

About Face! (Chewing): Synthetic Marijuana's Scourge



By Josh Bloom — September 8, 2015



Back in 2012 there was a cluster of rather strange cases in the news, especially originating from the Miami area, where people displayed rather poor dining etiquette. For reasons only they could describe, these folks decided it was a good idea to chew on other people's faces. Can you imagine what etiquette queen Amy Vanderbilt would have to say about this? I'm gonna bet that they also don't know which fork to use for salad.

It turned out these people had been smoking herbs sprayed with chemicals known in street parlance as "bath salts," which is a misnomer, because they are neither salts, nor used for bathing. Some other names for these drugs are Spice, K2, Black Mamba and Bombay Blue. K2, and others, are legal partly because they were labeled "not for human consumption." It was very easy to buy packets of them in convenience stores, or on the street.

Also, some of the drugs used were legal because they were new enough not to be deemed illegal by the authorities. This is a cat and mouse game and a losing one at that since in the DEA is always playing catchup. A new drug hits the street (usually by way of China) and it may be something that has never been seen in the U.S. Or, it may never had even existed before. Crafting laws to ban drugs that are new, or don't fit in with known classes of other substances of abuse is especially tricky.

And, even if a drug is made illegal, a different drug often similar will pop up to replace it. This process is called "analoguing," and it's the basis of most drug discovery, something that I did for 27 years. Except when my company did it, we were looking for new, legitimate drugs, and the method of testing them was, and continues to be, quite different.

In a typical program, thousands of new chemical analogues are synthesized, and then tested first against a target enzyme or receptor, then in cells that contain them, and later in animal models.

The methodology on the street is rather different: Make something new (and it's rather easy to predict whether the new substance will have *some* kind of psychotropic effect); sell it to human lab rats, who may or may not drop dead; or eat faces. Drug discovery in its simplest form.

It takes only a modicum of brainpower to think of (and then synthesize) a close relative of a street drug, which will then be different, and legal. It will also have properties that can be estimated, but cannot be precisely predicted. This process is only limited by the imagination of the organic chemist, and the availability of chemicals that are required to make the new drug. It is usually very easy.

K2, etc., are also referred to as "synthetic marijuana" also an incorrect term. Some of the many (often unknown) drugs/chemicals that can be found in K2, have marijuana-like properties, since they act on some of the same receptors as the cannabinoids (the active chemicals in marijuana), but others are much worse.

In a recent Wall Street Journal [article](#) [1], NYPD police commissioner William Bratton called K2 "'weaponized marijuana' that can make users go 'totally crazy.'" Bratton is taking steps to inform the police of signs of K2, which can include extreme violence by users, and insists that his officers call for backup. Some of the normal takedowns we use aren't going to work," Bratton said, adding that the drug's spread is "something we're very concerned about."

The New York Times ran a front-page [story](#) [2] on Sept. 3 that examined some of the profound and frightening effects the drug is having in East Harlem, a Manhattan neighborhood, especially among homeless people.

Although the term "synthetic marijuana" may sound relatively benign (given that real marijuana is usually considered to be), this is anything but true. Both mephedrone and methcathinone, *very* close cousins to methamphetamine, are typically found in the product. These are very far from safe. Any experienced medicinal chemist will know instantly that these are not "marijuana-like chemicals," but rather "meth-like." This partly explains the violent behavior, and profound and possibly permanent effects on users.

Do not let the name fool you. This is not your father's marijuana. Just something for you to chew over.

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[1] <http://www.wsj.com/articles/the-dangers-of-the-street-drug-k2-1440032581>

[2] http://www.nytimes.com/2015/09/03/nyregion/k2-a-potent-drug-casts-a-shadow-over-an-east-harlem-block.html?_r=0