

# The “Other Drug”

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- Presented by Rick Moldenhauer, MS, LADC, ICADC, LPC  
Treatment Services Consultant/State Opioid Treatment Authority  
P: (651) 431 2474  
F: (651) 431 7449  
Alcohol and Drug Abuse Division, DHS  
PO Box 64977  
St Paul, Minnesota 55164-0977  
richard.moldenhauer@state.mn.us

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## Diphenhydramine



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- **Diphenhydramine HCl (Benadryl, Nytol, Unisom)** is an OTC antihistamine, sedative and hypnotic, also used for the treatment of extrapyramidal side effects of typical antipsychotics.
- In the 1960s it was found that diphenhydramine inhibits reuptake of the neurotransmitter serotonin, leading to the invention of fluoxetine (Prozac), a selective serotonin reuptake inhibitor (SSRI).
- Diphenhydramine blocks the effect of histamine at H1 receptor sites, making it a popular choice for treatment of allergic sx;
  - rhinitis,
  - hives,
  - motion sickness,
  - insect bites and stings.

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## Diphenhydramine intox

- Diphenhydramine is a potent anticholinergic agent:
- profound drowsiness
- possibilities of motor impairment (ataxia),
- dry mouth and throat,
- flushed skin,
- rapid or irregular heartbeat (tachycardia),
- blurred vision at nearpoint due to lack of accommodation (cycloplegia),
- abnormal sensitivity to bright light (photophobia),
- constipation,
- pupil dilation (mydriasis),
- urinary retention (ischuria),
- difficulty concentrating,
- visual disturbances,
- hallucinations,
- confusion,
- erectile dysfunction, and
- delirium.
- Twitching; Severe, prolonged twitching and muscle spasm have also been experienced.

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- Diphenhydramine recreationally is a higher dose than recommended (usually between 225mg and 450mg) for its deliriant effects.
- Diphenhydramine is a component of the recreational form of heroin known as "cheese" or "chiva".
- The mental effects are described by many as "dreaming while awake" involving visual and auditory hallucinations which, unlike those experienced with most psychedelic drugs, often cannot be readily distinguished from reality.
- high dose can cause hallucinations which places them in a familiar situation with people and friends and rooms they know, while in reality being in a totally different setting. Inexperienced users of hallucinogens are liable to panic.
- Side effect profile consistent with tropane glycoalkaloidal poisoning. This is due to antagonism of muscarinic acetylcholine receptors in both the central and ANS which inhibits various signal transduction pathways. In the CNS, diphenhydramine readily crosses the blood-brain barrier, exerting effects within the visual and auditory cortex.
- Other CNS effects include confusion and temporary amnesia.

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# Dextromethorphan



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- (DXM or DM) is an antitussive (cough-suppressant) drug found in many OTC cold and cough medicines.
- it is generally administered via syrups, tablets, or lozenges.
- When taken at higher doses, dextromethorphan acts as a dissociative hallucinogen. It produces effects similar to those of ketamine and phencyclidine (PCP), which affords it a high potential for abuse.

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- DXM is used in coming down from narcotics and other habit-forming drugs (including nicotine); an inhibitor of many of the brain receptors involved in narcotic action on the brain.
- For this purpose, DXM is more effective when combined with an oxidase inhibitor such as quinidine.
- Dextromethorphan hydrobromide monohydrate is a salt of the methyl ether dextrorotatory isomer of levorphanol, a narcotic analgesic.
- United States Patent 6207674
- <http://www.freepatentsonline.com/6207674.html>

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- DXM is rapidly absorbed from the GIT and metabolizes in 15–60 minutes.
- T 1/2 is approximately three to eight hours for dextromethorphan-hydrobromide and 10 to 12 hours for dextromethorphan-polistirex.
- The average dosage for antitussive therapy is 10 mg to 30 mg. The time to re-dose depends on the specific preparation being used.
- Administration of DXM can trigger a histamine release (an allergic reaction).

