

# McHenry Western Lake County EMS System

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## Club Drugs– Why are they so popular?

Club Drugs, like MDMA, LSD, Ketamine, Rohypnol, and Cocaine are used due to the belief that their respective effects can enhance experiences at night clubs and raves. These drugs produce enhanced sensations, feelings, and even hallucinations that attracts users to try them. Lack of knowledge or lack of concern for risks associated with these drugs brings implications of patient care to EMS. Providers need to be knowledgeable about different types of club drugs, how they are used, their effects, and what to look for in terms of side effects and potential overdose symptoms. In general, all of these drugs require supportive care as the main treatment, but there are cases where symptoms may progress to airway compromise, unconsciousness, seizures, stroke, or coma to name a few. Knowledge of these types of drugs will assist in the management of these patients and allow the provider to anticipate needs related to patients care



## Initial Management of a Drug Overdose

### DRUG OVERDOSE / POISONING

Case by case determination if time sensitive

#### GENERAL APPROACH

- History:** Determine method of injury: ingestion, injection, absorption, or inhaled; pts often unreliable historians.
  - IMC special considerations:**
    - Uncooperative behavior may be due to intoxication/poisoning; assess for underlying pathology
    - Anticipate hypoxia, hypercarbia, respiratory and/or cardiac arrest, hyper or hypotension, dysrhythmias, vomiting, seizures, AMS, coma. **Monitor ECG, SpO<sub>2</sub> and ETCO<sub>2</sub> in all pts with AMS or given sedatives.**
    - Assess need for advanced airway if GCS ≤ 8, aspiration risk, or airway compromised unless otherwise specified
    - Support ventilations w/ 15L O<sub>2</sub>/BVM if respiratory depression, hypercarbic ventilatory failure
    - Large bore IV/IO NS titrated to adequate perfusion (SBP ≥ 90; MAP ≥ 65); monitor ECG
    - Impaired/nondecisional patients may not refuse treatment/transport
  - AMS, seizure activity, or focal neurologic deficit: Assess **blood glucose**; if < 70: treat per Hypoglycemia SOP (pg 34)
- Possible opiate toxicity w/ AMS & respiratory depression/arrest: NALOXONE 1 mg IVP/IO [ALS] IN/IM [EMR/BLS]**  
May repeat q. 30 sec until breathing adequate up to 4 mg. All additional doses require OLMC.
- Anxiety/serotonin syndrome: MIDAZOLAM 2 mg slow IVP q. 2 min (0.2 mg/kg IN) up to 10 mg titrated to response**
- Tonic clonic seizures: MIDAZOLAM 2 mg IVP/IO q. 30-60 sec (0.2 mg/kg IN) up to 10 mg IVP/IN/IO prn**  
*If IV/IO unable/IN contraindicated - IM: 5-10 mg (0.1-0.2 mg/kg) max 10 mg single dose*  
All routes: May repeat to total of 20 mg prn if SBP ≥ 90 (MAP ≥ 65) unless contraindicated.  
If hypovolemic, elderly, debilitated, chronic dx (HF/CPD); and/or have taken opiates, alcohol, or CNS depressants:  
↓ total dose to 0.1 mg/kg (½ normal dose) for anxiety.
- Excited delirium/violent/severe agitation: KETAMINE 2 mg/kg slow IVP (over 1 min) or 4 mg/kg IN/IM (max 500 mg)**  
**Recommended approach if NO IV/IO and based on estimated pt weight:**  
**50 mg (1 mL) IN** each nostril (unless contraindicated); **150 mg (3 mL) IM** (may use both thighs through clothing prn.  
If combativeness persists: **Repeat 50 mg (1 mL) IN** at least 90 seconds after last IN dose to max dose.  
Use caution in pts with active psychosis.

Don't Forget Scene Safety!!!!

Don't touch any drugs

unless necessary

If you have to, ALWAYS wear gloves



## Rohypnol

Rohypnol is a benzodiazepine that is not approved for use in the United States. Also known as the “Date Rape drug”, Rohypnol has powerful sedative effects and can be dissolved in liquid. This drug produces short term amnesia and sedation, similar to the Midazolam on your truck, but may also produce blackouts, where the patient may have no memory of what happened prior to taking it, whether purposefully or unknowingly. These effects can be amplified if taken with alcohol. Other effects seen may include irritability, hallucinations, slurred speech, headache, along with slow respiratory rate and heart rate. Treatment for

these patients focuses on supportive care. Also, consider contacting law enforcement for patients that report no knowledge of taking the drug.

