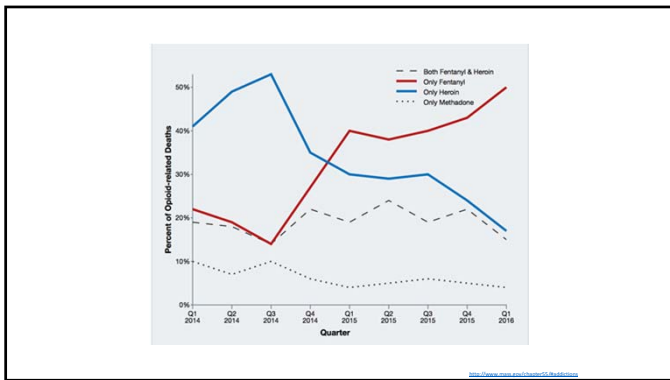


New Drugs of Abuse
Adam Rowden, DO
AMC Toxicology

Opioids and opioid-like compounds
Synthetic cannabinoids
Synthetic cathinones
2C compounds
Tryptamines

Opioids

Fentanyl

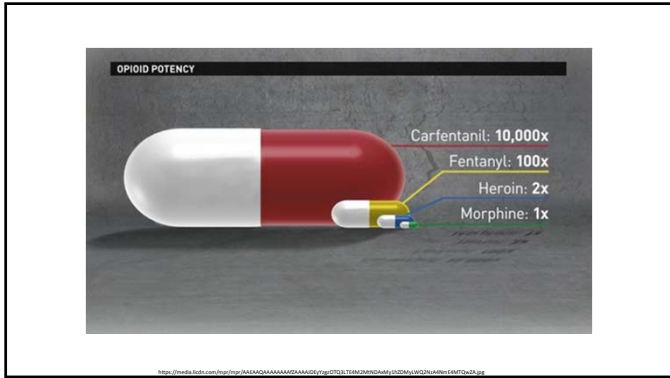


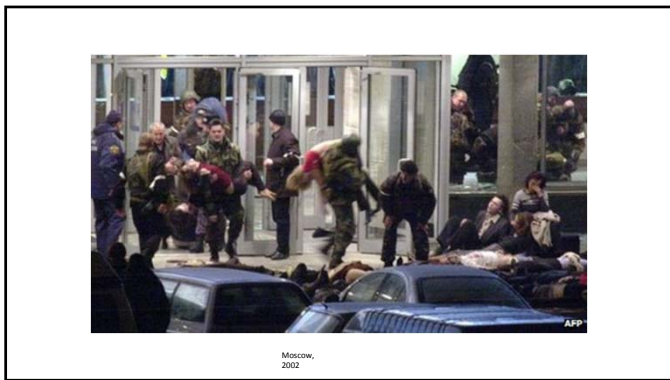




Carfentanil







MILWAUKEE / WISCONSIN
JOURNAL SENTINEL
SUBSCRIBE N for home del

HOME NEWS SPORTS BUSINESS OPINION WATCHDOG TAP FRESH OUTRAGES 44° USA TODAY SUBSCRIBE MORE

Carfentanil, 10,000 times more potent than morphine, kills homeless man in Milwaukee

Check for updates, Milwaukee Journal Sentinel Published 2:56 p.m. CT April 17, 2017 Updated 18 hours ago

Carfentanil, a large-animal tranquilizer 10,000 times more potent than morphine, has been discovered in the system of a homeless man who died in Milwaukee last month, the Milwaukee County medical examiner's office said Monday.

"We believe it is the first carfentanil death in the entire state," said the office's operations manager, Karen Domagala.


Carfentanil is an opioid in the same class as oxycodone, but it is 100 times more potent than fentanyl, which itself is 50 times more potent than heroin.

