.4	8.2	9.1	7.2
2001	3.5	6.2	9.2	9.2	7.5
2002	2.9	4.9	7.4	6.8	6.2
2003	2.1	3.0	4.5	NA	NA

NA: Not available.
Source: Monitoring the Future Study.

The Monitoring the Future Study also measures perceived harmfulness and disapproval of use by students. The 2003 study found that 41.9% of 8th graders, 49.7% of 10th graders, and 56.3% of 12th graders thought that trying MDMA once or twice was a great risk. This is up from 38.9%, 43.5%, and 52.2%, respectively, in 2002. Approximately 22% of 8th graders, 36% of 10th graders, and 58% of 12th graders surveyed in 2003 felt that MDMA was "fairly easy" or "very easy" to obtain.

Ecstasy was emerging, or was continuing to emerge, as a drug of abuse in all but five Pulse Check sites in 2002: Detroit, Miami, New Orleans, New York City, and Portland, Maine. In these five sites, ecstasy has either leveled off or is now considered an established drug of abuse. In 25 of the 40 Pulse Check sites, ecstasy is considered widely available by enforcement and epidemiologic/ethnographic sources.

Most ED visits involving club drugs also involve other drugs. In 2002, other drugs were found in 72% of the ED visits involving MDMA. Ecstasy continues to be taken with alcohol or marijuana, or both. It is also sometimes taken in combination or sequentially with various other legal and illegal drugs including LSD, GHB, ketamine, heroin, prescription pills (benzodiazepines or antidepressants), cough syrup, Viagra, and nitrous oxide.

Raves

MDMA is often found at nightclubs and raves. Raves first appeared in the United States in the late 1980s in cities such as San Francisco and Los Angeles. By the early 1990s, rave parties and clubs were present in most American metropolitan areas.

Raves are characterized by high entrance fees, extensive drug use, and overcrowded dance floors. Club owners often seem to promote the use of MDMA at their clubs. They sell overpriced bottled water and sports drinks to try to manage the hyperthermia and dehydration effects of MDMA use; pacifiers to prevent involuntary teeth clenching; and menthol nasal inhalers and neon glowsticks to enhance some of the other effects of MDMA.

Raves often are promoted as alcohol-free events, which gives parents a false sense of security that their children will be safe attending these parties. In reality, raves may be havens for the illicit sale and abuse of club drugs.

Cities and communities throughout the United States have attempted to reduce the number of raves in their areas and to curb the use of club drugs in these raves. Several cities have passed new ordinances designed to regulate rave activity. Other cities have reduced rave activity through enforcement of juvenile curfews, fire codes, health and safety ordinances, liquor laws, and licensing requirements for large public gatherings.

Production, Trafficking, and Enforcement

MDMA is most often manufactured clandestinely in Western Europe, primarily in Belgium and the Netherlands. These countries produce 80% of the MDMA consumed worldwide. This is primarily because of the availability of precursor and essential chemicals and international transportation hubs in this area of the world.

In the United States, the Drug Enforcement Administration's (DEA's) Chemical Control Program is working to disrupt the production of MDMA and other controlled substances by preventing the diversion of the precursor chemicals used to produce these substances. DEA registration, recordkeeping, and suspicious order reporting requirements apply to those who import, export, manufacture, and distribute the chemicals being monitored by DEA.

The United States works with other countries to prevent the diversion of precursor chemicals. As a result of the 1988 United Nations Drug Convention, parties to the convention became obligated to control their chemical commerce and to cooperate with each other in their efforts to prevent chemical diversion. The United States and other governments use the annual meetings of the United Nations Commission on Narcotic Drugs to promote international acceptance of chemical control and to highlight emerging chemical control concerns. During 1999, the International Criminal Police Organization (Interpol) reported several seizures of precursor chemicals in areas such as Spain, the Slovak Republic, and the Netherlands.

