

## Drug Facts: Synthetic Cannabinoids

### What are Synthetic Cannabinoids?



Photo: Wikipedia

Synthetic cannabinoids are designer drugs that do not contain marijuana, but rather contain dried, shredded plant material and chemical additives that are responsible for their mind-altering effects.<sup>1</sup> Synthetic cannabinoids are available under many names including synthetic marijuana, Spice, K2, No More Mr. Nice Guy, Fake Weed, Moon Rocks, Sexy Monkey, and many others. Synthetic cannabinoids contain chemicals that bind to cell receptors in the body and brain with strength that can be up to 800 times more potent than tetrahydrocannabinol (THC), which makes synthetic cannabinoids more potent than naturally grown marijuana.<sup>2</sup> The Drug

Enforcement Administration (DEA) has designated many of the substances found in synthetic cannabinoids as Schedule I controlled substances, meaning that they have high potential for abuse with no medical benefit.<sup>3</sup>

### Relevant Information about Synthetic Cannabinoids

- Synthetic cannabinoids are sold in tobacco shops, convenience stores, over the internet, and on the street.
- Like marijuana, synthetic cannabinoids are most often abused by smoking, or prepared as an herbal infusion for drinking.<sup>3</sup>
- Sometimes people mix synthetic cannabinoids with marijuana.
- Synthetic cannabinoid poisoning have been associated with an increase in the number of emergency department visits and some deaths.<sup>3</sup>
- Synthetic cannabinoids are the second-most popular illegal drug among high school seniors, with marijuana being the first.<sup>3</sup>
- Youth are attracted to synthetic cannabinoids because they are easy to access and the misperception that they are natural and safe.<sup>3</sup>
- There is a relatively low level of perceived risk for trying synthetic cannabinoids once or twice among adolescents and young adults.<sup>6</sup>



Photo: Susannah Bryan



Photo: DEA

### Synthetic Cannabinoids in Iowa

The use of synthetic cannabinoids is a growing problem in Iowa, resulting in a number of Iowans going to the Emergency Room (ER). In Iowa, about 42 synthetic cannabinoid-related ER visits were reported in 2013 compared to 33 ER visits in 2012. The rates of ER visits involving synthetic cannabinoids have increased more than twofold from 0.5 per 100,000 in 2009 to 1.4 per 100,000 in 2013. The rates of ER visits involving



synthetic cannabinoids in the United States have also more than doubled from 14.9 per 100,000 in 2010 to 30.2 per 100,000 in 2011.<sup>4</sup> In 2012, the past 12 months prevalence of synthetic cannabinoids use among 12th graders in the United States was 11.4 percent, 8.8 percent among 10th graders, 4.4 percent among 8th graders, and 5.3 percent among young adults.<sup>6</sup> In addition, on average, about 14 deaths were reported in Iowa for the years 2011-2013 due to synthetic cannabinoids poisoning.<sup>7</sup> These rates show how synthetic cannabinoids are becoming a growing problem in the state of Iowa and the nation.

## Health Effects of Synthetic Cannabinoids

- Tolerance is reported in long-term users who may experience withdrawal symptoms such as sleep disturbances, seizures, or arrhythmias.<sup>2</sup>
- New-onset of psychosis has been reported in long-term users of synthetic cannabinoids.<sup>2</sup>
- Synthetic cannabinoids use has been shown to cause physical effects such as vomiting, agitation, confusion, and hallucinations.<sup>3</sup>
- People who abuse synthetic cannabinoids may experience high blood pressure, reduced blood flow to the heart, and in some cases, heart attacks.<sup>3</sup>
- People who use synthetic cannabinoids do so because of its mind-altering effects, which is also why this is dangerous.<sup>5</sup>

Synthetic cannabinoids pose a significant risk to adolescents and young adults. In summary, Iowans need to recognize that using synthetic cannabinoids can carry a significant potential for harm. Consequently, individuals who use synthetic cannabinoids must seek medical treatment immediately if they experience any of the above health problems.<sup>6</sup>

## Finding Help

- If an individual is having a serious health problem (difficulty breathing, collapses, or has a seizure) associated with synthetic cannabinoids use, call 911 immediately
- Transport the individual to the nearest emergency department or hospital
- Call the Iowa Statewide Poison Control Center at 1-800-222-1222
- For more information or to learn more about prevention and treatment resources, contact the Iowa Substance Abuse Information Center at 1-866-242-4111 or visit [www.drugfreeinfo.org](http://www.drugfreeinfo.org)

## References

1. Synthetic marijuana : A dangerous drug at a cheap price. Health Studies Branch. December 2013. Accessed February 10, 2015. [http://www.cdc.gov/nceh/hsb/synthetic\\_marijuana.htm](http://www.cdc.gov/nceh/hsb/synthetic_marijuana.htm)
2. Aoun, Elie G., Hassan M. Minhas, and Jeffrey I. Hunt. "Synthetic marijuana : A serious emerging substance use problem in adolescents." *Brown University Child & Adolescent Behavior Letter* 30, no. 1 (January 2014): 1-5. *Academic Search Elite*, EBSCOhost (accessed February 6, 2015).
3. "DrugFacts: Spice ("Synthetic marijuana")." Drug Facts. December, 2012. Accessed February 10, 2015. <http://www.drugabuse.gov/publications/drugfacts/spice-synthetic-marijuana>.
4. Update: Drug-related emergency department visits involving synthetic cannabinoids. The CBHSZ Report. October 16, 2014. Accessed February 10, 2015. <http://www.samhsa.gov/data/sites/default/files/SR-1378/SR-1378.pdf>
5. Simons, J., Cookman, L., Kang, C., & Skinner, C. Three cases of "spice" exposure. *Clinical Toxicology*; 2011. EBSCOhost (accessed February 6, 2015).
6. Johnston, L.D., O'Malley, P.M., Schulenberg, J.E. Monitoring the future: National survey results on drug use, 1975-2012, Volume I: Secondary school students, 2013. Accessed February 23, 2015, [http://www.monitoringthefuture.org/pubs/monographs/mtf-vol1\\_2012.pdf](http://www.monitoringthefuture.org/pubs/monographs/mtf-vol1_2012.pdf)
7. Iowa Department of Public Health, Vital Records. February 2015. [http://www.idph.state.ia.us/apl/health\\_statistics.asp](http://www.idph.state.ia.us/apl/health_statistics.asp)