POISONS HAVE BECOME THE LEADING CAUSE OF ACCIDENTAL DEATH

Polypharmacy
- Narcotics: Oxy, Methadone, Opana
- Benzos: Xanax, Rope
- Poppa Dope

Internet Designer Drugs
- Chemicals are legal until legislated as illegal
- Chemists in Eastern Europe and Russia are employed
- High school kids can buy on the internet
- "Legal" drugs for sale at the corner store
- Old friends like Methamphetamine and Cocaine are still around

SOURCES OF TEEN DRUGS

- The Pusher Man
  - Out of vogue
  - Classmates
  - Home brew
- Home
  - Liberal prescribing
  - Poor medicine cabinet accounting
  - Parental inattentiveness
- The Internet
  - "Legal" chemicals

EROWID
DOCUMENTING THE COMPLEX RELATIONSHIP BETWEEN HUMANS AND PSYCHOACTIVES

Teen source of bad drug abuse information
E.g., DXM Jello recipe
- PreRx with dramamine
- 200mg DXM in agar with vodka
- Advertised: Minimal vomiting/maximal existential insight

DESIGNER DRUGS

Cannabinoid Agonists
- JWH018, R2, Spice
Phenylethylamine derivatives
- MDMA: Methamphetamine, 2CE
  - Bromodragonfly
Methcathinone Derivatives
- Methedrone, methadrone
Benzylpiperazines
- BDPP, 1FPP
Tryptamines
- Psilocybin, LSD, DMT

MECHANISMS

Cannabinoids
- CB2 + CB1 receptor affinity
Phenethylamines
- Dopaminergic/Serotonergic/Noradrenergic Reuptake inhibitors
  - Some presynaptic release
Tryptamines
- Serotonin Reuptake
MARIJUANA

"Fake" Marijuana
- THC Homologs
- Cannabinoids
- Some MJ screens will not show +
- Patients are scared and have a high heart rate
- Who knows what you buy on the Internet!
- Blueberry Spice = renal failure

K2 SPICE JWH018

Mountain in India
- THC Homologs
- Cannabinoids
- Some MJ screens will not show +
- Patients are scared and have a high heart rate
- Who knows what you buy on the Internet!
- Blueberry Spice = renal failure

STRUCTURAL RELATIONSHIPS

IOWA IN AUGUST 2012

METHAMPHETAMINE

The Drug of the new millennium
- Speed, Meth, Crank,
- Ice, Crystal, Glass
- Easy to synthesize
- Highly addictive stimulant when abused
- Long duration of action
- Prescription forms used for ADHD

ENTREPRENEURS ON THE SCHOOL BUS
MDMA 3,4-METHYLENEDIOXYMETHAMPHETAMINE

Ecstasy, The Love drug
- Disorientation followed by a rush then happy sociability
- Crash with confusion, depression, anxiety
- Crash may last for weeks

16 y/o took a single tablet at school
- Driving home and had a low speed collision with a telephone pole
- Found by EMS with jaw clenched and started having seizures
- Comatose for 18 hours in ICU

TOXIC EFFECTS

Stimulant effects like methamphetamine including seizures/hyperthermia
Hallucinations and agitation resembling paranoid schizophrenia
Speech and Parkinsonian effects like serotonin syndrome

18 year old was with friends and started acting like "the bad guys" were coming.
Given benzos in ER. Hypertensive, tachycardia. Sent intubated X 24 hours.
Tox screen negative. Was still acting paranoid and crazy after extubation.
Transferred to psych for 4 days and considered Paranoid Schizophrenia.
Prognosis poor.
Suddenly cleared and admitted to smoking some stuff a friend had given him.

