



## Not Legal, Not Natural, Not Safe: Understanding K2 and Bath Salts

April 9, 2013 - 12:30 p.m. to 1:30 p.m. CST

Presented by Brittany Ottino Psy.D.  
Program Director & Licensed Clinical Psychologist Gateway Foundation

# Who is Gateway Foundation Alcohol & Drug Treatment?

## Largest Provider of Substance Abuse Treatment in Illinois

- 11 locations
- New Outpatient Treatment Centers in Bloomingdale, Pekin and Chicago River North opens April 15.
- Intensive Outpatient, Day Treatment and Residential Care.
- Treatment for Adults and Adolescents.
- To learn more, visit [RecoverGateway.org](http://RecoverGateway.org).



# Meet the Trainer: Dr. Brittany Ottino

- Clinical Psychologist and Program Director at Gateway Foundation Springfield.
- Oversees clinical and psychiatric services for the 102-bed residential treatment center.
- Extensive experience treating adults and adolescents, including those with co-occurring disorders and those who have abused synthetic drugs like K2 and bath salts.
- Graduate of the Illinois School of Professional Psychology.
- Doctoral training rotation completed at the Great Lakes Naval Hospital, now part of the Captain James A. Lovell Federal Health Care Center.



## What you will learn about the popular synthetic drugs K2 and bath salts:

Synthetics 101: What are synthetic substances?

- Where do they come from?
- How available is it?
- What are the signs and symptoms of use?
- Effects of use of long-term use and withdrawal
- Who is using it and what does the data show?
- What are the current laws and how do we test for it?
- What options are there for treatment?
- Where to get resources for further information

# What Are Synthetic Drugs?

## SYNTHETICS 101

### Products Referred to as Synthetic Marijuana:

- K2 has emerged as a generic term for synthetic marijuana.
- K2 and Spice are brands of synthetic marijuana.
- Products are a blend of herbs sprayed with chemical compounds that are marketed as herbal incense.



# What Are Synthetic Drugs?

## SYNTHETICS 101

### Products Referred to as Synthetic Marijuana:

•K2 can be produced using chemical compounds called JWH-018, JWH-073, JWH-200, CP-47,497 and cannabicyclohexanol. These compounds are structured similar to THC, the active ingredient in marijuana, and can be sprayed onto varying mixtures of dried herbs, flowers and tobacco leaves.



To date, more than 140 different synthetic cannabis products have been identified.\*

# Synthetic Marijuana/K2

## Synthetic Marijuana is Sold As:

- Herbal incense
- Herbal blends
- Spice
- K2/K3
- Spike

## Numerous other brand names (more than 140) include:

- Spice Gold
- Space
- Yucatan Fire
- Aroma
- Krypton



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# Availability

**Previously, products were legally purchased at head shops, gas stations, and often times over the internet; chemical spray is frequently ordered online from countries such as China.**

**Now, synthetic drug products are illegal in the United States.**

# Audience Poll

Sellers of synthetic drugs have reported profits reaching:

- A. \$1000 Daily
- B. \$2,000-4,000 Daily
- C. \$4,000-6,000 Monthly
- D. \$12,000 Daily

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## According to Gateway Foundation, individuals in treatment for abusing K2 report the following:

- Although K2 is known as synthetic marijuana, in reality, it is nothing like marijuana (signs and symptoms of use are not similar either).
- Many adults report getting some peer education prior to using, so they realize they should not use very much (quantity).
- Teens however seem to smoke K2 in the same manners and quantities as marijuana—creating significant problems.

# Signs and Symptoms of K2

**According to Gateway Foundation research, those in treatment for abusing K2 report the following:**

- K2 can induce a limitless high
- Significant agitation and aggression
- “Dark” or “Scary” thoughts
- Users who overdosed reported blacking out, having seizures and vomiting.
- Hallucinations, paranoia, seizures, renal failure, anxiety and over-activation of the central nervous system (e.g., elevated temperature, rapid heartbeat) are common.
- Chest pain

# Signs and Symptoms of K2

**Some users report a sensation that can only be best described as a temporary paralysis of motor movement.**

## **CASE EXAMPLES:**

- Respiratory distress
- Eating a sandwich

## Long-Term Effects of K2

- Research on the safety of synthetic K2 is only now becoming available. Initial studies are focused on the role of synthetic cannabis and psychosis.
- It seems likely that synthetic cannabis can precipitate psychosis and in some cases it is prolonged.
- Studies suggest that synthetic marijuana intoxication is associated with acute psychosis, worsening of previously stable psychotic disorders, and also may have the ability to trigger a chronic psychotic disorder among vulnerable individuals, such as those with a family history of mental illness.



