What are synthetic drugs and how do we combat them?
How to deal with the current trends of synthetic drug use
Adrianne Trogden, LAC, CCS, LPC-S
Chief Clinical Officer
ACER, LLC
What do you know about synthetic drugs?
Objectives

- Be able to identify synthetic drug names and side effects.
- Be able to identify current trends in synthetic drug use/abuse.
- Be able to identify intervention strategies and treatment modalities pertaining to synthetic drug use.
What are “legal” drugs?

- Synthetic Cannabinoids - Fake marijuana
- Synthetic Stimulants - Bath salts or Designer cathinones
- DXM
- Salvia Divinorum
- Benzo Fury
- Sizzurp
- Energy Drinks
- Jewelry Cleaner
- Marinol - “Medical Marijuana”
Synthetic Cannabinoids

- Yucatan
- Fire
- Wicked X
- Black Mamba
- Bombay Blue
- Fake Weed
- Pot-pourri
- Buzz
- Pulse
- Hush
- Mystery
- Earthquake
- Ocean Blue
- Stinger

- K2
- K3
- Spice
- Blaze
- Red X Dawn
- Zohai
- Dream
- Genie
- Sence
- Smoke
- Skunk
- Serenity
General Info

- **What is it?**
  - A mixture of dried herbs or plant material sprayed with a synthetic compound
  - States on packaging “Not intended for human consumption”
- **How do you use it?**
  - Smoke it – looks like marijuana, but high is more comparable to cocaine or LSD
- **Where do you get it?**
  - Head shops
  - Internet
  - Gas stations/Convenience Stores
How Is It Made?

- Spraying a chemical compound on plant material
  (Ex. Damiana Leaf – used in herbal remedies & as an aphrodisiac made into tea typically – can turn into cyanide when ingested)
  - Mix powder chemical with Acetone
    (Ex. AM-2201 – synthetic cannabinoid)
Side Effects

- Convulsions
- Anxiety Attacks
- Dangerously Elevated Heart Rates
- Increased Blood Pressure
- Vomiting
- Disorientation
- Paranoia
- Giddiness
- Stores in body for long periods of time and long term effects are unknown
Current Legal Status in U.S.

• July 9, 2012
  • President Obama signed into law “Synthetic Drug Abuse Prevention Act of 2012”
    • Makes the use, possession or distribution of certain synthetic drugs illegal
    • Specifically, this Act added fifteen synthetic cannabinoids, which are commonly known as "Spice," and eleven synthetic cathinones, commonly referred to as "bath salts," along with 5 other synthetic hallucinogens to Schedule I of the Controlled Substances Act (31 substances total).
Legal Status History

- March 1, 2011 Order issued temporarily placing 5 synthetic cannabinoids in Schedule I to avoid imminent hazard to public safety for 1 year (research must be collected to place permanently on Schedule)
  - 1-pentyl-3-(1-naphthoyl)indole (JWH-018)
  - 1-butyl-3-(naphthoyl)indole (JWH-073)
  - 1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole (JWH-200)
  - 5-9(1,1-dimethylheptyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol (CP-47,497)
  - 5-(1,1-dimethyloctyl)-2-[1R,3S]-3-hydroxycyclohexyl]-phenol (cannabicyclohexanol; CP-47,497 C8 homologue)
## Synthetic Marijuana Stats

- **Poison Control Centers**

<table>
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<tr>
<th>Year</th>
<th>Number of Calls</th>
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<td>2010</td>
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<td>2013 (As of June 30, 2013)</td>
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### Poison Control Center Calls

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<th>2013 by Month</th>
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<td><strong>Total</strong></td>
<td><strong>5,205</strong></td>
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Synthetic Stimulants “Bath Salts”

- Bliss
- Blue Silk
- Cloud Nine
- Drone
- Energy-1
- Ivory Wave
- Lunar Wave
- Meow Meow
- Ocean Burst
- Pure Ivory
- Purple Wave
- Red Dove
- Snow Leopard
- Stardust
- Vanilla Sky
- White Dove

- Hurricane Charlie
- Cloud-9
- White Girl
- Molly’s Plant Food
- Super Molly’s
- Ivory Snow
- Scarface
- Jamaican Me Crazy
- Charlie Sheen
- Sprinkles
- Sprinklezz
- Lucky
- Purple Monkey
- White Knight
- White Lightening
- Ocean Snow
- NRG-1
Where Did They Come From?

