

Drugs of Abuse

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City cancels final day of Electric Zoo dance music festival after deaths of two concertgoers, possible sexual assault

Two drug overdose deaths and a possible sexual assault triggered the cancellation of the Randall's Island electronic music festival. 'Molly' consumption is suspected. Additional revelers were hospitalized as well, officials said.

[Comments \(212\)](#)

BY RICHARD ZITRIN IN ROCHESTER, N.Y., BARRY PADDOCK AND BILL HUTCHINSON / NEW YORK DAILY NEWS



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queens/city-cancels-final-day-electric-zoo-dan...

DAILY NEWS
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Half-off Evening or Full-Day Fishing Trips in Sheepshead Bay on the Lady Midnight! [View Deal >](#)

1 2

Two critical after total of 11 Wesleyan University students overdose on Molly, pure form of MDMA: officials

BY SASHA GOLDSTEIN

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/ NEW YORK DAILY NEWS / Monday, February 23, 2015, 8:54 AM

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132

104

8

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HANDOUT





DRUG HITS CHICAGO

CASES OF FLESH-EATING DRUG



CNN

THE POST-STANDARD

SUNDAY, SEPTEMBER 8, 2013
syracuse.com



HOW SYRACUSE BECAME GROUND ZERO IN THE BATH SALTS CRAZE

By John O'Brien
joobrien@syracuse.com

A new illegal drug nearly paralyzed a small group of partiers gathered at the Orange Line art gallery across from Syracuse City Hall three years ago.

Bill Harper, a former Common Council candidate and business owner, had obtained a shipment of the synthetic drug he was calling "molly" from a chemist in China.

It wasn't the same molly — a pure form of Ecstasy — that had been around for decades. This was a synthetic knockoff, with a chemical structure altered just enough to keep police at bay.

It was a stimulant that caused a sense of euphoria and was believed to enhance the users' sexual performance. Harper had been taking different versions of it to swing-



THE SUPPLIER
IN CHINA:
Eric Chang



THE BUYER
IN SYRACUSE:
Bill Harper

ers' parties in the Syracuse area, according to agents with the U.S. Drug Enforcement Administration.

But this newest iteration dehydrated the partiers at the art gallery to the point where they could barely move that day in December 2010, according to Shane LaVigne, an Onondaga County sheriff's detective working as a federal

agent with a DEA task force.

The panicked partiers didn't want to call 911 for fear of alerting police, he said. Instead, they called friends for medical help. The friends brought them bottled water and everyone recovered, LaVigne said.

The DEA agents were aware of the calls because they were secretly listening in. They'd placed a wiretap on Harper's phone a couple of weeks earlier.

"They were paranoid that the police would find out," LaVigne said. "They were trying to find a doctor who'd come to the art gallery."

The case presented a learning experience not only for the crim-

nals, but for the cops as well. The new drugs, nicknamed "bath salts," came out of nowhere in 2009. They were part of an onslaught of drugs whose chemical structures could be modified to avoid prosecution.

Syracuse apparently was ground zero in the United States. The bath salts craze spread across the country, but Syracuse was among the first to import big shipments from China, according to the DEA.

Harper established a connection with the chemist in China, Eric Chang, who needed a distribution base in the U.S., according to the DEA and federal prosecutors.

In 2010 and 2011, Chang

BATH, PAGE A-6

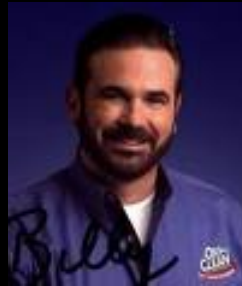
Harper to Chang: "I am very worried ... I don't mean to alarm you ... I look forward to a long and prosperous relationship."

A black and white photograph showing a person lying on a gurney, possibly in a hospital or emergency room. The person is wearing a dark jacket and has their head tilted back. Medical equipment, including a ventilator and various tubes, is visible around the person's head and chest. The background is slightly out of focus, showing what appears to be a hospital setting with some equipment and a window.

Spike Nation

Cheap, unpredictable and hard to regulate, synthetic marijuana

What do THESE people have in common?



