

THE MISSOURI STATE HIGHWAY PATROL

# SYNTHETIC DRUGS



# What are SYNTHETIC DRUGS?

**S**ynthetic drugs—known as “designer drugs”—are clandestinely produced chemicals that mimic other controlled substances. Originally, scientists developed these chemicals in a research laboratory. The original researchers discontinued their work in the area of synthetic drugs: There is no industrial or medical use for these products. Although the people using the research by legitimate scientists refer to these substances as research chemicals, the only research on them now is to their abuse liability and toxicity. Today’s synthetic drugs are manufactured by people who have accessed the original research and figured out how to make them. Their only goal is to make money.

Synthetic drugs are marketed specifically to teenagers and young adults, military personnel, and anyone on probation or parole. These drugs are manufactured mostly in China, Pakistan, and India. Packaging for these substances includes warnings that the product is “not for human consumption.” These products are not FDA approved; thus, this industry is unlicensed and unregulated. These drugs are easily attainable via the internet.

These drugs are perceived as being “legal” alternatives to marijuana, cocaine, methamphetamine, and MDMA.



# Bath Salts



# N-Bomb

# Synthetic CANNABINOIDS (K2)

Synthetic cannabinoids are a large family of chemically unrelated structures similar to THC. The compounds are dissolved in acetone and sprayed onto dried plant material. The compounds in pure form are white powder and resemble cocaine. They are marketed as incense, potpourri, tea, and spice, and can be sprayed with flavors, such as, watermelon, vanilla, root beer, tropical, etc. While most users choose to smoke K2, it can be mixed into a drink.

Abusers report a potent cannabis-like effect. They arrive at emergency rooms seeking treatment for dependence and withdrawal. Multiple deaths have been connected to the abuse of synthetic cannabinoids alone and in conjunction with other substances.

**Other adverse health effects include:**

<b>PSYCHOLOGICAL</b>	Anxiety, aggressive behavior, agitation, confusion, dysphoria, paranoia, irritation, panic attacks, intense hallucinations
<b>NEUROLOGICAL</b>	Seizures, tremors, loss of consciousness, nonresponsive, incoherent/slurred speech
<b>CARDIOVASCULAR</b>	Tachycardia, hypertension, chest pain, cardiac ischemia (decrease/obstruction of blood supply to the heart)
<b>METABOLIC</b>	Hypokalemia (abnormally low potassium), hyperglycemia
<b>GASTROINTESTINAL</b>	Nausea, vomiting
<b>AUTONOMIC</b>	Fever, mydriasis (prolonged dilation of the pupil)
<b>MUSCULOSKELETAL</b>	Numbness, tingling
<b>OTHER</b>	Conjunctivitis

# SYNTHETIC CATHINONES

Synthetic cathinones are structurally and functionally similar to amphetamine, Ecstasy (MDMA), and cocaine. The key ingredients in synthetic cathinones are the compounds known as MDPV (3, 4-Methylenedioxypropylvalerone), mephedrone, pyrovalerone, and methylone. However, they may include other ingredients. Many of the synthetic cathinone products seized have been found to contain extremely high levels of caffeine. They are usually white, odorless, and appear as fine-grained powder or crystal. They can be snorted, swallowed, injected, or smoked.

The compounds found in synthetic cathinones are also marketed as shoe deodorizer, plant fertilizer, window cleaner, and research chemicals. Doing so allowed producers of bath salts to reach their consumers while avoiding detection of law enforcement.

These products may sound harmless; however, synthetic cathinones are a dangerous synthetic stimulant. Long-term effects are being studied. Similar to methamphetamine, using synthetic cathinones appear to lead to emotional and physical “crash-like” feelings of depression, anxiety, and intense cravings for more of the drug. They are highly addictive and carry the risk of stroke, heart attack, and sudden death.



A condition known as “excited delirium” can occur. This is known to be fatal and is defined as a situation where the body becomes overly sensitive to its own adrenaline, causing a lethal heart rhythm. Kidney failure is also a primary concern and can occur after a single use of bath salts. There is currently no treatment for bath salts. If excited delirium is suspected, emergency medical personnel should be requested and law enforcement personnel should be present.

**Symptoms of using synthetic cathinones (bath salts) include:**

Psychological	Aggressive behavior, anger, anxiety, agitation, auditory and visual hallucinations, depression, dysphoria, empathy, euphoria, fatigue, fornication, increased energy, concentration, panic attacks, paranoia, perceptual disorders, restlessness, self-mutilation, suicidal thoughts
Neurological	Seizures, tremor, dizziness, memory loss, cerebral edema, headache, lightheadedness
Cardiovascular	Palpitations, tachycardia, chest pain, vasoconstriction (constriction of blood vessels), myocardial infarction (heart attack)
Musculoskeletal	Arthralgia (joint pain), extremity changes (coldness, discoloration, numbness, tingling), muscular tension, cramping
Gastrointestinal	Abdominal pain, anorexia, nausea, vomiting
Pulmonary	Shortness of breath
Ear/Nose/Throat	Dry mouth, nasal pain, tinnitus (ringing of the ears)

# OTHER SYNTHETIC COMPOUNDS



2C Series  
Piperazines  
Tryptamines  
Arylcyclohexylamines  
Methoxamine  
Methylhexanamine

## 25I-NBOMe and 25C-NBOMe

Known as "N-bomb" or Bom-25, SmileyPaper.