- From 1920s
  - University research labs & Pharmaceutical companies
  - Explored in attempts to find new and better antidepressants
- Problems in Europe for several years before coming to U.S.
- After becoming illegal in the European Union, labs began opening in the U.S.
Bath Salts

- What is it?
  - Synthetic derivatives of cathinone (CNS stimulant) – active chemical found naturally in the khat plant
  - Mephedrone and MDPV are designer cathinones commonly found in “bath salts”
  - States on packaging “Not intended for human consumption”

- How do you use it?
  - Powder or pill form
  - Usually snorted, but can be smoked or IV use
  - Similar high to Amphetamines, Cocaine, LSD, MDMA

- Where do you get it?
  - Head shops
  - Internet
  - Gas stations/Convenience Stores
What Do They Do?

- Work on the Serotonin receptors primarily
- Create a sense of well being, euphoria, empathy, hallucinations
- Mephedrone (common base)
  - Increases Dopamine levels greater than amphetamines
  - Increases Serotonin levels greater than Ecstasy
- Psychosis
  - 12 hours up to 3 days for symptoms to resolve
Side Effects

- Agitation
- Insomnia
- Irritability
- Dizziness
- Depression
- Paranoia
- Delusions
- Suicidal Thoughts
- Seizures
- Panic Attacks
- Impaired Perception of Reality
- Reduced Motor Control
- Rapid Heart Rate

- Jerking Eye Movements
- Teeth Grinding
- High Body Temperature
- Suppressed Appetite
- Diminished Thirst
- Hallucinations
- Significant Violent Outbursts
- Self-Injurious Behavior
- Profuse Sweating
- Nausea/Vomiting
- Death
- Chest Pains
- Nose Bleeds
Amped

- New bath salt being used in Virginia
  - Reported in May 2012
  - 6 cases of ingestion have been reported to poison control
- Sold as a ladybug attractant
- Same side effects as other bath salts
How Is It Treated?

- Acute Psychosis - Typically in the ER, ICU or hospital setting
  - Goal is to reduce acute symptoms
  - Large doses of:
    - IV fluids
    - Sedation
      - Benzodiazepines (Versed)
Legal Status History

- No approved medical use in U.S.
- Recently scheduled under Controlled Substances Act (CSA) on an emergency basis for public health reasons
  - One year research being conducted in order to keep on federal registry
- Louisiana was the 1st state to use emergency measures to ban retail products of synthetic stimulants
Bath Salt Stats

- Poison Control Calls
  - Most popular with people 20-29 yrs old
  - Exposures documented from under 6 yrs old to over 59 yrs old

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<td>2011</td>
<td>Number: 159</td>
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<td>Rate: 3.48/100,000</td>
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"Project Synergy"
DXM Cough Suppressor

- Street Names: CCC, Dex, DXM, Poor Man’s PCP, Robo, Rojo, Skittles, Triple C, Velvet
- Prevalence: 2009 Monitoring the Future (MTF) Report indicated that the annual prevalence of non-medical use of cough and cold among students in 8th, 10th, and 12th grades was 2.6%, 5.0%, and 6.3%, respectively.
- What is it?
  - Dextromethorphan
  - Cough suppressor found in more than 120 OTC cold meds
  - Robitussin
- How do you use it?
  - Orally or powder (sold on internet)
- Where do you get it?
  - Any pharmacy or store
Side Effects

- Hallucinations
- Confusion
- Agitation
- Paranoia
- Lethargy
- Loss of Coordination
- Sweating
- Slurred Speech
- Hypertension
- Involuntary
- Spasmodic Movement of the Eyeballs
- Liver Damage
- Vomiting
- Seizures
- Coma
Salvia Divinorum