What do THESE people have in common?

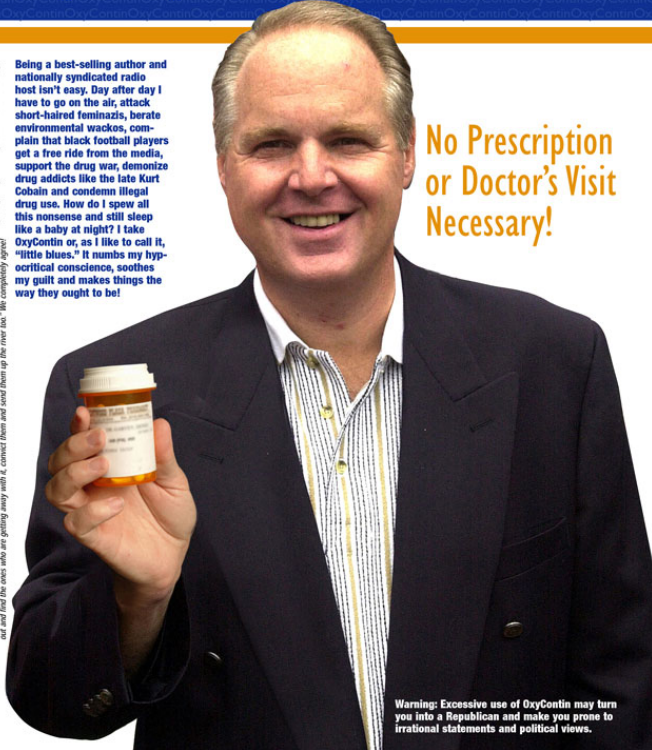
Rush Limbaugh for OxyContin

“I couldn’t get through my day without it!”

Being a best-selling author and nationally syndicated radio host isn't easy. Day after day I have to go on the air, attack short-haired feminazis, berate environmental wackos, complain that black football players get a free ride from the media, support the drug war, demonize drug addicts like the late Kurt Cobain and condemn illegal drug use. How do I spew all this nonsense and still sleep like a baby at night? I take OxyContin or, as I like to call it, "little blues." It numbs my hypocritical conscience, soothes my guilt and makes things the way they ought to be!

No Prescription or Doctor's Visit Necessary!

Warning: Excessive use of OxyContin may turn you into a Republican and make you prone to irrational statements and political views.

A photograph of Rush Limbaugh, a well-known conservative radio host, smiling and holding a small white pill bottle with an orange cap. He is wearing a dark suit jacket over a light-colored striped shirt. The background is a blue banner with white text and a yellow horizontal line.

What Do People Abuse?

- Cocaine
- Amphetamines
- Nicotine
- Ethanol
- THC
- Caffeine
- LSD
- GHB
- Psilocybin Mushrooms
- Sniffing/Huffing/Bagging
- PCP/Ketamine/Dextromethorphan
- **Kratom**
- **Nutmeg**
- **Salvia Divinorum**
- **Prescription Drug Abuse**
- **Synthetic Cannabinoids**
- **Designer Amphetamines**
- **Methoxetamine (MXE)**