Can be confused with LSD.

Usually encountered on blotter paper or in dropper bottles.



# CONCLUSION

The use of synthetic drugs has become more prevalent since 2007. They are unregulated and unlicensed and made by multiple manufacturers. The packages rarely provide full list of ingredients. There is limited knowledge of the short- and long-term health effects of synthetic drugs on humans.

Synthetic drugs are sold in convenience stores, gas stations, drug paraphernalia shops, and over the internet. It is popular with adolescents and individuals who must pass random drug tests.

In 2011, Missouri legislators banned all synthetic cannabinoids, adding this to the current law, which encompasses some of the most commonly known compounds of bath salts.

Chapter 195 RSMo adds the following to Schedule I drugs:

- (a) Synthetic cannabinoids which include any natural or synthetic material, compound, mixture, or preparation that contains any quantity of a substance that is a cannabinoid receptor agonist including, but not limited to, the synthetic cannabinoids specifically listed in Section 195.017 RSMo, and any analogues, homologues, isomers, esters, ethers, and salts. These include the compounds commonly found in K3. However, synthetic cannabinoids will not include any approved pharmaceutical authorized by the United States Food and Drug Administration;
- (b) 3-Fluoromethcathinone;
- (c) 4-Fluoromethcathinone;
- (d) Mephedrone, or 4-methylmethcathinone;
- (e) 4-methoxymethcathinone;
- (f) Methylenedioxypropylone, MDPV, or (1-(1,3-Benzodioxol-5-yl)-2-(1-pyrrolidinyl)-1-pentanone, commonly known as bath salts;
- (g) Methylone, or 3,4-Methylenedioxymethcathinone; and
- (h) 4-Methyl-alpha-pyrrolidinobutiophenone, or MPBP (Sections 195.010 and 195.017 RSMo).



Unfortunately, producers of synthetic drugs continue to re-engineer their formulas making it difficult for law enforcement and legislators.

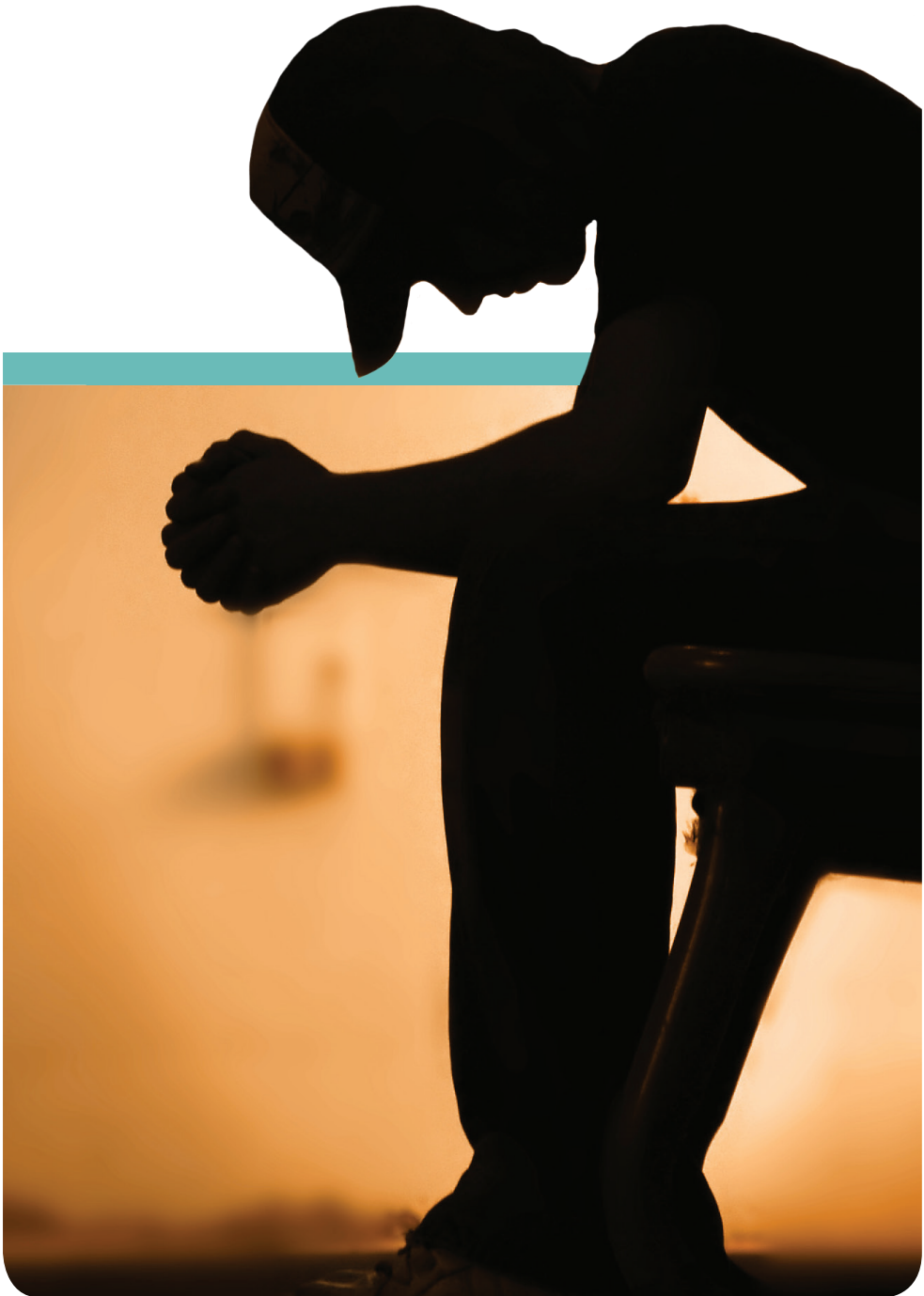
An arrest for possession of synthetic cathinones (bath salts) is dependent upon its composition. Not all of the compounds of bath salts are controlled substances. When banned chemicals are found in bath salts, as indicated by laboratory tests, criminal charges are pursued.