RELATED: Scouring drug deaths bring search for answers
RELATED: Potent synthetic opiate fentanyl tied to so recent

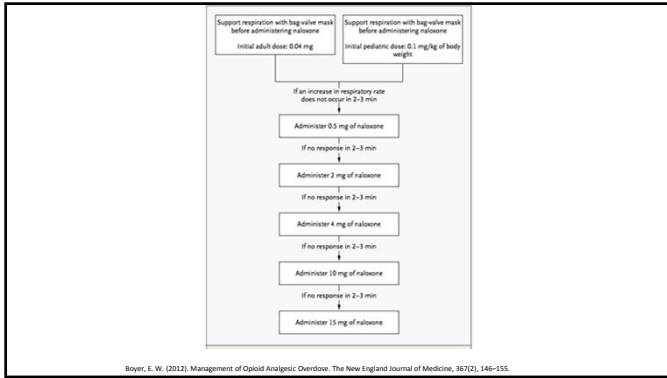
JJS-HOUSE
A Challenge of neck Floor Length Chiffon...
Shop Now

U-47700





- Pinpoint pupils
- Decreased respiratory rate
- Depressed mental status



Don't expose yourself
Be liberal with narcan

Loperamide





Opioid effects
Cardiac arrest

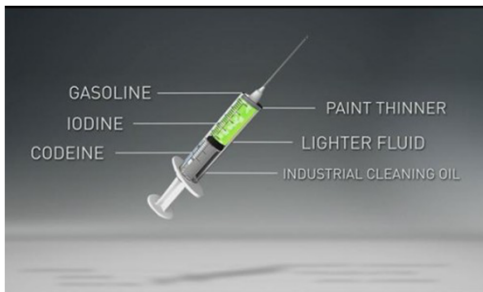
Krokodil



Flesh-eating “zombie drug”

Injected

Active ingredient =
than morphine) (10X stronger

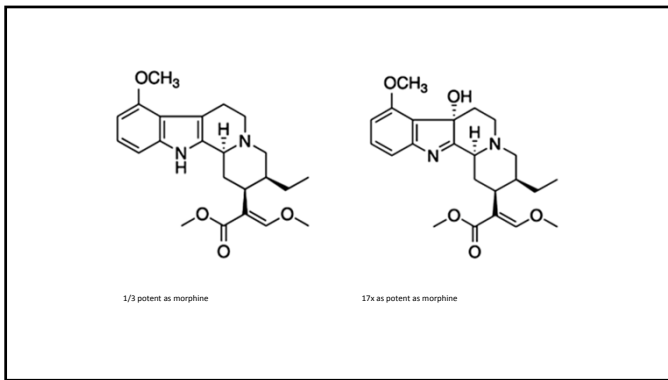


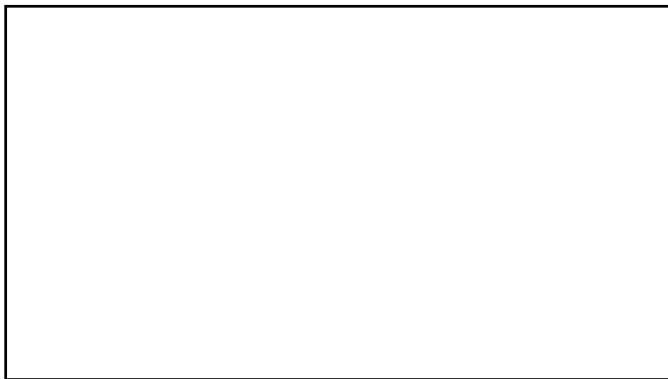


Kratom



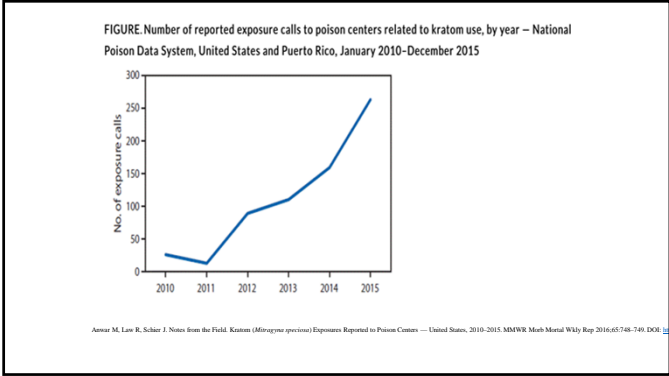






Fatalities only reported with coingestants.