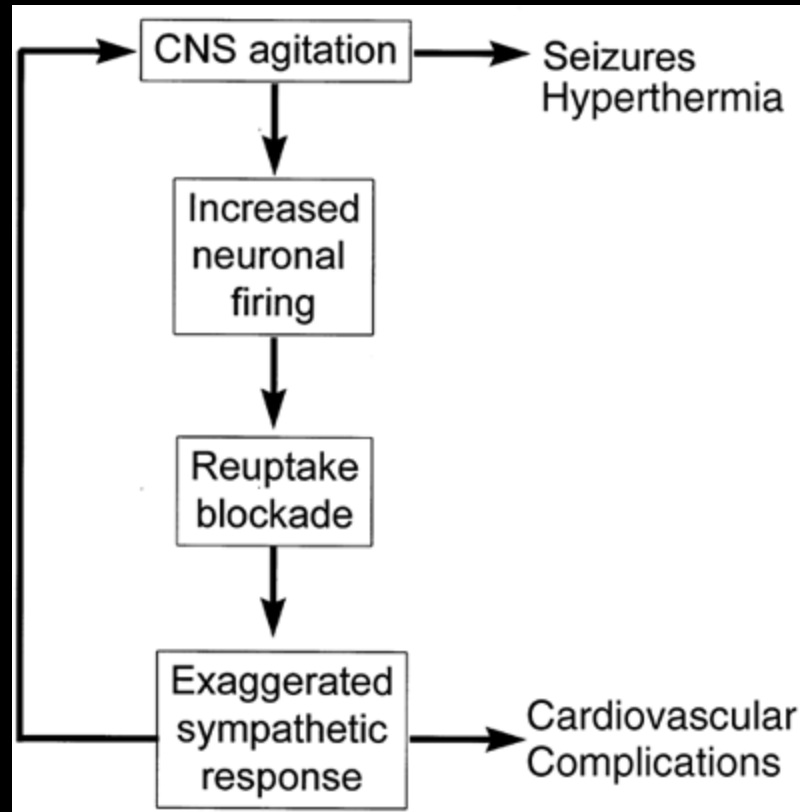
Cocaine

Cocaine

- Inhibition of reuptake of catecholamines
- Sodium Channel Blocker
- Increases excitatory amino acids including aspartate and glutamate
- tPA Inhibitor

Acute Cocaine Exposure

- Life Threats
 - Cardiac
 - Dysrhythmias
 - MI
 - Neurologic
 - Seizures
 - Stroke
 - Autonomic
 - HYPERTHERMIA
 - Tachycardia, tachypnea, hypertension
 - Other
 - Pulmonary, ENT, abdominal, musculoskeletal, neuropsychiatric, obstetrical



Cocaine Hydrochloride

- Extracted in aqueous media after initial hydrocarbon extraction
 - Ingested
 - Nasal Insulflation
 - NOT SMOKED

Cocaine base

- Extracted from cocaine hydrochloride in water by adding a base
 - “free basing is dipping the basic mixture with a smokable source [cigarette or marijuana]
 - Dried result is crack cocaine
 - Smoked
 - Results in additional toxic metabolite [m2 receptor agonist]

Toxicokinetics

<u>Route</u>	<u>Onset (min)</u>	<u>Peak (min)</u>	<u>Duration (min)</u>
Intravenous	<1	3-5	30-60
Nasal	1-5	20-30	60-120
Smoking	<1	3-5	30-60
GI	30-60	60-90	Unknown

Management

- Hyperadrenergic Symptoms
 - Benzodiazepines
- Hyperthermia
 - Cooling
 - Benzodiazepines
- Seizures
 - Benzodiazepines
 - Barbiturates
 - Propofol
 - Avoid Phenytoin
- Dysrhythmias
 - Sodium bicarbonate for wide QRS
 - Magnesium for prolonged QTc

Management of Cocaine Associated Myocardial Ischemia

- | | |
|----------------------------|---------------------|
| • Benzodiazepines | • Yes |
| • Aspirin | • Yes |
| • Nitroglycerin | • Yes |
| • Beta Blockers | • No |
| • Labetolol | • No |
| • Thrombolytics | • In selected cases |
| • Calcium Channel Blockers | • In selected cases |
| • Lidocaine | • In selected cases |
| • Sodium Bicarbonate | • In selected cases |

Unique Cocaine Presentations

- Body Packers
 - Drug Mules
 - Well packed
 - Deadly if even one opens
 - May show up on imaging
 - GI Decon
 - WBI
 - Barium swallow
- Body Stuffers
 - Usually a dose or a few doses
 - Not well packed
 - Imaging likely unhelpful
 - GI Decon
 - MDAC