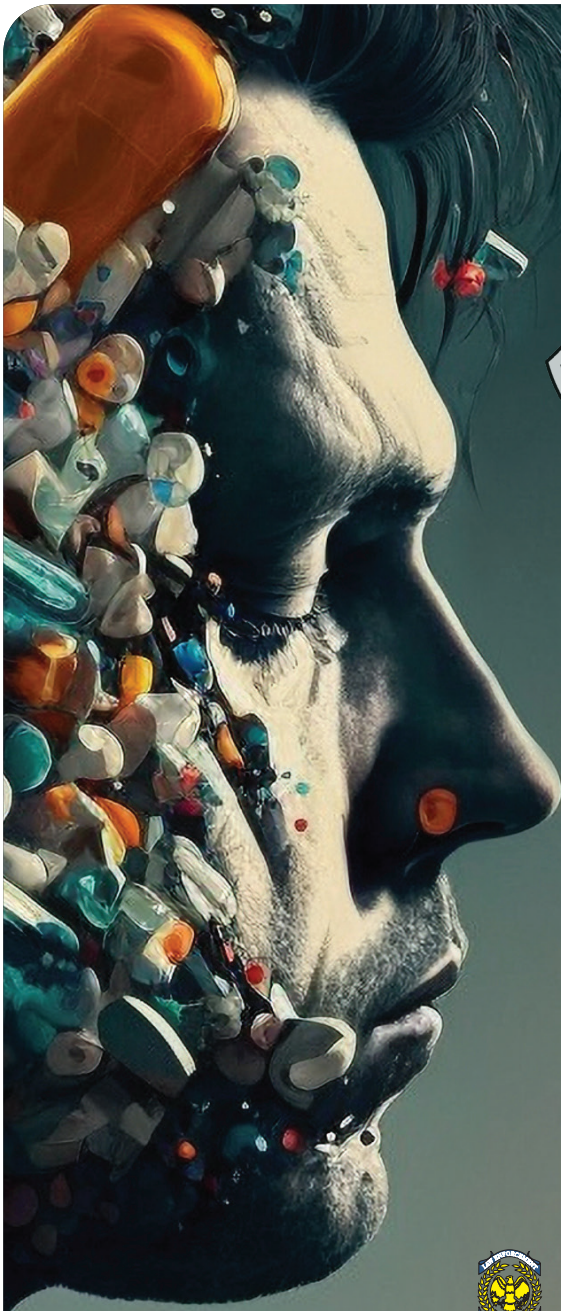
The most important information is that all of these substances are harmful. Risks include easy overdose, paranoia, hallucinations, and suicidal thoughts. There are reported cases of emergency room visits, hospitalizations, and deaths. The Missouri State Highway Patrol encourages everyone to avoid the use of illegal or illicit drugs.



DRUGS ARE THE ENEMIES OF  
AMBITION AND HOPE – AND  
WHEN WE FIGHT AGAINST  
DRUGS WE ARE FIGHTING  
FOR THE FUTURE.”

– BOB RILEY, FORMER  
ALABAMA GOVERNOR





EMERGENCY ASSISTANCE  
\*55

ROAD CONDITIONS  
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