- Sympathomimetics (modafinil, caffeine, proprylhexedrine)
- Benzos (zopiclone)
- OTC cold meds (benadryl)
- Antidepressants (citalopram, venlafaxine, mirtazipine, lamotrigine)
- Muscle relaxers (soma)
- Opioids (fentanyl, morphine, O-desmethytramadol)



Kratom withdrawal?

Dextromethorphan

DXM

Delsym, Robitussin,
Coricidin, Nyquil

+/- tylenol,
chlorpheniramine,
benadryl

"Robo-tripping"



Clinical effects

Hypertension	Tremor
Tachycardia	Sweating
Hallucinations	Mumbled speech
Nystagmus	"Robo walk"
	Rigidity



Clinical effects

Severe

- Serotonin Syndrome
- Seizure
- Hyperthermia
- Respiratory depression
- Death

Treatment
Supportive
Narcan for respiratory depression

Synthetic Cannabinoids
(K2)

K2
K9
Spice
Black Mamba
Zombie Killa
Herbal Incense
Fake Weed



Clinical Manifestations

- Agitation
- Seizure
- Psychosis, anxiety
- Tachycardia, tachydysrhythmia
- Kidney failure

Clinical Manifestations

- Atypical:
- Slow heart rate
- Somnolence/sleepiness
- Zombie-like state



Synthetic Cathinones (Bath Salts)

Synthetic Cathinones

A type of Amphetamine

Examples: Methcathinone, methytlone, mephedrone, buytlone, ethylone, methylenedioxypropylone (MDPV), dimethylcathinone, etc.



Khat (natural cathinone)



<http://stocking.org/wp-content/uploads/2011/06/bath-salts.jpg>



Time to peak: 1.5 hours
 Duration: ~ 6 hours

Table 1. Physical and Behavioral Effects of Psychoactive "Bath Salts."

Physical Effects	Behavioral and Mental-Status Effects
Tachycardia	Panic attacks
Hypertension	Anxiety
Vasoconstriction	Agitation
Arrhythmias	Paranoia
Hyperthermia	Hallucinations
Sweating	Psychosis
Mydriasis	Aggressive behavior
Muscle tremor and spasms	Violent behavior
Seizures	Self-destructive behavior
Stroke	Self-mutilation
Cerebral edema	Suicidal ideation
Respiratory distress	Insomnia
Cardiovascular collapse	Anorexia
Myocardial infarction	Depression
Death	

Rhee EA et al. "Bath salts" intoxication. (2011). New England Journal of Medicine, 365(10), 967-968.

Flakka

alpha-pyrrolidinopentiophenone (a-PVP)
AKA gravel



2C Compounds

2C Compounds

Synthetic
hallucinogenic
amphetamines

Examples: (AKA
nexus, bromo,
spectrum), (blue
mystic), 2C-B-FLY
()



Snorted, IV, or rectal
Onset within 1 hour
Symptoms last 6-10 hours

Clinical effects

Hypertension
Tachycardia
Hallucinations
Finger necrosis
Sudden death

25I-NBOMe

4-iodo-2,5-dimethoxy-N-(2-methoxybenzyl)phenethylamine

"N-bomb", Smiles, Wizard

Responsible for multiple deaths



<http://www.flickr.com/photos/101424112@N06/8250404000/>
www.flickr.com/photos/101424112@N06/8250404000/

Tryptamines

Hallucinogens

Related to psilocybin, DMT, bufotenine

Examples:

5-MeO-DiPT “ ” (N,N-diisopropyl-5-methoxytryptamine)

“IT-290, Amtrak, Anthrax” (alpha-methyltryptamine)



Ingested*, smoked, snorted
Onset within 20-30 min
Symptoms last 3-6 hours (5-MeO-DIPT) or 12-16 hours (AMT)

Clinical effects

- Enlarged pupils
- Euphoria
- Hallucinations
- Nausea
- Diarrhea
- Jaw clenching



Salvia

Salvia divinorum
"Legal"
hallucinogen
Inhaled: Onset 30
min, Duration 15-20
min
Ingested: Onset 1
hr, Duration 2 hours



Clinical effects

- Vivid hallucinations
- Synesthesia
- Diuresis
- Nausea
- Dysphoria
- Psychosis

Questions?