- Street Names: Maria Pastora, Sally-D, Salvia
- Prevalence
  - Poison centers treated 117 Salvia divinorum exposures in 2010, up from 81 the year before
  - 6 percent of high school seniors and college students reported using the drug in 2009
- What is it?
  - Perennial herb in the mint family abused for hallucinogenic effects
  - Native plant of Sierra Mazaleca region of Oaxaca, Mexico used by Mazatec Indians for ritual divination
  - Can be grown outside of region indoors or outdoors
- How do you use it?
  - Chew, smoke, vaporize
- Where do you get it?
  - Internet from botanical companies
  - Not sold at garden stores
Side Effects

- Effects are immediate and last about 8 minutes (study done by San Diego State University)
  - perceptions of bright lights
  - vivid colors/shapes/body movement
  - body/object distortions
  - fear/panic
  - sense of overlapping realities
  - hallucinations
  - loss of coordination
  - dizziness
  - slurred speech
Brett’s Law

- Delaware Statute prohibiting use of Salvia
- Named after Brett Chidester - 17 year old who committed suicide by carbon monoxide poisoning (January 2006)
- Parents allege that salvia-induced depression caused his death
- Journal entries from Brett document his experiences with Salvia
- Louisiana – only legal when not used for human consumption
Benzo Fury

- Street names: APB, White Pearl, 6-APB, 5-APB, 5-APDB, 6-APDB
- Stimulant similar to speed or ecstasy
- Banned June 10, 2013 under temporary order
- Causes temporary love & affection for others, anxiety, panic attacks, paranoia, confusion, increase in body temperature (can lead to overheating), insomnia, psychosis
- Deaths in the UK and Sweden have been linked to APB
- “Comedown” may last days – tiredness, low mood
Sizzurp

- Rapper Lil Wayne uses & Pimp C died of overdose in 2008
- Linked to Justin Bieber
- Gained popularity in hip-hop culture of the south – 1990s in Houston underground rap scene
- 2012 survey found 5.5% of 12th graders have used cough syrup to get high
- Street names: purple drank, lean, syrup, barre, purple jelly
- Highly addictive – euphoria, hallucinatory, increased heart rate, fever, liver damage
- Made by combining prescription strength cough syrup, sugary soda & Jolly Ranchers
  - Codeine (narcotic) or Promethazine (sedative antihistamine)
Jewelry Cleaner

- Stimulant “fake cocaine”
- Street names: MRG-1, Energy1, Cosmic Blast, Eight Ballz
- Powdery drug
- Contains MDPV – similar to MDMA
- Euphoric high, hallucinations
- Raises body temperature to over 108 degrees – fries the brain
- Body changes can last for days
Energy Drinks

- Not regulated by FDA due to being considered dietary supplements
- Difficult to know how much caffeine is in drink due to caffeine-containing ingredients are not separately listed (yerba mate, taurine, cacao, guarana)
- Jan – June 2013 – Poison control has received 1,575 calls related to energy drinks (988 children 18 or younger)
- Side effects: nausea, vomiting, nervousness, tremors, insomnia, restlessness, delirium, sweating, headache, seizures, elevated heart rate, kidney problems, mood changes, diarrhea, chest pains, dehydration
Treatment

- Add to Intake Assessment
  - Especially if reporting psychotic symptoms
- Adolescent-Early 20s Focus
- Medical evaluation/Psychiatric evaluation
- Motivational Interviewing/MET/Stages of Change
- Education on bodily effects
- Incorporate into Traditional Treatment Interventions
  - CBT
  - 12 Step Recovery
- Drug Testing for Synthetics more widespread
  - Drug Screening Services (Franklinton, LA)
  - Redwood Toxicology
  - Quest Diagnostics
  - Sterling
  - Dominion
Resources

- www.k2info.org
- www.justice.gov/dea
- http://bathsaltsdrug.com/
- www.samhsa.gov
Contact Info

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