# Withdrawal Symptoms

**Reports of the following immediate withdrawal symptoms have been made:**

- Panic and anxiety
- Sweats
- Inability to self-regulate body temperature
- Chills

# Withdrawal Symptoms

**Additionally, within 24-48 hours, some users report the following:**

- Nightmares
- Disruption in thought processes (“mind goes blank”)
- Throwing up, which may result in dehydration
- Psychosis
- Chest discomfort-coughing, wheezing, reduced lung capacity
- The average withdrawal period reported is 7-10 days
- Case example

# Trends Related to K2

## So why the sudden popularity?

## Trends Related to K2

- An explosion of the use of K2 started in the U.S. in early 2010. The increased number of emergency room visits related to the substance sparked attention of the media.
- According to the 2011 Monitoring the Future survey sponsored by National Institute on Drug Abuse, 11.4% of high school seniors used Spice or K2 in the past year, making it the second most commonly used illicit drug among seniors.
- The 2012 Monitoring the Future survey results from the University of Michigan, demonstrated 11.3% had used synthetic marijuana. In the same survey, 36.4% of seniors reported marijuana use.
- Use of synthetic marijuana is reported almost twice as often with adolescent boys when compared to girls according to the National Institute on Drug Abuse.

[www.drugabuse.gov/publications/drugfacts/spice-synthetic-marijuana](http://www.drugabuse.gov/publications/drugfacts/spice-synthetic-marijuana). Accessed 4/8/2013.

# Trends Related to K2

- Gateway Foundation has noticed a trend in increased admissions for K2 abuse since fall 2011.
- Early evidence and ongoing research in Gateway Foundation treatment of K2 and Spice abuse shows abuse potential of synthetic cannabinoids, tolerance development, and addiction potential.
- In an Internet-based survey of adults who used synthetic cannabis, it was found that the use of other psychoactive drugs was common.\*

\*Vandrey R, Dunn KE, Fry JA, Girling ER . A survey study to characterize use of Spice products (synthetic cannabinoids). *Drug Alcohol Depend.* 2012;120:238-241.

# Trends Related to K2

Between January 1, 2012 and December 31, 2012, the American Association of Poison Control Centers (AAPCC) reported 5,202 calls for exposure to synthetic marijuana.

American Association of Poison Control Centers. Synthetic marijuana data.  
[www.aapcc.org](http://www.aapcc.org), accessed 4/8/2013.

The Illinois Poison Center “has responded to more than 400 callers with questions about ‘synthetic marijuana’.”

[www.illinoispoisoncenter.org](http://www.illinoispoisoncenter.org), accessed 4/8/2013.

# Trends Related to K2

## *Recently in the news...*

Auburn College- 2010 Football Championship

United States Military

# Another Popular Synthetic Drug

## Products Referred to as Bath Salts:

- This is not the same product you put into your bathtub, it's not like Epsom salts.
- The product is sold as bath salts and labeled “not for human consumption” to bypass FDA regulation.
- Effects are similar to methamphetamine, ecstasy and cocaine.



# Audience Poll

## Bath Salts may be:

- A. Taken orally
- B. Snorted
- B. Injected
- C. Smoked
- D. All of the above



# Audience Poll

Bath Salts may be:

- A. Taken orally
- B. Snorted
- B. Injected
- C. Smoked

**D. All of the above**



# Signs and Symptoms of Bath Salts Abuse

- Anxious and jittery behavior
- Decreased need for sleep
- Lack of appetite
- Severe paranoia
- Erratic behavior with potential for hallucinations, violence and self-mutilation



# Effects of Using Bath Salts

- Use of bath salts brings on a prolonged high lasting six to eight hours.
- Like cocaine, users have expressed fleeting euphoric feelings followed by some very bad feelings, like paranoia, depression and intense cravings for more.
- Bath salts are addictive.