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- Side-effects of DXM use can include;
- body rash/itching,
- disassociation,
- nausea as well as other gastrointestinal disturbances,
- drowsiness,
- dizziness,
- excitation,
- vomiting,
- blurred vision,
- dilated pupils,
- sweating, fever,
- hypertension,
- shallow respiration,
- diarrhea,
- urinary retention, and
- increases in pulse and blood pressure,
- body temperature.

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- DXM, when consumed in low recreational doses (under 200 mg), is described as having a euphoric effect.
- With higher doses (400 mg), intense euphoria (or dysphoria), vivid imagination, and closed-eye hallucinations may occur.
- With very high doses (600 mg and over), profound alterations in consciousness, often out-of-body experiences or temporary psychosis.
- Frequent and long-term usage at very high doses can lead to toxic psychosis and permanent psychological problems.
- Most users find high doses to be uncomfortable and are unwilling to repeat them. Flanging (speeding up or slowing down) of sensory input is characteristic at any recreational dosing level.
- Estimated LD50 between 50 and 500 mg/kg. It is generally accepted that the antidote to DXM overdose is naloxone, administered intravenously.

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# Coricidin



- **Coricidin, Coricidin 'D'** (decongestant), or **CoricidinHBP** (High Blood Pressure), is the name of a drug that contains dextromethorphan and chlorpheniramine maleate (antihistamine). Varieties of Coricidin may also contain acetaminophen (analgesic/antipyretic) and guaifenesin (expectorant).

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- Coricidin used in high doses as a recreational, contains the psychoactive drug dextromethorphan.
- Referred to as C's, Corey, Red Devils (Red D's), Skittles, or CC's.
- Use of Coricidin for this purpose became dangerous after chlorphenamine replaced the less harmful pseudoephedrine in 2002.
- Chlorphenamine is an anticholinergic, causing acute anticholinergic syndrom.
- This may be compounded by the fact that dextromethorphan and chlorpheniramine are both metabolized by CYP2D6 isozyme of Cytochrome P450.
- This could increase the plasma concentration of both drugs by inhibiting metabolism and increasing blood serum concentrations. Fatalities have resulted from overdoses of chlorphenamine.

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## acute anticholinergic syndrom.

- Ataxia; loss of coordination
- Decreased mucus production in the nose and throat; consequent dry, sore throat
- Xerostomia, (dry mouth)
- Cessation of perspiration; consequent decreased epidermal thermal dissipation leading to warm, blotchy, or red skin
- Increased body temperature
- Pupil dilation (mydriasis); consequent sensitivity to bright light (photophobia)
- Loss of accommodation (loss of focusing ability, blurred vision — cycloplegia)
- Double vision (diplopia)
- Increased heart rate (tachycardia)
- Easily startled
- Urinary retention
- Diminished bowel movement, sometimes ileus
- Increased intraocular pressure, dangerous for people with narrow-angle glaucoma
- Shaking

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# Salvia Divinorum



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- Its primary psychoactive constituent is a diterpenoid known as *salvinorin A* which is a potent  $\kappa$ -opioid receptor agonist.
- Salvinorin A is unique in that it is the only naturally occurring substance known to induce a visionary state this way.
- *Salvia divinorum* can be chewed, smoked, or taken as a tincture to produce experiences ranging from uncontrollable laughter to much more intense and profoundly altered states. The duration of effects is much shorter than that of other, more well-known psychedelics; the effects of smoked salvia typically last for only a few minutes.
- The most commonly reported after-effects include an increased feeling of insight, improved mood, sense of calmness, increased sense of connection with nature—
- Less often, it may cause dysphoria (unpleasant or uncomfortable mood).
- *Salvia divinorum* is not generally understood to be toxic or addictive. As a  $\kappa$ -opioid agonist, it may have potential as an analgesic and as a therapeutic tool for treating drug addictions.

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# Catnip

- Contains Nepetalactone:
- It is a weak sedative, antispasmodic, febrifuge, and antibacterial. In high doses it also has an emetic effect. Nepetalactone also has an effect on some insects, repelling the cockroach and mosquito, but it is poisonous to some common flies and a sex pheromone to aphids.



