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UNDERSTANDING ADDICTION *to* MOLLY

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Understanding Addiction
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Partying with Molly

It's been glamorized in pop music for years now. Miley Cyrus danced with it, Madonna asked about it at a concert, and Trinidad James started sweating as soon as he popped one. But who – or what – *is* Molly? What about this drug is so magical that it has a rabid following that would make any cult jealous?

Molly's Twisted History

To understand Molly's place in the ecosystem of today's illegal drugs, we have to go back just over a century, to a laboratory in Germany in 1912. Major pharmaceutical firm Merck was attempting to create a compound that could be used to control bleeding; one of the chemicals created as a part of this process was 3,4-methylenedioxy-N-methylamphetamine, which Merck received a patent for in 1914 and then proceeded to do nothing with for the next decade. Experimentation with the compound, which was referred to in shorthand as methylenedioxymethamphetamine, or just MDMA, was based on the fact that as an amphetamine, it showed numerous stimulant effects when used on animals. Still,

the drug found little use, and was put by the wayside.

Our understanding of the effects of MDMA took a sinister turn in the 1950s, however, when the US Army and CIA, in conjunction with a group of former German chemists and psychiatrists, began using MDMA in Project MKUltra, a series of experiments to develop the perfect chemical for mind control. MDMA, LSD, morphine, and a host of other powerful narcotics were used in attempts to weaponize psychotherapy. It was during these experiments that some of MDMA's more unique properties were observed – namely, its behavioral effects. Unlike the rest of the compounds used in Project MKUltra, MDMA did not cause hallucinogens or crush a subject's will; instead, it filled the subject with euphoria and a heightened sense of empathy. This attribute would later earn MDMA the classification of "empathogen" or "entactogen" – that is, a chemical that increases a person's natural inclinations towards empathy and emotional intelligence. However, this had little utility for the CIA, and efforts to weaponize MDMA were abandoned in favor of more effective chemicals, such as scopolamine.

MDMA went unregarded for another decade or so, when it came to the attention of University of California professor and psychopharmacologist Alexander Shulgin, who had been told about the drug by a few of his students who had successfully synthesized it and used it recreationally. Shulgin himself tried MDMA in 1976 and then introduced it to his colleague David Nichols; in

1978, the two of them published the first research paper analyzing the drug's psychotropic effects, calling them comparable "to marijuana, and to psilocybin ["magic mushrooms"] devoid of the hallucinatory component." Shulgin and Nichols proceeded to introduce the drug to their colleagues, including psychotherapist Leo Zeff. Between the three of them, a great amount of practical research was done on using MDMA's entactogenic effects as an aid to psychotherapy, as in the proper setting the drug would reduce the patient's inhibitions and allow them to better consider their senses of self.

By the early 1980s, MDMA had been spread around enough by these "underground psychotherapists" that it had gained popularity as a club drug, first in the European resort community of Ibiza and then in Dallas, Texas. Both its entactogenic properties and its stimulant effects made it extremely popular in the disco and nascent electronic music dance clubs, particularly in Dallas' burgeoning gay club scene, where it picked up its first street name, "Adam," although "Ecstasy" became the preferred nomenclature around 1982. The drug shortly became buzzworthy enough that the DEA placed it on Schedule I of the Controlled Substances Act in 1985, declaring that MDMA had no medical value whatsoever, although the DEA refused to look at Shulgin's research from the previous decade and did not commission any further studies to explore this claim.

MDMA, as Ecstasy, remained popular in the dance club and electronic music scene well into the late

1990s, and was considered to be as much a part of the scene as the glowsticks and the music itself. Ecstasy lost its appeal, however, around 2000, when a study claiming that Ecstasy was so neurotoxic that it would literally drill holes into a user's head gained a massive amount of media attention, including a special on MTV. Although the scientific community quickly pointed out that the study in question was inherently flawed, and the researchers who wrote the study soon claimed that they had accidentally used the methamphetamine instead of MDMA because of a mislabeled vial from their chemical supplier, the public perception of Ecstasy had already permanently shifted, and recreational use dropped off nationwide.

In the late 2000s, however, there was a resurgence of MDMA use, this time with a focus on the perceived purity of the new batches of the drug. For all the fake hyperbole behind the "holes in your brain" rhetoric from the years before, there was definitely a developing trend for Ecstasy tablets to be adulterated with other stimulants, with frequently negative results. This new MDMA was usually sold as loose powder or in clear gel caps filled with powder. It is assumed that at some point during this resurgence the nickname of "Molly" was coined, supposedly as a shortening of the word "molecule" and used to imply the heightened purity of the drug. Whether or not this was true at the time, it quickly stopped being so.

On average, four out of every ten tabs of Molly sold in the past fifteen years have actually contained no MDMA at all, and two out of every ten contain MDMA supplemented with some other chemical, leaving about only 30% of the overall supply consisting of pure MDMA. Yet now, even with the growing risk of adulterated or falsely advertised Molly, the drug has become more popular than ever.