## Users reported effects include:

- Hallucinations
- Suicidal thoughts
- Paranoia

# Effects of Using Bath Salts

## More serious side effects associated with bath salts include:

- Kidney failure.
- Blood circulation problems—including increased blood pressure and renal failure.
- Fast heart rate
- High temperature
- A powerful high, first-time users have accidentally overdosed on bath salts.
- It can kill users due to their organs not being able to withstand the impact.
- It is also reported that some individuals have committed suicide while high on bath salts.

# Where Do People Get Bath Salts?

- Much of the bath salts supply comes from China and sold via the Internet and at truck stops, tobacco shops and novelty stores for \$25 to \$50 for 50-milligrams.
- Marketed and sold on the Internet as “natural” and “safe” substances.
- Federal ban enacted in July 2012. Under the Synthetic Drug Abuse Prevention Act, it is illegal to produce, possess or ingest synthetic marijuana and bath salts in the United States.

# Trends Related to Bath Salts

- Gateway Foundation saw an increased number of admissions from people abusing bath salts around the fall of 2011, which anecdotally seems to have tapered off.



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# Trends Related to Bath Salts

- According to the American Association of Poison Control Centers, there were 6,138 calls for exposures to bath salts in 2011.\*
- Between January 1, 2012 and December 31, 2012 there were a total of 2,654 calls for exposure.



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\*American Association of Poison Control Centers. Bath salts data.

<http://www.aapcc.org/dnn/Portals/0/Bath%20Salts%20Data%20for%20Website%202.8.2012.pdf>. Accessed 5/25/2012 and 4/8/2013.

# Federal Ban

## Federal ban enacted in July 2012.

- This covers the online and interstate sale of bath salts and other synthetics.
- This law is unique because it prohibits not only the compounds currently identified as “bath salts,” but also outlaws similar compounds that may be produced in the future. In addition to the identified compounds, the law also prohibits any other synthetics that may have different chemical formulas but produce the same effects.

This law closes loopholes that have allowed manufacturers to circumvent local and state bans.

# Federal Ban

## Federal ban enacted in July 2012.

- Bans the active ingredients of bath salts, mephedrone and methylenedioxypropylone, by adding them to the [Food and Drug Administration](#)'s category of substances that cannot be sold under any circumstances and also cannot be prescribed for medical purposes.
- The law enumerates 31 compounds that are explicitly banned, giving the precise, dizzying chemical name of each.
  - 20 from the list are synthetic marijuana varieties.
  - 10 are bath salts.
  - The compounds listed, experts say, are some of the most popular varieties currently being used, so the ban should slow use of these synthetic drugs, at least for the moment.

# Treatment Options

- Medical stabilization as required (Use of medications, intravenous fluids, and respiratory assistance)
- Timely and effective screening
- Drug testing

# Treatment Options

- Individual and/or group psychotherapy
- Individual and/or group Cognitive-behavioral Therapy
- Family Therapy
- Motivational Interviewing and Motivational Enhancement therapies
- Increasing Protective Factors (Self-control, Parent support, Supervision, Self-esteem, Education, Access to healthcare, Coping skills)

# Treatment Options

- Prevention Education for communities, schools, employers
- Self help groups

# Additional Articles and Resources

<http://www.drugabuse.gov/drugs-abuse/emerging-drugs>

<http://www.drugabuse.gov/publications/drugfacts/spice-synthetic-marijuana>

<http://www.justice.gov/dea/index.shtml>

<http://abcnews.go.com/topics/lifestyle/health/synthetic-marijuana.htm>

<http://www.cbssports.com/collegefootball/story/19814416/where-theres-smoke-theres-fire-when-it-comes-to-synthetic-marijuana>

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**Call: 24-Hour Helpline 877-505-HOPE (4673)**

**Thank you for your interest and participation in today's webinar.**

**We welcome your feedback!**

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