- Levamisole
 - Neutropenia
 - Vasculitis



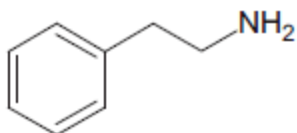
Amphetamines

Amphetamines

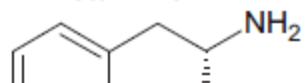
- Methamphetamine
- Prescriptions amphetamines
- MDMA
- “Molly”
- Designer Amphetamines
 - Cathinones (ethylone/methylone etc)
 - 25-NBOME (aka “synthetic LSD”)
 - Bromodragonfly
 - Alpha-PVP (aka Flakka)

Phenethylamines

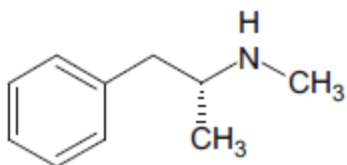
Phenethylamine



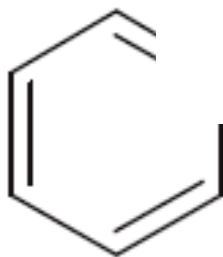
Amphetamine



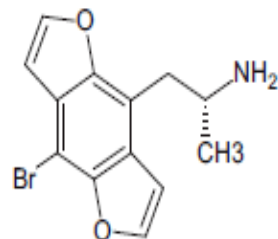
Metamphetamine



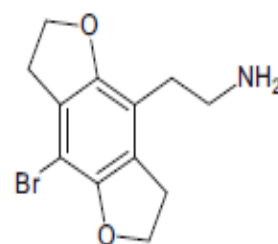
Phenethylamine



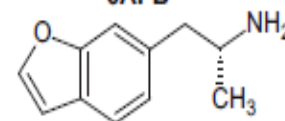
BromodragonFLY



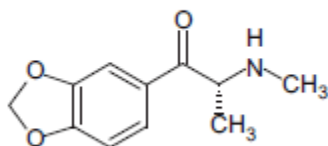
2C-B-FLY



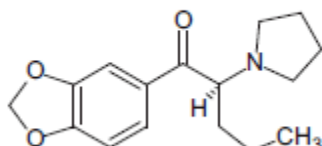
6APB



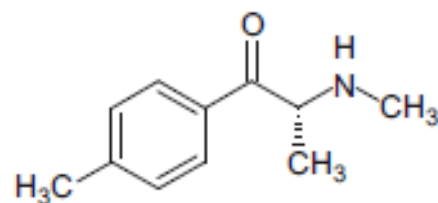
Methylone



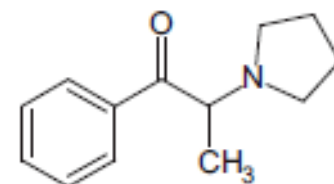
MDPV



Mephedrone



α PPP



Toxicity & Management

- Hyperadrenergic Symptoms
 - Benzodiazepines
- Hyperthermia
 - Cooling
 - Benzodiazepines
- Hyponatremia
 - SIADH and excess free water intake
 - Sodium replacement
- Agitation
 - Benzodiazepines
 - Dexmetomidine
 - Propofol

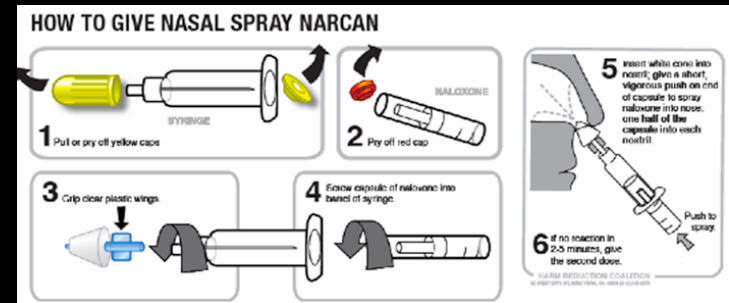
Opioids

Opioids

- Natural
 - Morphine
 - Codeine
- Semi-synthetic
 - Heroin
 - Hydromorphone
 - Oxycodone
- Synthetic
 - Meperidine
 - Propoxyphene
 - Methadone
 - Fentanyl
 - Buprenorphine
 - Designer Opioids



A person is holding a blue pouch labeled "OVERDOSE PREVENTION RESCUE KIT" and "PREVENCIÓN DE SOBREDOSIS EQUIPO DE RESCATE". The pouch contains several items: a white Bio-BARRIER FACESHIELD, a syringe, two white gloves, a small vial of Naloxone, a bottle of Alcohol Prep, and a small vial of Narcan.



