

Synthetic Cannabinoids Fact Sheet

Background

Synthetic cannabinoids are drugs of abuse that are chemically similar to THC, the psychoactive chemical in marijuana. They include JWH-018, JWH-019, JWH-073, JWH-200, CP-47-497, RCS-4, RCS-8, AM-294, AM-2201, UR-144 and XLR-11. The list is constantly growing.

Form: Synthetic cannabinoids are usually applied to a mixture of herbs that users smoke to get high. These herbal blends are sold in small packets as “potpourri” or “incense” labeled “not for human consumption.” The packets are available in some convenience stores and on the web. Brand names seen in the past include “Spice” and “K2.” The substance seen in Manchester, N.H., in August 2014 was called “Smacked!”

Origin: Scientists developed the chemicals used in these products to study cannabinoid receptors in a laboratory setting. The chemicals were not intended to be used as drugs to be given to humans or animals.

Effects

Although developed to mimic marijuana, synthetic cannabinoids often have different—and sometimes more severe—effects.

Short-term effects: Those who have needed treatment at hospitals have had one or more of the following effects: anxiety, hallucinations, paranoia, agitation and rapid heart rate, chest pain, increased blood pressure, sweating, red eyes, upset stomach, vomiting and drowsiness, seizures.

In rare cases there have been heart attacks, a stroke, or decreases in kidney function.

While it is not always clear which chemicals are involved, in some of the more serious cases, patients had used UR-144, XLR-11 and ADB-PINACA. Health care providers have reported multiple cases of decreased kidney function in association with XLR-11. Seizures, heart attack, stroke, and death were associated with either UR-144 or XLR-11. Colorado had multiple cases of altered mental status, agitation, and kidney changes after use of ADB-PINACA. In the same series of cases, a smaller number had seizures and/or required intubation because of respiratory failure. In these cases, most had increases in heart rate, but some later had decreases in heart rate below normal.

In some outbreaks, it is unclear which effects were related to the chemicals. Some smoke synthetic cannabinoids while using other drugs such as bath salts or heroin. Also, as these chemicals are not regulated, the contents may not be what are advertised.

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128 Lakeside Avenue, Suite 106
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Long-term effects: Although the association is unclear, some report prolonged psychosis or other psychiatric effects, including depression and/or suicidal thoughts, after use.

Laboratory screens: Urine screens for the tetrahydrocannabinol (THC) in marijuana do not pick up synthetic cannabinoids. Testing for synthetic cannabinoids is available, but must be special ordered. Not all of the available chemicals are detected in the testing for synthetic cannabinoids. Synthetic cannabinoids are not present in the urine for long after use (hours or days).