**DEPRESSANTS: Barbiturates:** Phenobarbital, Seconal (secobarbital) **Benzodiazepines:** diazepam (Valium), midazolam (Versed), lorazepam (Ativan), Librium, flunitrazepam (Rohypnol) - Relatively non-toxic except when combined with other CNS depressants (ETOH). **GHB:** Cherry meth, Easy lay, G-riffic, Grievous body harm, liquid ecstasy, liquid X, liquid E, organic quaalude, salty water, scoop, soap, and somatomax; SSRIs

4. Observe for CNS depression, respiratory depression, apnea, nystagmus, ↓ P, ↓ BP, seizures. *Supportive care.*

**Dextromethorphan (DXM):** Active ingredient in over-the-counter cough-suppressants. Liquid & capsule/tablet forms. Abuse referred to as “Robotripping” referring to Robitussin®, and using “Skittles” or “Triple C’s” due to red pill forms in Coricidin Cough & Cold® products. Acts as a dissociative anesthetic with increasing effects depending on amount consumed. Clinical effects may **mimic ketamine** (including nystagmus).

4. **Supportive care:** Check for salicylate or *acetaminophen intoxication*, as preparations are often coformulated. If coformulated with *diphenhydramine*, look for S&S of tricyclic antidepressant-like sodium channel blockade (wide QRS and/or abnormal R wave in aVR).

5. Treat Na channel blockade with **SODIUM BICARBONATE** (See cyclic antidepressants)

## LSD

D-lysergic acid diethylamide, or LSD, is an extremely powerful hallucinogen that causes sensations and images to feel and look real when they are not. Symptoms patients may present with include rapid heart rate, nausea, and intensified feelings. Patients may also experience panic, fear, and anxiety sometimes referred to as “a bad trip”. Effects of the drug commonly last up to 90 minutes, but may vary. Care for patients after taking LSD are supportive. Try to maintain a calm environment to not exacerbate the effects of the drug.

## Ketamine

Ketamine, sometimes referred to as Special K, is a dissociative anesthetic. It has sedative as well analgesic properties. It can also produce dream-like and hallucinogenic effects on the user, and has been reported to cause “out of body experiences” in higher doses. A risk of Ketamine use is called emergence phenomena. This reaction is directly related to size of the dose taken and frequency. When it occurs, patients may present with symptoms similar to schizophrenia. Patients experiencing and overdose of Ketamine will need supportive, calm care, so as to not overstimulate them and trigger hallucinations.

**Fun Fact:**

*Spravato (esketamine) is being trialed to treat resistant depression*

**HALLUCINOGENS:** Lysergic acid diethylamide (LSD), phencyclidine (PCP, Angel dust, TIC); cannabis, ketamine, methoxetamine (MXE) -analog of ketamine, (structural similarity to PCP). Synthetic cannabinoids come as white/off-white powders or may be combined with plant products and sold as *Spice, K2, Chill Zone, Sensation, Chaos, Aztec Thunder, Red Mercury, and Zen*. May be ingested or insufflated (if powdered chemicals) or smoked when mixed with other plant products. Liquid forms increasingly popular for use in electronic cigarette devices. Belong to varied classes of designer drugs and do not resemble THC in chemical structure.

**S&S:** Variable (mild to significant paranoia and agitation resulting in self-harm); nystagmus, AMS (out-of-body experiences), significant analgesia

4. Supportive care, quiet environment devoid of stimulation (lights, noise and touch)

3,4-methylenedioxymethamphetamine (MDMA) or Ecstasy is a drug that can be frequently seen in night clubs, parties, or raves. “It is chemically similar to both stimulants and hallucinogens, producing feelings of increased energy, pleasure, emotional warmth, and distorted sensory and time perception,” (National Institute on Drug Abuse, 2021). Also called “Molly”, MDMA stimulates three neurotransmitters, Serotonin, Norepinephrine, and Dopamine to produce its effects. It does come with negative effects, as do most drugs. Chills, sweating, nausea, and teeth clenching are common side effects. Users may even have items similar to pacifiers to put in their mouths to combat the teeth clenching. One dangerous side effect of MDMA is hyperthermia. MDMA can cause elevated body temperatures, which, coupled with the warm, crowded environment of night clubs can raise core body temperatures to dangerous levels. Patients taking MDMA should be treated with supportive care and careful monitoring for elevated temperatures and seizures.