Contaminants

- Heroin + Strychnine
- Heroin + Scopolamine
- Heroin + Clenbuterolol
- Heroin + Fentanyl
- Fentanyl only
- Heroin + Acetylfentanyl
- Heroin + “xxxx”fentanyl

Opioids & Seizures

- Meperidine
- Propoxyphene
- Tramadol/Tapentadol

Opioids & Serotonin Toxicity

- Fentanyl
- Tramadol
- Meperidine
- Dextromethorphan



CASE STUDIES IN TOXICOLOGY

Series Editor: Lewis S. Nelson, MD

Opioid-Induced Hearing Loss A Trend to Keep Listening For?

Kathryn T. Kopec, DO, and Lewis S. Nelson, MD

What possible toxicologic causes should be considered for sudden-onset hearing loss?
Are treatments available—and what is the long-term prognosis?

Opioids & Hearing Loss

- Acute
 - Sensorineuronal
 - Rapid onset
 - Usually reversible
- Chronic
 - Sensorineuronal



Opioids & Cardiac Toxicity

- Methadone
 - QT Prolongation
- Propoxyphene
 - QRS Prolongation
- Loperamide
 - QRS and QT Prolongation

“The Peace Pill” PCP and congeners



PCP/Ketamine/DM/MXE

Clinical Effects

- *Superhuman strength*
- *Horizontal, Vertical, Rotary* nystagmus
- Ataxia/ Altered gait
- Dysarthria
- Miosis
- Myoclonus, dystonia, hypertonia
 - Usually not apparent unless unconscious

Management

- Supportive care
 - Temperature
- Psychobehavioral symptoms
 - Quiet, non-stimulating environment
- Psychomotor symptoms
 - Physical/ chemical restraints
 - Benzodiazepines to effect

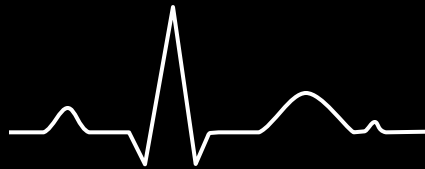
Inhalant Abuse

Hydrocarbons

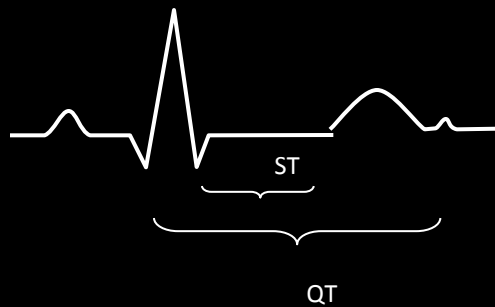
- Trichloroethanol
 - Metabolite of chloral hydrate
- Halogenated Hydrocarbons
- Hydrocarbons
- Volatile Substance Inhalation Abuse (VSIA)
 - “Sudden Sniffing Death”



Normal



K channel
blocker



When ACLS May Not Be Enough: Treatment of Torsades de pointes

- Overdrive pacing
- Magnesium
- β -Adrenergic Antagonists

Synthetic Cannabinoids

K-What?

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View our entire collection as low as \$7/gram

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**THE STRONGEST K2
INCENSE EVER MADE**

*As featured on...
and other countless publications*



March 1, 2011: DEA placed 5 synthetic cannabinoids into Schedule 1
(JWH-018, JWH-073, JWH-200, CP-47,497, and CP-47,497 C8 homologue)