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## METHADONE

- Methadone HCl is a narcotic agonist used to treat opiate addiction either through maintenance or withdrawal.
- Is can also be used to treat pain

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## Methadone found in:

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| <ul style="list-style-type: none"><li>• OTP:</li><li>• Pink liquid or pink disk</li><li>• Individual mg differences</li><li>• Should be in bottle from OTP</li><li>• Controlled by CFR42.8</li></ul> | <ul style="list-style-type: none"><li>• Pain:</li><li>• White pill</li><li>• 5, 10, or 40mg</li><li>• Any Pharmacy label</li><li>• Controlled by 21 CFR 1306</li></ul> |
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## Buprenorphine

Buprenorphine is a partial agonist at the mu-opioid receptor and an antagonist at the kappa-opioid receptor.  
Naloxone is an antagonist at the mu-opioid receptor.

Suboxone  
Subutex

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## Drug Addiction Treatment Act (DATA) 2000

- Public Law 106-310, amended 21 U.S.C 823(g)
- -Allows Private MD/DO to use buprenorphine formulation in Office Based Opiate Treatment (OBOT)
- -Limits to initially 30 patients, then after one year 100 patients
- -Must refer for treatment

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## suboxone

- **SUBOXONE is supplied as sublingual tablets in white HDPE bottles..**
- Hexagonal orange tablets containing 2mg buprenorphine with 0.5mg naloxone
- NDC 12496-1283-2 30 tablets per bottle
- Hexagonal orange tablets containing 8mg buprenorphine with 2mg naloxone
- DC 12496-1306-2 30 tablets per bottle
- Store at 25°C (77°F), excursions permitted to 15-30°C (59-86°F) [see USP Controlled Room Temperature]
- SUBOXONE is the preferred medication for maintenance treatment due to the presence of naloxone in the formulation.

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## subutex

- **SUBUTEX is supplied as sublingual tablets in bottles and in white / opaque blister strips packed in a cardboard carton.**
- Oval white tablets containing 2mg buprenorphine
- NDC 12496-1278-2 30 tablets per bottle
- Oval white tablets containing 8mg buprenorphine
- NDC 12496-1310-2 30 tablets per bottle
- Store at 25°C (77°F), excursions permitted to 15-30°C (59-86°F) [see USP Controlled Room Temperature]

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- Buprenorphine has a mean elimination half-life from plasma of 37 h.
- SUBOXONE and SUBUTEX tablets should be placed under the tongue until they are dissolved.
- The recommended target dose of SUBOXONE is 16 mg/day. The dosage of SUBOXONE should be progressively adjusted in increments / decrements of 2mg or 4mg to a level that holds the patient in treatment and suppresses opioid withdrawal effects. This is likely to be in the range of 4mg to 24mg per day depending on the individual.

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## Xanax (alprazolam)



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## Klonopin (clonazepam)



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## Water drunk

- Hypotonic expansion
- Normal hydration is 30ml/kg body weight per day; out-put is 2 ltrs
- Huge water intake creates insufficient electrolyte concentration
- Hypertension, V-Fib, MI
- Can appear as alcohol intoxication

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## Jimson weed (stink weed)



- Contains atropine and scopolamine
- Anticholinergics/deliriant

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## Budder

- Budder is reported as being the purest cannabis product available, at anywhere between 82% and 99.8% THC/CBN/CBD, making it several times more potent than the buds of the cannabis plant that are usually consumed (5%–28%).
- One hit of Budder is supposedly equal to 1 – 2 full cannabis joints.
- Budder is made by whipping in air and freezing isomerized hash oil.
- Isomerization is an additional chemical step in which the less psychoactive chemical  $\Delta^8$ -tetrahydrocannabinol, found in Cannabis, is converted to the more active  $\Delta^9$ -tetrahydrocannabinol..



