



To: ALL HEALTH CARE PROFESSIONALS
From: Ron Kirschner, MD, Medical Director
Subject: Update on Synthetic Cannabinoids
Date: 9/16/13

- Marijuana substitutes consisting of plant material sprayed with various synthetic cannabinoids (SCs) have become increasingly popular over the past few years.
- These are often sold on the internet as incense or potpourri under brand names such as “Spice” or “K2” and labeled “not for human consumption”, though users typically smoke them.
- Besides stronger cannabinoid agonist effects compared with plant marijuana, these newer generation SCs may have other pharmacologic properties, and products may contain additional substances.
- In 2011, five specific SCs were made Schedule I drugs by the DEA (others were later added). However, newer SCs continue to become available.
- In 2012, an outbreak of acute kidney injury, sometimes requiring dialysis, was linked to use of products containing the synthetic cannabinoid XLR-11 or its metabolites.
- Recently in Colorado, there have been increasing reports of agitation, seizures, and severe CNS depression following use of SC products with labels such as “Crazy Clown” and “Dead Man Walking”.
 - The CDC is currently investigating these cases and 3 fatalities that may be linked to SCs.
- Last month in Nebraska, a patient had CNS depression requiring endotracheal intubation after reportedly abusing “Crazy Clown”. No other coingestants were identified and the patient recovered.
- The mainstay of treatment for SC intoxication remains supportive care including:
 - Airway support if clinically indicated
 - Benzodiazepines for agitation or seizures
 - Routine chemistries along with additional testing as needed to identify other causes of altered mental status
- Synthetic cannabinoids will not be detected by standard urine drug screens. Specialized reference labs may be able to identify some SCs, but results won’t be available in real time.

References

CDC. Acute kidney injury associated with synthetic cannabinoid use – multiple states, 2012. *MMWR Morb Mortal Wkly Rep* 2013 Feb 15; 62: 93.
Whitney, “Synthetic marijuana prompts CO health investigation,” NPR 9/13/13 (accessed at npr.org 9/14/13).
Wilson, “3 deaths may be tied to synthetic marijuana in CO,” CNN 9/7/13 (accessed at cnn.com 9/14/13).

Our trained staff of nurse/physician assistant specialists in poison information and physician toxicologists is available 24 hours a day to answer your questions.