## MDMA- Ecstasy

**STIMULANTS: Amphetamines:** Benzedrine, Dexedrine, Ritalin, Methamphetamine (crystal, ice); **ECSTASY:** “Molly” - MDMA (methylene-dioxy-methamphetamine), designer drug used at “rave” parties with stimulant and hallucinogenic properties. Produces feelings of increased energy and euphoria and distorts users’ sense and perception of time. May have S&S of serotonin syndrome (hyperthermia, HTN, tachycardia, AMS, ophthalmic clonus, hyperreflexia, clonus, muscle rigidity, and bruxism (teeth grinding—users known to use pacifiers). Suspect if pt is holding a Vicks vapor rub inhaler; anticipate seizures). **COCAINE** (“Coke”, “Crack”, “Blow”, “Rock”), **ephedrine, PCP; BATH SALTS** produce clinical effects like amphetamines or other stimulants. Sympathomimetic effects (↑ HR, BP & Temp; diaphoresis; agitation; hallucinations and psychotic S&S

4. Supportive care; prepare to secure pt safety with restraint if necessary  
Treat tachycardia, dysrhythmias, cardiac ischemia, and hyperthermia per appropriate SOP.
5. **If generalized tonic clonic seizure activity, anxiety, severe HTN: MIDAZOLAM** (see general approach)
6. **If excited delirium, violent, severe agitation: KETAMINE** (see general approach)
7. **If hallucinations:** quiet environment devoid of stimulation (lights, noise and touch)

Cocaine is a very addictive drug made from the coca plant. Similar to MDMA, Cocaine targets the neurotransmitter, Dopamine. It doesn’t stimulate Dopamine release though, it blocks the reuptake of it allowing large amounts of it to remain active within the brain, producing feelings of happiness, hyper-alertness, and excessive energy. These effects are what triggers the addiction, as the effects are short lasting. As stated by The National Institute on Drug Abuse, “the flood of dopamine in the brain’s reward circuit strongly reinforces drug-taking behaviors,” (National Institute on Drug Abuse, 2021). Negative effects of cocaine use can include tremors, rapid or irregular heartbeats, nausea, and restlessness. In patients presenting with an overdose of cocaine, treatment focuses on supportive care as there is no reversal agent for cocaine. Patients may also present with symptoms similar to heart attacks, strokes, or seizures at which point patient care would then shift to management of these presenting symptoms.

Name: \_\_\_\_\_ Dept: \_\_\_\_\_ Email: \_\_\_\_\_

U I P L V G O L R B Y K M V S  
D O D H X R H T G A E D E H X  
X V Z Y I U K Q A T V C R Z V  
L O N P Y H O R A V N E F K P  
C K V E W A Z M Q E A J S G L  
V C S R H I I K G V U R W Z I  
W V C T T N E R L I B V P O U  
N F C H E B E K T T W V V S Z  
S T E E Q M J V A R X I X T Y  
P S A R E T V L D O D U V G L  
M K N M E S C D O P A M I N E  
G E U I J O I J P P K U Q A I  
L A Z A H C A N A U E A P R G  
N I N O T O R E S S O J E V O  
Z H L L V O A W I V C P T L F

## Club Drugs: CE Credit



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**Answer the following questions to find the words hidden in the puzzle above:**

1. What club drug is a dissociative anesthetic? \_\_\_\_\_
2. Which club drug is not approve for use in the United States? \_\_\_\_\_
3. Treatment for resistant depression may use what drug? \_\_\_\_\_
4. What is the primary care for club drug overdose? \_\_\_\_\_
5. What is the phenomena related to Ketamine overdose called? \_\_\_\_\_
6. What neurotransmitter does Cocaine focus on? \_\_\_\_\_
7. Where are club drugs commonly found? \_\_\_\_\_
8. What is the dangerous side effect of MDMA? \_\_\_\_\_
9. What drug can Rohypnol be added to hoping to amplify its effects? \_\_\_\_\_
10. MDMA stimulate what neurotransmitter? \_\_\_\_\_

**Continuing Education Hours: Each completed newsletter will earn the provider 0.25 hours of continuing education**

*For CE Credit, Please scan your quiz to Cindy Tabert by email to [cynthia.tabert@nm.org](mailto:cynthia.tabert@nm.org). If you are **NOT** a provider within of the McHenry Western Lake County EMS System, please include your mailing address. You may submit by email or via mail to: Northwestern Medicine – McHenry Hospital EMS, 4201 Medical Center Drive, McHenry, Illinois 60050. We will forward verification of your continuing education hours to your home address.*

References:

[Drugabuse.gov](http://Drugabuse.gov) | [National Institute on Drug Abuse \(NIDA\)](http://NationalInstituteonDrugAbuse(NIDA))