RECENT ARRIVALS

Bromo DragonFLY / MDPV / rCFF / TII

Bromo DragonFLY

MDMA DERIVATIVES

Phenethylamine derivatives
2C-E, 2C-B, 2C-F, DOC, DOI
Bromo-DragonFLY: multiple fatalities in OK sold as 2C-E
Benzylpiperazine (BZP) - identified at autopsy

4-Fluoroamphetamine
XLR 11-aminoalkylindole
UR 144-aminoalkylindole
25I-NBOMe (phenethylamine)
25B-NBOMe (phenethylamine)
2C-C-NBOMe (phenethylamine)
Methoxetamine (arylcyclohexylamine)
N,N-Dially-5-Methoxytryptamine (5-Methoxy-Dalt) (tryptamine)
2,5-Dimethoxy-4-chloroamphetamine (phenethylamine/amphetamine)
URB 754 (2-arachidonoyl glycerol)
Phenazepam (benzodiazepine)
MANAGEMENT

No antidote or specific recommendations.
Not likely to identify toxin during hospitalization.
Benzos Benzos Benzos
Aggressive management of seizures and hyperthermia.
For continued agitation/confusion/hallucinations, atypical antipsychotic such as olanzapine.
Cyproheptadine for serotonin syndrome (?)

METHCATHINONE

Cat
Khat bush
Russia - "Jifi"
Ephedrine-like
Mephedrone
Has morphed
Marketed as Bath Salts

METHCATHINONE

"Plant food"
Sold on the internet
Methylenedioxypyrovalerone MPV
Smoke it, drink it, insufflate it, any orifice.
Legal until its illegal.
Derivatives like crazy.

BATH SALTS- BEYOND BED AND BATH

"Plant food"
Sold on the Internet
Methylenedioxypyrovalerone MPV
Smoke it, drink it, insufflate it, any orifice.
Legal until its illegal.
Derivatives like crazy.

BATH SALTS EXPOSURES REPORTED TO THE TEXAS POISON CENTER NETWORK DURING 1/1/10-7/12/11 (N=217)

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Agitation
Hallucinations
Mydriasis
Renal Dysfunction
Hyperventilation
Diaphoresis
Rhabdomyolysis
Tachycardia
Hypertension

Presented with status epilepticus.
**PURPLE DRANK**

Phenergan with Codeine

**METHADONE**

Synthetic opiate

Very long acting

Taken by mouth is used to treat heroin addiction

Taken IV is very lethal

Variable pharmacogenetics: therapeutic to toxic in same dose range

100 fold variability?

Cyp3A4, Cyp2D6

Being replaced by Suboxone (buprenorphine/naloxone) to avoid diversion

Shows up in many autopsies

**OXYCONTIN**

Killer, OC, OCX, Oxycotton

Sustained release form of oxycodone

Very safe-unless crushed

Large dose intended to last all day

Opiate for pain control

Lethal when injected

Has insoluble excipients-pulmonary emboli

Diversion problem

**DEXTROMETHORPHAN**

DXM, Dex, Skittles, Rob, DM

Cough suppressant in many OTC cough meds

Has opiate and hallucinatory properties

Many strange concoctions to concentrate and abuse

Very popular

Can stop respirations, cause seizures

**DATE RAPE DRUGS**

Combination of submission and amnesia

Amnesia may be profound

Difficult to understand unless you see the level of anesthesia

Usually a group of drugs called “benzos” or benzodiazepines

Flunitrazepam = Rohypnol

**ROPE/RUFIES**

Date Rape Drug

Potent Benzo available in Mexico

- Amnesia
- Cooperation

Synergistic with Alcohol and tasteless

Message of “The Hangover” should have been:

Don’t trust a dealer and don’t trust your lunatic friends.
SALVIA

Sally D or Sage of the Diviners
Magic Mint
Herb in the sage family from Oaxaca
Used in a religious context
Hallucinogenic, but not a fun one!
Rapidly being outlawed

TO PEE OR NOT TO PEE?

Urine Drug Screens in the home now readily available

Workplace: Highly Regulated/Highly Accurate
- Require confirmation usually GC/MS
- Home versions may miss some narcotics (oxy), show PCP for DXM, Meth for Cold Meds, TCA’s for Benadryl
- Will not show GHB, hallucinogens, plants
- Second hand or Passive MJ will not show.
  - If pretty accurate that it is real
  - MJ may show + for 6 weeks after heavy use
  - Many disappointed dopehead job seekers

Read the instructions
What is the wisdom of doing this?
Not a substitute for conversation