Spice

Virginia EMS Symposium
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Objectives

Upon completion of this educational activity, the participant will be able to:

1. Identify Spice as a synthetic cannabis.
2. Discuss historical use of Spice.
3. Describe presentation of patients who have consumed Spice.
4. Verbalize management of patients who have consumed Spice.
Why people abuse substances

Pleasure
Freedom
Right
Expanding consciousness
Social acceptance
Addiction
SPICE

Names

K2
Synthetic cannabis
Diamond
Herbal incense
Chemical composition

Ingredients

Leafy mixture spiked with one of these designer drugs:

*JWH-018*

*JWH-073*

*JWHY-200 CP-47,497*

*Cannabicyclohexanol*

Laboratory analysis

Does not produce positive results for cannabis

Metabolites detectable in urine

Warning label

Can be harmful.
Has same effects as marijuana.
Historical uses

Made for experimental purposes in a lab of Clemson University researcher John Huffman, MD

No research on how the compounds act in the human body

Anecdotal reports that they may stick around in the body for a while.
Legislation and Banning

International

United States

Schedule 1 Drug November 2010

No permitted medical use

Federal offense

http://commons.wikimedia.org/wiki/File:Dea_color_logo.JPG
Nutmeg

- Surge of u-tube videos on teens experimenting with nutmeg tripping
- Psychotropic effects take 4-5 hours
- Persons take more thinking they did not consume enough
Uses

Snort
Drink
Smoke
Effects

- Nausea
- Stomach pain
- Delerium
- Hallucinations
- Vomiting
- Headaches
- Irregular heart rhythms

Toxic levels
- Feel lousy
Overdose

Doses of 1 tablespoon can cause hallucinogenic effects
More than 1 tablespoon
Severe hallucination
Heart abnormalities
Coma
Clues
Not acting right
Smell like nutmeg
Historical uses

Tea brewed in South American Jungles by shamanistic healers

Psychological experience that expands perception

Legal for religious practitioners in New Mexico and in the US

O Centro Espirita Beneficiente Uniao de Vegetal (VDU)
Active ingredients

Beta-carboline

Tryptamine alkaloids

N-dimethyltryptamine (DMT)

MAO inhibiting harmala alkaloids
Guidelines

Fasting 24 hours in advance and for a time after the system returns to normal

Has Hallucinogenic effects
BATH SALTS

http://www.drug-testing-facts.com/blogs/
Bath salts

Abused for years in Europe and Australia
Available on line and in convenience stores
Outlawed in US

Louisiana Jan 6, 2011 First state to ban
Virginia February 26, 2011
FDA Emergency ban October 21, 2011
Common Names

Ivory wave
Ocean
Charge+
White lightening
Scarface
Hurricaine Charlie
Red Dove
Cloud 9
White Dove
Composition

Methylenedioxypyrovalerone (MDPV)-psychoactive drug with stimulant properties which acts like norepinephrine-dopamine reuptake inhibitor (Wellbutrin is in this class)

or

Mephedrone-synthetic stimulant in amphetamine class

or

Both
Uses

Snort
Injection
Smoke
Swallow
High abuse level

EXTREME drive to use again
Effects

Mental and sexual stimulation
Increased energy
Insomnia
Muscle twitching
Paranoia
Intense desire to redose

Last 6-8 hours or days with redosing
<table>
<thead>
<tr>
<th>Presentation</th>
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<tbody>
<tr>
<td>Paranoia</td>
<td>Tachycardia</td>
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<tr>
<td>Hallucination</td>
<td>Hypertension</td>
</tr>
<tr>
<td>Delusions</td>
<td>Chest pain</td>
</tr>
<tr>
<td>Agitation</td>
<td>Difficulty breathing</td>
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<tr>
<td>Suicidal thoughts</td>
<td>Headache</td>
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</tbody>
</table>
ED Presentation

Overdoses common, several deaths
Drug testing

No known urine or blood test
Management

If acute agitation treat with benzodiazepines (Ativan and Midazolam)

Monitor for extreme tachycardia and hypertension

Case reports of patients requiring admission to psychiatric facilities for continuing psychosis

Concern for injury to staff

Four Loko

Fruit flavored alcoholic beverage
Alcohol
Caffeine
Taurine
Quarana

Drink Four Brewing Company Phusion Projects of Chicago Illinois
November 2010 FDA Declared must pull caffeine from alcoholic beverages

COCAINE

ED Presentation

History

Assessment findings

Sympathomemetic effects:
- Dilated pupils
- Increased temperature
- Tachycardia
- Hypertension
- Hyperstimulated, over-reactive

Abdominal pain

Acute renal failure
Complications

Cocaine plus alcohol = cocaethylene

Coronary vasospasm

Cerebral vasospasm

Ischemic bowel syndrome and gastropyloric perforations secondary to vasoconstriction effects