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## EoTH



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## Nocoderm CQ



- Approved by FDA in 1991, available in 7, 14 and 21mg patches
- qd application
- A cigarette delivers roughly 1mg of nicotine
- The LD50 of nicotine is 0.5-1.0 mg/kg can be a lethal dosage for adult humans

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## Cranial rectal inversion w/ matasis



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## Drinking urine to get high

- Rumored w/ methamphetamine use
- Basic use is ¼ gram (250mg), BCA reports ~40% (100mg) ACTUAL M.A.
- UDS at BCA are in mg/L, mg =  $10^{-3}$ , or .001L
- About 30% of MA is excreted unmetabolized
- For a ¼ gram, ~100mg is actual MA, of which ~30mg/L is excreted.
- For a 220 lbs (100kg) man, you would need to drink 8+ Liters to theoretically feel an effect.
- 1 Gal is 3.78L, so you need to drink 2.11+ gallons of pee.

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# NOPE

- No credible report anywhere in Minnesota
- Manufacturers/traffickers often “sign” their product

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- Names:
- Ivory Wave,
- Vanilla Sky
- Reported to contain MDPV (Methylenedioxypropylone) and lidocaine.
- UDS seems to tested positive for amphetamines/Ecstasy

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- Associated symptoms/effects:
- Grand mal seizures
- Agitation
- Hallucinations
- Delusions
- Possible cardiac toxicity
- A significant rise in creatinine kinase,
- High temperature
- High blood pressure (although blood pressure levels may show significant variation both high and low); and
- Tachycardia

- [www.buddablend.com](http://www.buddablend.com)
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[www.givemecream.com](http://www.givemecream.com)




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- <http://www.whippedlightning.com/>

- It retails here for \$9.99 a can and comes in 6 flavors - cherry, carmel, vanilla, chocolate, raspberry and strawberry

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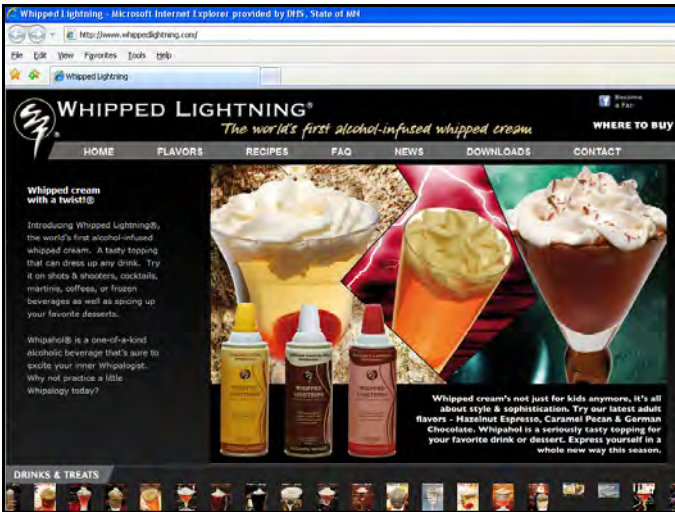
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## cathinone

- Cathinone, (Benzoylathanamine) is a monoamine alkaloid found in the shrub *Catha edulis* (khat) and is chemically similar to ephedrine, cathine and other amphetamines.
- Cathinone induces the release of dopamine from striatal preparations that are prelabelled either with dopamine or its precursors.
- Cathinone differs from many other amphetamines in that it has a ketone functional group. Other amphetamines that share this structure include the antidepressant bupropion and the stimulant methcathinone, among others.
- Internationally, cathinone is a Schedule I drug under the Convention on Psychotropic Substances.[2] Circa 1993, the DEA added cathinone to the Controlled Substances Act's Schedule I.

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## cathinone



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- Excessive cathinone usage can cause loss of appetite, anxiety, irritability, insomnia, hallucinations and panic attacks.
- Chronic abusers are at risk of developing personality disorders and possibility of sustaining myocardial infarction.
- Urine tested for the presence of cathinone and norephedrine, a major metabolite.\*

\*R. Baselt, Disposition of Toxic Drugs and Chemicals in Man, 8th edition, Biomedical Publications, Foster City, CA, 2008, pp. 250-252.