The majority of the MDMA produced in other countries is trafficked to the United States by Israeli and Russian organized crime syndicates that have forged relationships with Western European drug traffickers and gained control over most of the European market. These groups recruit American, Israeli, and Western European nationals as couriers. In addition, traffickers use express mail services, commercial flights, and air-freight shipments to deliver their merchandise. All major airports in Europe act as shipping points for MDMA destined for the United States. Currently, Los Angeles, Miami, and New York are the major gateway cities for the influx of MDMA from abroad.

According to DEA data, the national wholesale price range for MDMA tablets was $5 to $17 per dosage unit during 2001. The national retail price range during the year was $10 to $60 per tablet.

Domestically, DEA seized 196 MDMA tablets in 1993, 174,278 tablets in 1998, more than 1 million in 1999, more than 3 million in 2000, and more than 5.5 million in 2001. The U.S. Customs Service (USCS), now part of U.S. Customs and Border Protection, also reported a large increase in the number of MDMA tablets seized. USCS seized approximately 3.5 million MDMA tablets in 1999 and 9.3 million tablets in 2000.

According to Interpol, more than 14.1 million MDMA tablets were seized in Europe during 1999. This is nearly triple the amount seized in 1998 (5 million tablets). During the first half of 2000, more than 8.4 million MDMA tablets were seized in Europe. In 1999, global MDMA seizures totaled approximately 22 million tablets, up from 5.6 million in 1998.

Prevention and Enforcement Initiatives

In recent years, some initiatives have been developed to curb the use of MDMA and other club drugs. In 1999, the National Institute on Drug Abuse (NIDA) and its partners (American Academy of Child and Adolescent Psychiatry, Community Anti-Drug Coalitions of America, Join Together, and National Families in Action) launched a national research and education initiative, "Club Drugs: Raves, Risks, and Research," to combat the increased use of club drugs. Through this initiative, NIDA increased funding for

club drug research and launched a multimedia public education strategy to alert teens, young adults, parents, educators, and others about the dangers associated with MDMA and other club drugs.

In February 2002, the Partnership for a Drug-Free America (PDFA) launched a national MDMA education campaign. The campaign consists of television and print advertising and an MDMA microsite found within PDFA's Web site. The campaign is aimed at teens and their parents.

In 2002, DEA began Operation X-Out, a multifaceted, year-long initiative that focuses on identifying and dismantling organizations that produce and distribute MDMA and similar drugs in the United States and abroad. Some results of Operation X-Out include increasing the number of DEA investigations involving MDMA and other club drugs, enhancing airport interdiction task forces, creating new task forces in cities such as Miami and New York, creating a task force on Internet drug trafficking, and expanding cooperation with international law enforcement.

Street Terms

Street terms for MDMA

Adam	Ecstasy	Morning shot
B-bombs	E	Pollutants
Bens	Essence	Scooby snacks
Clarity	Eve	Speed for lovers
Cristal	Go	Sweeties
Decadence	Hug drug	Wheels
Dex	Iboga	X
Disco biscuit	Love drug	XTC

Conclusion

The synthetic drug MDMA is commonly found at rave parties, nightclubs, and, more recently, other settings such as schools, malls, and private homes that are frequented by youth and young adults. The damaging effects of the drug can be long lasting and are possible after only a small number of uses. The trafficking of MDMA is increasing at an alarming rate, and multiple agencies have reported large seizures of the drug.

Sources

Executive Office of the President:

Office of National Drug Control Policy

Pulse Check: Trends in Drug Abuse, November 2002. www.whitehousedrugpolicy.gov/publications/drugfact/pulsechk/nov02

Drug Policy Information Clearinghouse, Street Terms: Drugs and the Drug Trade, 2004. www.whitehousedrugpolicy.gov/streetterms/default.asp

National Institutes of Health:

National Institute on Drug Abuse

"Club Drugs Take Center Stage in New National Education and Prevention Initiative by NIDA and National Partners," December 2, 1999. www.drugabuse.gov/MedAdv/99/NR-122.html