Complications

Rhabdomyolysis
Hyperkalemia
Hyperphosphatemia
Increased CK
Elevated serum creatinine
Myoglobinuria

Death secondary to
Hyperkalemia
Excess fluid administration
DIC
ARDS
Key assessment

History taking
Physical exam
EKG, watch for ST elevation
Cardiac work up
ABG
Urine analysis
Urine drug screen - may have “false negative” drug screen early
Management

Medical and Nursing

Fluids
Treat metabolic acidosis with sodium bicarbonate
Push Potassium into cells
Charcoal? NO
Aggressive Cooling
<table>
<thead>
<tr>
<th>Drug</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Cocaine</td>
<td>48.5%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>37.7%</td>
</tr>
<tr>
<td>Heroine</td>
<td>20.2%</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>6.7%</td>
</tr>
<tr>
<td>PCP or Phencyclidine</td>
<td>3.8%</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>3.2%</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>1.8%</td>
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</tbody>
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Prescription Drug abuse

• The death toll from overdoses of prescription pain relievers has more than tripled in the past decade (U.S. Centers for Disease Control and Prevention)
• More than 40 people die every day from overdoses involving narcotic pain relievers such as hydrocodone (Vicodin), methadone, oxycodone (OxyContin) and oxymorphone (Opana).
Prescription Drug Overdoses

• "Overdoses involving prescription painkillers are at epidemic levels and now kill more Americans than heroin and cocaine combined," CDC Director Thomas Frieden, MD, MPH

Names

MDMA
Methylenedioxymethamphetamine
Increased number of ED visits

74% increase in ED visits for use between 2004-2008 (10,222 to 17,865)

68% 18-29 years old

17.9% 12-17 years old

(Drug Abuse Warning Network data)
Effects

Hallucinogenic Amphetamine made in street lab, many colors and designs.

Rush with in an hour, then terrified

Psychedelic and stimulant side effects

Anxiety attacks
Hypertension
Hyperthermia
Tachycardia

Once they crash dysphoria
Uses

For energy in dance clubs
Combat downers or depressants


http://jorgeguerra.com/?p=4
http://cyclingreporter.com/2010/02/26/goodbye-vicks/
Signs

Chew gum or suck on pacifier to relieve jaw muscle tension
High body temperature, may remove clothes, drink lots of water
May take alcohol or downers to calm irritability and agitation
Combined with other drugs

Increased use with alcohol or other substances being abused
77.8% ED visit one additional substance
39.7% of those >21 used 3 or more substances

Alcohol
Cocaine
Varies by region

South 31.4%

More than 17,000 ER visits by teens and young adults because of Drug Ecstasy

Dangers

Normal dose close to toxic dose
Deaths due to complications from fevers up to 108 degrees or seizures
<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
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<tbody>
<tr>
<td>Fever</td>
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<tr>
<td>Hallucinations</td>
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<tr>
<td>Agitation</td>
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<tr>
<td>Hypertension</td>
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<tr>
<td>Irregular heart beat</td>
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<td>Fast heart beat</td>
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<tr>
<td>Dilated pupils</td>
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<tr>
<td>Stroke</td>
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<tr>
<td>Upset stomach</td>
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<tr>
<td>Jaw clenching</td>
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<tr>
<td>Muscle spasms</td>
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<tr>
<td>Seizures</td>
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<tr>
<td>Sweating</td>
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</tbody>
</table>
Suspicion

New onset seizures, no history, teenage to young adult age
Management

Supportive
Benzodiazepines - Valium
Fluids
Cooling
http://drugrecognition.com/blog/?category_name=illicit-drugs

MOLLY
Composition

Molly shorthand for “molecular”

Pure MDMA (Ecstasy) versus the pill form which contains binding agents and artificial colors.

Molly Mix may contain a mixture of ecstasy, heroin and meth
TRANSDERMAL FENTANYL INHALATION

Case

20 year old male found unresponsive at home by parents after smoking a 25 mcg Fentanyl patch

On arrival to ED no pulse, no response to Naloxone 4 mg

Resuscitated, transferred to regional hospital on pressors

MSOF developed

Died Day 2

Autopsy Fentanyl level 9.6 ng/ml

Mechanism of illicit use

Ingestion
Placed in body orifices
Applied to skin at multiple locations
Case report of steeping in hot water like tea bag.
CASE PRESENTATION
• 27 year old complains of chest pain, tachycardia

• EMS arrives on scene to find anxious and scared patient who admits to using a substance he bought in a head shop. He pulls out a condom like package labeled black magic which he states he bought for $19.95. He states this is the first package he has smoked.

• VS: BP 180/110, HR 140
• Poison control called
• Patient transported to ED
• Medical evaluation, psychiatric evaluation
• Admitted
• Agitated, required restraints
Save this number.
You might save a life.

POISON Help
1-800-222-1222

Call for emergency treatment advice, questions about medications, and information about poisons in your home, outdoors, or at work.

Health care experts are standing by 24 hours a day.