So most people taking Molly really have no idea what their pills or powders are made up of, and that can lead to serious problems.

Common Adulterants in Molly

- MDEA ("Eve")
- 2-CB ("Nexus, "Venus," or "Bromo")
- TFMPP ("Legal X")
- Para-methoxy-amphetamine (PMA)
- Amphetamine ("speed")
- JWH-210 (synthetic marijuana)
- Pseudoephedrine (Sudafed)

- Caffeine
- Ketamine (“Special K”)
- DXM (Robitussin or “Robo”)
- GHB (“liquid X” or “lollipops”)
- BZP (“Frenzy” or “Nemesis”)
- Cocaine
- MDPV (“bath salts”)
- PCP (“angel dust”)
- Methylone (“explosion”)
- 4-Methylmethcathinone (“Meow”)
- Oxycodone (Percocet, Oxycontin)
- Lorazepam (Ativan)
- Acetaminophen
- Lidocaine
- Heroin

There are two major health concerns regarding the ubiquity of adulterated Molly. First is that there is simply no easy way of knowing the chemical makeup of a pill; while there are some chemical testing kits on the market, which can certainly help identify potentially problematic pills, but these are expensive,

cumbersome, and thanks to federal legislation, frequently illegal due to their categorization as drug paraphernalia. So most people taking Molly really have no idea what their pills or powders are made up of, and that can lead to serious problems.

Secondly – and this in some way relates to the previous issue – many of these drugs have severely negative interaction effects due to the widely varying ways they effect the central nervous system. Caffeine, for example, is a fairly innocuous substance in and of itself, and most users of Molly (and of course the rest of the population) probably imbibe their fair share of caffeine during any given day. But introducing caffeine into the bloodstream of someone high on MDMA can be lethal, as caffeine can exacerbate MDMA's normal actions on the CNS, accelerating the development of dangerous symptoms such as hyperthermia. And unfortunately, around 30% of all Molly contains caffeine, with the average pill consisting of anywhere between 250 and 400 milligrams of caffeine – as much as four cups of coffee! Other adulterants, such as common street drugs (heroin, cocaine, bath salts, and the like) can either exacerbate or counteract the effects of MDMA, resulting in heightened blood pressure, hyperthermia, nausea, digestive problems, or hallucinations. In fact, according to some sources, around 40% of all pills and powders sold as Molly contain no MDMA at all!

Of course, MDMA itself, even when completely pure, has its own health risks. While the majority of its effects

on the human body are still hotly debated, thanks in part to some extremely misleading research about its inherent neurotoxicity, MDMA unquestioningly impairs the judgment of anyone using it. Moreover, MDMA's stimulant effects can be lethal when the drug is taken in a large enough quantity; MDMA has hyperthermic effects, raising the user's core body temperature. In the high-temperature environments of the dance clubs where MDMA is most commonly used, even low-level hyperthermia can quickly accelerate to lethal levels, exacerbated by natural dehydration or any other drugs and alcohol in the user's system. Most fatalities brought on by MDMA toxicity are directly attributable to this hyperthermic effect.

Another major health risk of MDMA abuse is "serotonin syndrome" or "serotonin toxicity," which is when the brain is overwhelmed by serotonin activity in the central nervous system. Serotonin is one of the neurotransmitters that MDMA interacts with, creating the euphoric feelings that the drug is known for. Too much MDMA can send the central nervous system into overdrive, essentially poisoning the body with the excess serotonin. Although serotonin syndrome is not necessarily fatal, one of the most high-profile deaths from MDMA, Libby Zion, is generally agreed to have died from MDMA-induced serotonin syndrome in 1984.

Symptoms of Serotonin Syndrome

- Headache
- Agitation
- Hypomania
- Mental Confusion
- Hallucinations
- Coma
- Shivering
- Sweating
- Hyperthermia
- Hypertension
- Tachycardia
- Nausea
- Diarrhea
- Muscle spasms
- Tremors
- Consumptive coagulopathy

Signs and Symptoms of Molly Abuse

Diagnosing someone's habit of Molly abuse can be difficult, as MDMA is not "classically" addictive like so many other street drugs; the human body does not develop a physical dependence on the chemical itself, and thus there are also no major withdrawal symptoms. MDMA can create a state of psychological dependence, however, and the body will also over time adjust to the presence of MDMA in the bloodstream even as the MDMA completely depletes the brain's serotonin supply, requiring larger and larger doses to have any effect.

MDMA can create a state of psychological dependence...

While not classically addictive, studies of both youth and adult demographics show that there are a large number of people just barely straddling the line of technically being classified as Molly addicts. Colloquially referred to among researchers as "diagnostic orphans," these people display enough of the medically-sanctioned behaviors of addiction to warrant concern and medical treatment, but are still capable of functioning in their day-to-day lives. Relaxing the diagnostic criteria for addiction shows that 20% of adult MDMA users report at least one criteria for abuse or dependence, along with 23% of adolescent MDMA users.