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## methcathinone

- Methcathinone ( $\alpha$ -methylamino-propiofenone), is a psychoactive stimulant
- It is usually snorted, but can be smoked, injected, or taken orally. Methcathinone is currently a DEA Schedule I controlled substance in the United States.
- The C=O bond at the R $\beta$ -position (directly right of the benzene ring) is slightly polar, and as a result the drug does not cross the lipid blood-brain barrier quite as well as amphetamine. Nevertheless, it is a potent CNS stimulant and dopamine reuptake inhibitor.
- Chronic high dosage use may result in acute mental confusion ranging from mild paranoia to psychosis. These symptoms typically disappear quickly if use is stopped.

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# methcathinone



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- In clandestine laboratories, synthesizing methcathinone using either potassium permanganate or various chromates is considered undesirable because of the low yields and the high toxicity of these oxidants. A method that yields more methcathinone is oxidizing ephedrine with sodium hypochlorite
- Methcathinone hydrochloride increases spontaneous rodent locomotor activity, potentiates the release of dopamine from dopaminergic nerve terminals in the brain, and causes appetite suppression. Users can easily forget to consume fluids leading to increased thirst and dehydration.
- The effects of methcathinone are similar to those of methamphetamine, initially deemed to be less intense by the inexperienced user, and often more euphoric. The effects have been compared to those of cocaine, since it commonly causes hypertension and tachycardia. Reported effects include:

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- Feelings of euphoria
- Increased alertness
- Dilated pupils
- Rapid breathing
- Increased heart rate
- Inability to stop talking
- Increased empathy and sense of communication
- Both decreased and increased sexual function and desire
- Loss of cognitive ability relating to the distinction of relative importance of matters (i.e. one might spend days thinking that he or she is being productive but later realize that the activity and/or product was not even necessary)
- The effects of methcathinone usually last from four to six hours.
- Injecting this substance has recently been associated with symptoms similar to those seen in patients with Parkinson's Disease (Manganism) due to the compound manganese dioxide which is a byproduct of synthesis with permanganate.[9]

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# Mephedrone

- Mephedrone, aka 4-methylmethcathinone (4-MMC), or 4-methylephedrone, is a synthetic stimulant and entactogen drug of the amphetamine and cathinone classes. Slang names include meph,[4] drone,[5] and MCAT[6]. It is reportedly manufactured in China and is chemically similar to the cathinone compounds found in the khat plant of eastern Africa.
- It comes in the form of tablets or a powder, which users can swallow, snort or inject, producing similar effects to MDMA, amphetamines and cocaine.
- As well as producing the intended stimulant effects, negative side effects occur with mephedrone, bruxism being the most common. The metabolism of mephedrone has been studied in rats and humans, with the metabolites being able to be detected in urine after usage. Little is known about the potential neurotoxicity of mephedrone, but possible dangers associated with its use based on its similarity to other drugs.
- Several people have died after consuming mephedrone, but some deaths that the media attributed to the drug were later determined to have been caused by other factors.

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# mephedrone



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- Users have reported that mephedrone causes euphoria, stimulation, an enhanced appreciation for music, an elevated mood, decreased hostility, improved mental function and mild sexual stimulation; these effects are similar to the effects of cocaine, amphetamines and MDMA.
- Effects last different amounts of time, depending on the way the drug is taken:
- Orally, users report they can feel the effects within 15–45 minutes,
- Snorted the effects are felt within minutes and peak within half an hour.
- The effects last for between two and three hours when taken orally or nasally, but only half an hour if taken intravenously.
- 12 Out of 70 Dutch users of mephedrone, 58 described it as an overall pleasant experience and 12 described it as being an unpleasant experience."
- \*Brunt, T.; Poortman, A.; Niesink, R.; Van Den Brink, W. (2010). "Instability of the ecstasy market and a new kid on the block: mephedrone". Journal of psychopharmacology.