GOVERNOR ANDREW M. CUOMO

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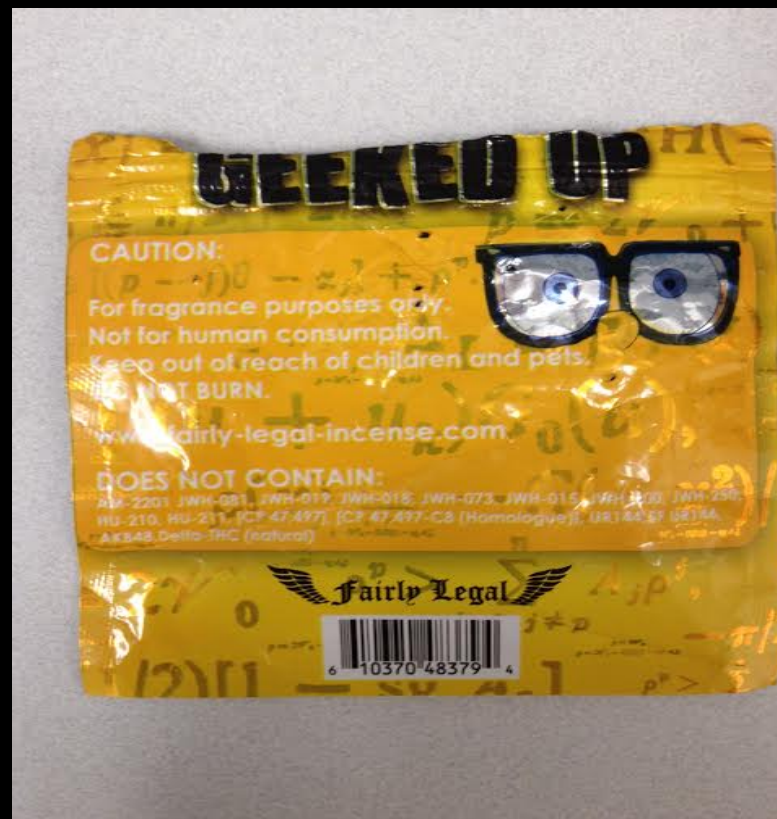
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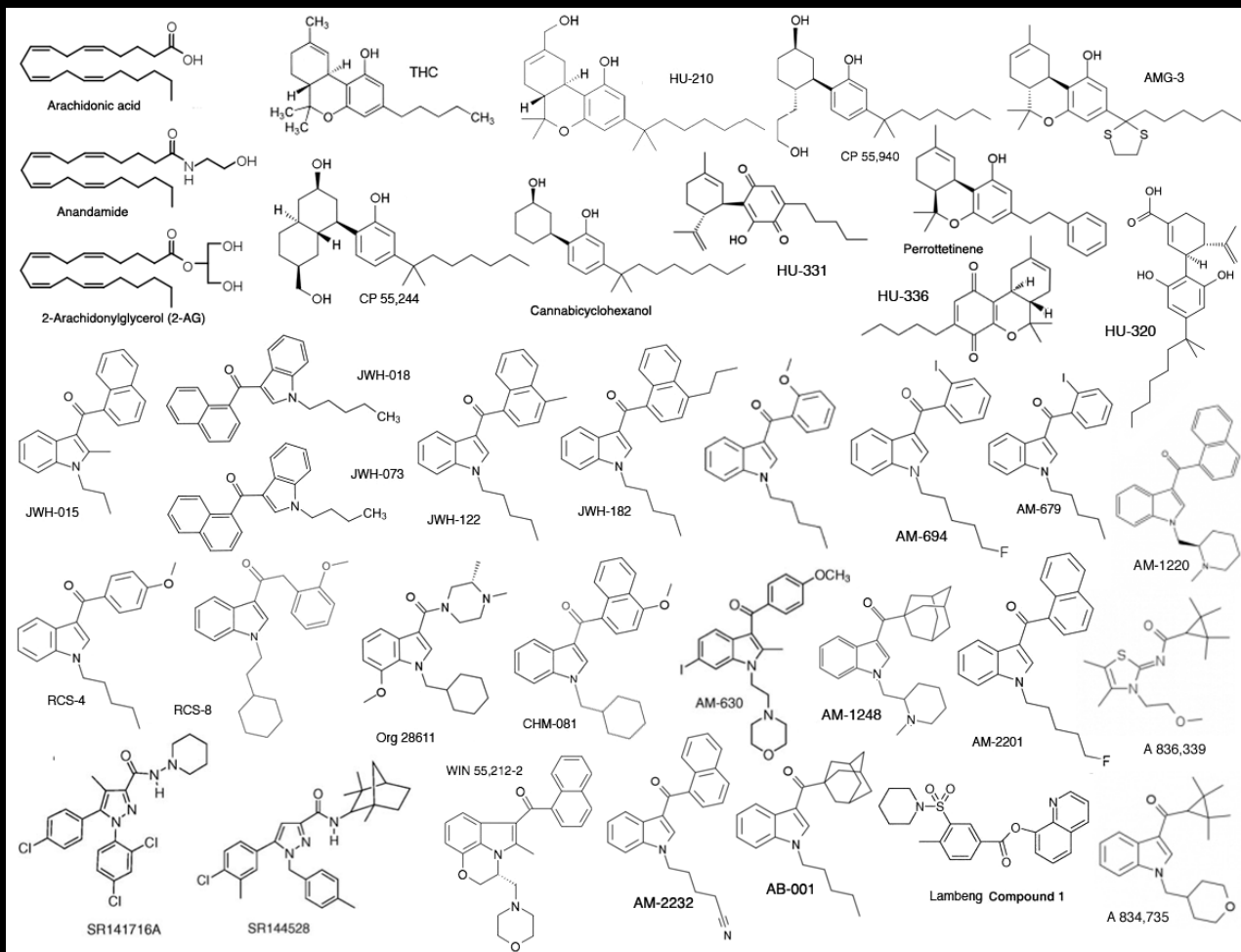
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APRIL 17, 2015 | Albany, NY