Ecstasy: What We Know and Don't Know About MDMA www.drugabuse.gov/PDF/MDMAConf.pdf

Monitoring the Future 2003 Data From In-School Surveys of 8th-, 10th-, and 12th-Grade Students, December 2003. http://monitoringthefuture.org/data/03data.html#2003data-drugs

Monitoring the Future: National Survey Results on Drug Use, 1975–2002, Volume II: College Students & Adults Ages 19–40, 2003b. http://monitoringthefuture.org/pubs/monographs/vol2_2002.pdf

U.S. Department of Health and Human Services:

Substance Abuse and Mental Health Services Administration

The DAWN Report: Club Drugs, 2001 Update, October 2002. www.samhsa.gov/oas/2k2/DAWN/clubdrugs2k1.pdf

Emergency Department Trends From the Drug Abuse Warning Network: Final Estimates 1995–2002, July 2003. http://dawninfo.samhsa.gov/pubs_94_02/edpubs/2002final/files/EDTrendFinal02AllText.pdf

Results From the 2002 National Survey on Drug Use and Health: National Findings, September 2003. www.samhsa.gov/oas/nhsda/2k2nsduh/2k2SoFW.pdf

U.S. Department of Homeland Security:

Customs and Border Protection

Ecstasy News
www.cbp.gov/xp/cgov/newsroom/highlights/ecstasy_news.xml

U.S. Department of Justice:

Drug Enforcement Administration

Drug Intelligence Brief. Club Drugs: An Update, September 2001.
www.dea.gov/pubs/intel/01026/index.html

Drugs of Abuse, February 2003.

Drug Trafficking in the United States, September 2001.
www.dea.gov/pubs/intel/01020/index.html

Ecstasy and Predatory Drugs, February 2003.
www.dea.gov/pubs/ecstasy/predatory_drugs-4.pdf

Ecstasy: Rolling Across Europe, August 2001.
www.dea.gov/pubs/intel/01008/index.html

The Hallucinogen PMA: Dancing With Death, October 2000.
www.dea.gov/pubs/intel/20025intellbrief.pdf

Illegal Drug Price and Purity Report, April 2003.
www.dea.gov/pubs/intel/02058/02058.pdf

Office of Diversion Control, Chemical Control Program Web site.
www.deadiversion.usdoj.gov/chem_prog/index.html

National Drug Intelligence Center

Raves, Information Bulletin, April 2001.
www.usdoj.gov/ndic/pubs/656/656p.pdf

U.S. Department of State:

International Narcotics Control Strategy Report, 2002, March 2003.
www.state.gov/g/inl/rls/nrcrpt/2002/html

U.S. Sentencing Commission:

MDMA Drug Offenses: Explanation of Recent Guideline Amendments, May 2001.
www.ussc.gov/r_congress/mdma_final2.PDF

"Sentencing Commission Increases Penalties for High-Dollar Fraud Offenders, Sexual Predators, and Ecstasy Traffickers," April 16, 2001.
www.ussc.gov/PRESS/rel0401.htm

"Statement of Diana E. Murphy, Chair of the United States Sentencing Commission, Before the Senate Caucus on International Narcotics Control," March 21, 2001.
www.ussc.gov/testimony/ecstasytestimony2.pdf

Other Source:

Partnership for a Drug-Free America

"National Survey: Ecstasy Use Continues Rising Among Teens," February 11, 2002.
www.drugfreeamerica.org

This fact sheet was prepared by Michele Spiess of the ONDCP Drug Policy Information Clearinghouse. The data presented are as accurate as the sources from which they were drawn. Responsibility for data selection and presentation rests with the Clearinghouse staff. The Clearinghouse is funded by the White House Office of National Drug Control Policy to support drug control policy research. The Clearinghouse is a component of the National Criminal Justice Reference Service. For further information about the contents or sources used for the production of this fact sheet or about other drug policy issues, call:

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