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- Mephedrone can cause hallucinations, headaches, palpitations, vasoconstriction of the extremities (similar to Reynaud's Disease) nausea, vomiting, blood circulation problems, rashes, anxiety, paranoia, fits and delusions. Agitation, tachycardia and systolic hypertension. Possible seizure activity. Other side effects may include poor concentration, poor short-term memory, increased heart rate, abnormal heart beats, anxiety, depression, increased sweating, dilated pupils, the inability to normally open the mouth, and teeth grinding.
- Nine out of the 15 of patients had a Glasgow Coma Scale (GCS) of 15 indicating that they were in a normal mental state, 4 had a GCS below 8, but these patients all reported using a central nervous system depressant, most commonly GHB, with mephedrone. The patients also reported polydrug use of a variety of compounds\*
- \*Wood, D.; Greene, S.; Dargan, P. (2010). "Clinical pattern of toxicity associated with the novel synthetic cathinone mephedrone". Emergency Medicine Journal.

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## methylone

- Methylone, also known as "M1", 3,4-methylenedioxy-N-methylcathinone, bk-MDMA, MDMC, is an entactogen and stimulant of the phenethylamine, amphetamine, and cathinone classes.
- It was originally patented by Peyton Jacob and Alexander Shulgin in 1996 as an antidepressant.[1]. Methylone is a close structural analogue of MDMA, differing by the addition of a  $\beta$ -ketone group.

Methylone acts as a mixed reuptake inhibitor/releasing agent of serotonin, norepinephrine, and dopamine.

In comparison to MDMA, it has approximately 3x lower affinity for the serotonin transporter, while its affinity for the norepinephrine and dopamine transporters is similar.

The results of these differences in pharmacology relative to MDMA are that methylone is less potent in terms of dose, has more balanced catecholaminergic effects relative to serotonergic, and behaves more like a reuptake inhibitor like methylphenidate than a releaser like amphetamine;

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## methylone




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- Reported dosages range from 100 to 250 mg orally.[4] Some respondents say that increasing dose with methylone beyond 100–180 mg causes increased physical effects and does not substantially improve the empathic cognitive effects.[4]

• The effects of methylone may include the following:

- Central Nervous System
- Stimulation
- Euphoria or dysphoria, and anxiolysis or anxiogenesis, depending on the individual.
- An increase in sociability.
- Insomnia and restlessness
- Derealization/depersonalization, hallucinations, and psychosis, depending on the individual, and in all individuals with high dosage or extended use.
- Sympathomimetic
- Tachycardia and hypertension
- Hyperthermia and sweating
- Mydriasis and nystagmus
- Trismus and bruxism
- Anorexia
- Nausea and vomiting
- Most of these effects are very similar to those of other psychostimulants.

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## flephedrone

- Flephedrone, also known as 4-fluoromethcathinone (4-FMC), is a stimulant drug of the phenethylamine, amphetamine, and cathinone
- Flephedrone has only a short history of human use and its toxicity is not well established. Hyperthermia, convulsions and other typical complications may be expected in overdose. p-Halogenated amphetamines are known for their neurotoxicity excluding 4-Fluoro substituted amphetamines and cathinones.

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## flephedrone



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# Kratom

- Kratom (Thai: กระทือ, *Mitragyna speciosa*) is a medicinal leaf harvested from a large tree in the Rubiaceae family native to Southeast Asia.
- Inspired by traditional use, H. Ridley reported in 1897 that the leaves of *Mitragyna speciosa* were a cure for opium dependence.
- In more recent times, mitragynine has been used in New Zealand for methadone dependence detox. Kratom was smoked whenever the patient experienced withdrawal symptoms, over a 6 week treatment period.
- Patients reported a visualization effect taking place at night in the form of vivid hypnagogic dreams.

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# kratom



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# Amanita muscaria

- Commonly known as the fly agaric or fly Amanita is a poisonous and psychoactive fungus, one of many in the genus *Amanita*.
- It associates with various deciduous and coniferous trees.
- poisoning typically occurs in either young children or people ingesting it for a hallucinogenic experience.

