

A Weekly FAX from the Center for Substance Abuse Research

University of Maryland, College Park

CDC Alert: Acute Kidney Injury Associated with Synthetic Marijuana Use in Six States

Acute kidney injury following exposure to synthetic cannabinoids has been identified in six states from March to December 2012, according to a recent report from the Centers for Disease Control and Prevention (CDC). Synthetic cannabinoids, also known as synthetic marijuana, K2, and Spice, are psychoactive substances chemically similar to the active ingredient in marijuana that are applied to plant material and smoked (see *CESAR FAX*, Volume 20, Issue 17). Prompted by hospitalizations in Wyoming for unexplained acute kidney injury after recent use of synthetic marijuana, a collaboration among several state public health officials, poison center toxicologists, forensic laboratory scientists, individual clinicians, and the Arkansas K2 Research Consortium identified 16 cases of synthetic marijuana-associated acute kidney injury in 6 states (Kansas, Oklahoma, Oregon, New York, Rhode Island, and Wyoming (see table below). All of the patients were admitted to the hospital, and five required hemodialysis, a treatment for kidney failure. None of the patients reported preexisting renal dysfunction or use of medication that might have caused renal problems. Earlier this month, doctors in Alabama reported four cases of acute kidney injury after ingestion of synthetic marijuana among previously healthy young men.* The CDC report suggests that “physicians caring for otherwise healthy adolescents and young adults with unexplained [acute kidney injury] should inquire about [synthetic marijuana] use, and cases of suspected [synthetic marijuana] poisoning should be reported to both the regional poison center and the appropriate state health department” (p. 97).

Sixteen Acute Kidney Injury Cases Associated with Synthetic Marijuana Use, March 16-December 7, 2012

State	Number of Cases	Ages (median 18.5 yrs)	Peak Creatinine (normal=0.6-1.2 mg/dL)	Implicated Product(s)
Kansas	1	26	7.7	Mr. Happy
Oklahoma	2	15	6.2-11.5	Flame 2.0
Oregon	6	15-27	4.7-10.6	synthetic cannabinoid; Mad Monkey or Clown Loyal; Lava
New York	2	30-33	3.3-9.0	Phantom Wicked Dreams; Spice Gold
Rhode Island	1	25	21.0	synthetic cannabinoid
Wyoming	4	15-21	4.1-6.8	synthetic cannabinoid; blueberry flavored; bubble gum flavored

*Bhanushali, G.K., Jain, G., Fatima, H., Leisch, L., Thornley-Brown, D., “AKI Associated with Synthetic Cannabinoids: A Case Series,” *Clinical Journal of the American Society of Nephrology*, published online before print December 2012. Online at <http://www.ncbi.nlm.nih.gov/pubmed/23243266>. Also see press release at <http://www.uab.edu/news/latest/item/3133-uab-doctors-synthetic-marijuana-dangerous-for-kidneys>

SOURCE: Adapted by CESAR from Centers for Disease Control and Prevention, “Acute Kidney Injury Associated with Synthetic Cannabinoid Use—Multiple States, 2012,” *Morbidity and Mortality Weekly Report* (MMWR), 62(6): 93-98, 2012. Available online at <http://www.cdc.gov/mmwr/pdf/wk/mm6206.pdf>. For more information, contact Michael D. Schwartz at mschwartz@cdc.gov or 770-488-7282.