Of course, once you factor in the myriad highly addictive substances found in most Molly now, the numbers of potential addicts rise by a significant amount. While there are no hard statistics about the prevalence of tainted Molly on the overall market, the website ecstasydata.org gives reports on pills that interested parties have sent to them, showing that there has definitely been an increase in contaminated drugs over the past decade.

CHECKLIST:
Behavioral Signs of Molly Abuse

- ☐ Frequently attends dance clubs or "raves" and comes home unnaturally exhausted
- ☐ Has a high frequency of abusing marijuana or alcohol
- ☐ Extreme depression in the middle of the week
- ☐ Frequently gets sick or other signs of lowered immune system
- ☐ Sleep apnea or insomnia
- ☐ Chronic exhaustion
- ☐ Liver problems

CHECKLIST:
Symptoms of Acute Molly Toxicity or Overdose

- ☐ Hyperthermia
- ☐ Tachycardia
- ☐ Myocardial infarction (heart attack)
- ☐ Hypertension
- ☐ Catatonia
- ☐ Excessive sweating
- ☐ Manic energy and behavior

Treatment for Molly Addiction and Abuse

The Detox Process

Overcoming an addiction to any of Molly's common components requires going through withdrawal – the period where the user's body, which has come to rely on the drugs to function, must return to a state of homeostasis, purging any remaining quantities of toxins still present. While this process is short if the user has only abused pure MDMA, which has a half-life of about ten hours, the presence of any adulterants in their supply of Molly can have very unpredictable results. This process is usually painful, and involves a whole list of symptoms that are almost impossible to handle without outside assistance. Addicts who attempt to go through withdrawal on their own inevitably relapse, which usually leads to an overdose; relapsing addicts will resume using in the same quantities they were used to before beginning withdrawal, but during the withdrawal period their tolerance for the drug will have gone down, and thus what before may have only gotten them a little high can now possibly result in a seizure or cardiac arrest. This is why medical supervision is so important, especially during the withdrawal process. Properly trained recovery specialists can administer medications to help ease the pain of withdrawal

symptoms, as well as provide counseling and assistance with any psychological issues that may arise.

Addicts who attempt to go through withdrawal on their own inevitably relapse, which usually leads to an overdose...

Common Symptoms of MDMA Withdrawal

- Depression
- Sleep problems (insomnia, etc.)
- Agitation or anxiety
- Memory problems
- Mood swings

If the Molly the patient has been using contains chemicals other than pure MDMA, then the withdrawal process is likely to be much more arduous, with a high probability of severe symptoms like hallucinations or delirium. In cases where Molly has been contaminated with cocaine or heroin, or especially bath salts, please read our other works

on the addiction cycle of those drugs to better understand the relevant withdrawal processes.

Inpatient Rehabilitation

Successfully recovering from Molly addiction means getting help from the right people – people like the staff at Behavioral Health of the Palm Beaches. Once you've checked into a recovery facility, you will be placed in a detoxification program so that you will have the necessary medical assistance and supervision as you go through withdrawal. After the detox, which cleans your system of any drugs or other toxic substances, you will enter an inpatient residential rehabilitation program.

In a residential rehab program, the patient is removed from whatever circumstances may have influenced their addiction, and by no longer being exposed to that environment they can more easily undergo the process of recovery. For most patients, this kind of program lasts for thirty days, during which they stay in a supervised facility and attend therapy sessions and workshops to address the root causes of their addiction. Residential programs like those at Behavioral Health of the Palm Beaches provide both medical supervision and emotional support to patients at this vulnerable stage in their recovery.

Alternative Treatment Types

For patients in need of greater support, Behavioral Health of the Palm Beaches offers a long-term residential rehab program that can last from two to twelve months. This program is focused on giving patients a new perspective on life, which can be extremely helpful for people who have spent many years grappling with addiction, as the effects of long-term MDMA use on both a person's brain chemistry and personality are extensive.

Recovery Maintenance Programs

After a patient has finished treatment at Behavioral Health, their recovery is by no means finished. Maintaining sobriety can be a difficult task after returning to the pressures of everyday life, and that is why Behavioral Health offers a supportive community for alumni of their programs, as well as for the friends and loved ones of those alumni. Through the Behavioral Health Alumni website, former patients can maintain an open dialogue about their progress and their successes, chat with other fellow alums, and organize in-person events. It can be impossible to maintain recovery alone, but with the help of the Behavioral Health alumni community, there will always be someone to talk to who is personally invested in your success.

A Clear Path to Recovery

Recovery is a continuous process; even after you've finished detoxification and rehabilitation, there will still be hardships to overcome. But Behavioral Health's program will give you the tools and the strength to get through those hard times.

There is hope. We can help.

Resources

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