



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



http://blogs.pitch.com/plog/2009/11/product_review_will_k2_synthetic_marijuana_get_you_high.php

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



NUTMEG



<http://naturallyyoursblog.blogspot.com/2010/12/dangers-of-nutmeg-abuse.html>

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 rythms

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



<http://www.squidoo.com/AyahuascaBrew>

AYAHUASCA

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

(<http://www.independentmail.com/news/2011/oct/21/federal-drug-agency-ban-makes-bath-salts-illegal-n/>)

Common Names

Ivory wave

Ocean

Charge+

White lightening

Scarface

Hurricane Charlie

Red Dove

Cloud 9

White Dove

Composition

**Methylenedioxyprovalerone (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

Presentation

Paranoia

Hallucination

Delusions

Agitation

Suicidal thoughts

Tachycardia

Hypertension

Chest pain

Difficulty breathing

Headache

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

<http://www.wcsh6.com/news/article/177627/2/Bath-salts-patient-damages-hospital-room>

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**



<http://www.zmescience.com/medicine/mind-and-brain/cocaine-rat-study-1002201/>

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**

**(Mason,M. The 'crack belly": Newly recognized bowel sequelae after crack cocaine intoxication, J
Emerg Nurs 1999;25:373-6.)**

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

Illicit Drugs

Cocaine 48.5%

Marajuana 37.7%

Heroin 20.2 %

Methamphetamine 6.7%

PCP or phencyclidine 3.8%

Amphetamines 3.2%

Ecstasy 1.8%

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**

(<http://news.nurse.com/apps/pbcs.dll/article?AID=2011111140003>)

Names

MDMA

Methylenedioxyamphetamine

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://lollipops.co/wp-content/uploads/2010/08/Lollipops-co1.jpg>



<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

Hendrick, B (2011, March 24). Study shows More than 17,000 ER visits by teens and young adults because of Drug Ecstasy. Retrieved April 4, 2011 from <http://webmf.com/parenting/news/20110324/teen-er-visits-due-to-ecstasy-are-on-the-rise>.

Dangers

Normal dose close to toxic dose

**Deaths due to complications from
fevers up to 108 degrees or
seizures**

Signs and Symptoms

Fever

Hallucinations

Agitation

Hypertension

Irregular heart beat

Fast heart beat

Dilated pupils

Stroke

Upset stomach

Jaw clenching

Muscle spasms

Seizures

Sweating

Suspicion

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

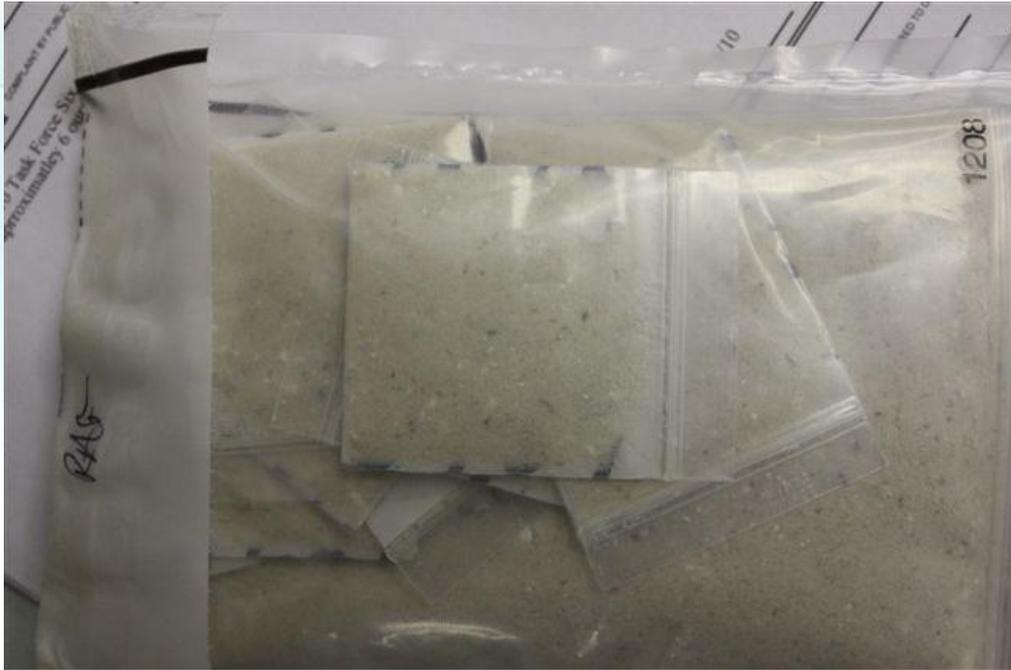
Management

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



<http://www.drug-attorneys.com/drugs/duragesic-patch-lawsuit-02162011/attachment/20110217-duragesic-patch>

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**

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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.