Governor Cuomo Issues Health Alert: Illegal Synthetic Marijuana Sends More Than 160 New Yorkers to the Hospital Since April 8

HEALTH





Systemic *Effects*

- Tachycardia
- Xerostomia
- Hypertension
- Hallucinations
- Seizure
- Psychosis
- Weakness
- Coma
- Dependence
- Withdrawal



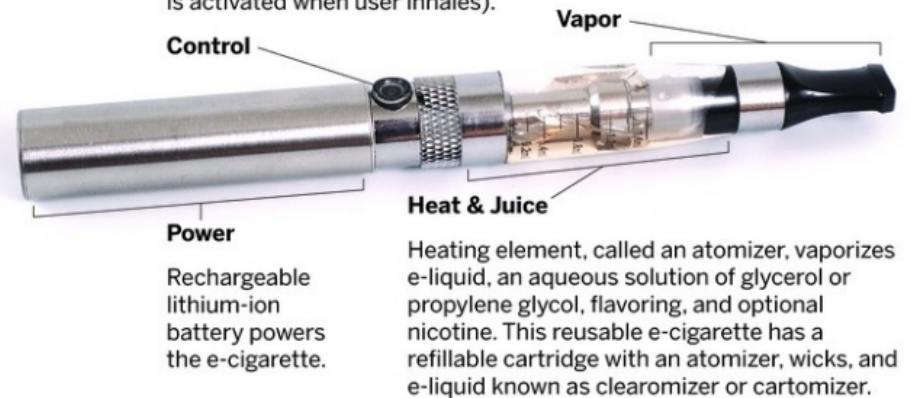
Synthetic Cannabinoids

- Increasing amount of patients
 - Hypotension/Bradycardia
 - Profound AMS
 - Conduction abnormalities
 - Withdrawal
 - Addiction
 - STEMI
 - Renal Failure



To smoke, user pushes a button to activate an electronic controller (in other models, such as disposable e-cigarettes, this is activated when user inhales).

User inhales vapor through the mouthpiece and exhales a cloud that appears smoky, thanks to glycerol or propylene glycol.



Treatment

- Mainly Supportive
- Will not show up on standard UDS



Conclusions

- Drug Abuse remains a significant public health concern
- The “Oldies” are still VERY popular
- Drug abusers are very creative
 - » www.erowid.org
- The Poison Center is available 24/7 for consultation and advice
 - 1-800-222-1222

Questions?