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- Amanita muscaria contains a number of biologically active agents, at least two of which, muscimol and ibotenic acid, are psychoactive.
- toxic dose in adults is approximately 6 mg muscimol or 30 to 60 mg ibotenic acid; typically about the amount found in one cap of Amanita muscaria.
- However, the amount and ratio of chemical compounds per mushroom varies widely from region to region and season to season, which further confuses the issue. Spring and summer mushrooms have been reported to contain up to 10 times as much ibotenic acid and muscimol compared to autumn fruitings.

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## Amanita muscaria



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## 2C family

- 2C is a general name for the family of psychedelic phenethylamines
- Hallucinogens that have a CNS stimulant effect

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2C-E Powder  
Photo by Anonymous, © 2017 Erowid.org

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**FOR VETERINARY USE ONLY** **durvet** **KEEP OUT OF REACH OF CHILDREN**

NDC 30790-254-31

**Piperazine-17 Medicated**

**PRECAUTIONS**  
Although Piperazine is a drug with a wide margin of safety, occasionally an animal may show nausea, vomiting, or muscular tremors. Such side effects are usually associated with over-dosage. Therefore, recommended dosage should be followed carefully. Animals with known kidney pathology should be treated only by a veterinarian.

**FOR ORAL ANIMAL USE ONLY**  
**NOT FOR HUMAN CONSUMPTION**

**KEEP OUT OF REACH OF CHILDREN**

**STORE OUT OF DIRECT SUNLIGHT AND ABOVE FREEZING TEMPERATURES.**

Consult your veterinarian for assistance in the diagnosis, treatment and control of parasitosis.

**CAUTION**  
SEE ADDITIONAL PRECAUTIONS ON SIDE PANELS  
Each 100 cc contains 17 grams of Piperazine Lactate, Color, Flavoring, and preservative added.

**NET CONTENTS: 16 fl. oz. (1 PT.) (473 mL)**

**DIRECTIONS FOR USE**  
**DOGS AND CATS:** Give 1 ml (15 drops) PIPERAZINE - 17 for each 9 pounds of body weight. Dose the dog and cat individually or give in milk, water or food. Repeat treatment in 30 days or when necessary.  
**HORSES:** (non-food producing) Give 1 fluid ounce PIPERAZINE - 17 for each 100 pounds of bodyweight. Give the full dose with a dose syringe. If feed administration is preferred give bran mash with a small amount of PIPERAZINE - 17 for 2 or 3 feedings, then give full dose in bran mash. Repeat treatment in 30 days or when necessary.

1-1961 Rev. 11-00  
Manufactured for:  
**DURVET, INC.**  
Blue Springs, Missouri 64014  
Lot No.  
Exp. Date

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## AMT

- alpha-Methyltryptamine is a psychedelic, stimulant, and entactogen drug of the tryptamine class
- αMT acts as relatively balanced releasing agent of serotonin, norepinephrine, and dopamine, and as a non-selective serotonin receptor agonist.
- It also acts as a very weak, non-selective and reversible inhibitor of the enzyme monoamine oxidase (MAO),

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- $\alpha$ MT's analogue  $\alpha$ ET has been shown to produce long-lasting serotonergic neurotoxicity at very high doses,
- both  $\alpha$ MT and  $\alpha$ ET appear to produce considerably less of a hangover in comparison to MDMA, although this is not necessarily an indication of long-term safety
- Despite some experiential similarities,  $\alpha$ MT is fairly different chemically from MDMA, and is part of the tryptamine family. It can cause strong distortions, delusions and hallucinations, and many other effects similar to those of LSD, psilocin and MDMA

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## SPICE

- Contains JWH-018/073
- Synthetic cannabinoid
- Effects CB1 and CB2 receptors
- Sold as incense



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- Peak effect almost instantly (when smoked); 2-5minutes
- Duration; 3-5 hours
- Metabolized in CP55-940 pathway; plasma T1/2 is about 2 hrs.
- Carcinogenic/teratogenic: non in parent compound, varies with inert agent

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