

# K2 Herb



## Introduction

One of our requirements for this course, PCH 201 wellness, to complete this course is to choose a topic, which showed our interest and conduct research on this topic. To show understanding of our individual topics, we have to research these topics and organize the information we found onto a fact sheet. The topic I chose was K2 Herb.

The reason I chose this topic, K2 herb, is because out of all the things that were listed on the signup sheet, this topic was the one I knew least about. When thinking about this topic I can remember hearing this herb on the news. When describing this drug, many people have compared K2 Herb to marijuana. Like marijuana, when using this drug, you are required to smoke the herb to get the satisfaction of the drug. But what was very interesting to me was the fact that why this herb is legal and why is there very little information out there about this “legal” drug? This is where my research begins about K2 Herb.

## Section 1: Background and Problem Statement

- **Web site #1 Name:** WebMD: “Legal Herbal Products Laced With Designer Drugs: Not Your Father's Marijuana” (Healthy People 2020 does not have any information on my topic)
- **Web address:** <http://www.webmd.com/mental-health/news/20100305/k2-spice-gold-herbal-incense-faq>
- **Background Information:**
  - K2 herb is a legal drug which is legal in almost all the states in America. One the main causes of the legalization of this drug is the fact there is barely any information or studies for this herb. K2 herb is a drug that can be misleading by the ingredients that are said to be in this herb. These substances that are found in this drug that are used to get a “high” are called *designer drugs*. According to the article “Legal Herbal Products Laced With Designer Drugs: Not Your Father's Marijuana” by Daniel J. DeNoon, “The DEA action applies to five of these drugs: JWH-018, JWH-073, JWH-200, CP-47,497, and cannabicyclohexanol,” (DeNoon 1). These “designer” drugs found in this herb show similar effects when smoking “marijuana, hashish, and other cannabis”. But because of these products not specifically being listed on the labels for this herb, these effects are showing up more frequently since the drug was introduced in early 2004.
- **Web site #2 Name:** Drug Enforcement Administration (DEA)
- **Web address:** [http://www.justice.gov/dea/pubs/abuse/drug\\_data\\_sheets/K2\\_Spice.pdf](http://www.justice.gov/dea/pubs/abuse/drug_data_sheets/K2_Spice.pdf)
- **Background Information:**
  - According to the DEA, the K2 herb or also called “spice”, which is a
  - mixture of herbs and spices that is typically sprayed with a synthetic compound chemically similar to THC (DEA 1). Since this drug is very similar to the ingredients of marijuana, this drug is commonly called “fake weed”. Other names that this herb has on the street are bliss, black mamba, Bombay blue, genie, spice and zohai (DEA 1). Because this drug is not yet illegal in all states in America, this herb is accessible in head shops, tobacco shops, retail stores, and commonly on the Internet. The dangers of purchasing this drug on the Internet are not knowing where this substance is really coming from and the amounts of chemicals that are put in this substance (DEA 1).
  - Since the drug shares similar chemicals that are in the drug marijuana, K2 herb also shares similar effects on the mind and body. When smoking this “legal” drug, people can have psychological effects like “paranoia, panic attack and giddiness” (DEA 1). The effects on the body can be increased heart rate and blood pressure. But because this drug is relatively new, there is no research of the long-term effect on humans (DEA 1).
- **Web site #3 Name:** Science Daily
- **Web address:** <http://www.sciencedaily.com/releases/2010/03/100303092405.htm>
- **Background Information:**

- There are many disguised advertisements about K2 herb that many people do not know about. This drug is legal, which leads the consumers in thinking that there is nothing wrong with the drug. According to Anthony Scalzo, M.D., professor of toxicology at Saint Louis University, has seen many cases of teenagers that have tried this drug shows similar adverse effects as marijuana (para 1). The effects he has witnessed are hallucinations, severe agitation, elevated heart rate and blood pressure and vomiting.
- Many people think that this herb is nature and organic, which brings the consumer to think that this drug is safe (para 2). Even though this drug is mixed with “herbal and spice plant products”, is also contaminated by unknown toxic chemicals similar to marijuana, like THC (para 3). These toxic chemical lead to adverse effects, which affect the cardiovascular system. Also this drug can affect the central nervous system causing hallucinations and possibly seizures (para 4).

## Section 2: Research

### Web site #1 Name: WebMD: “Legal Herbal Products Laced With Designer Drugs: Not Your Father’s Marijuana”

- **Web address:** <http://www.webmd.com/mental-health/news/20100305/k2-spice-gold-herbal-incense-faq>
- **Summary of the research:**
  - Volker Auwarter, ScD, and colleagues in the forensic toxicology lab at the University Hospital Freiburg, Germany, tested K2 herb and found no illegal substances (WebMD 1). The reason why Auwarter could not find illegal substances in this drug is because these substances were not detected. As discussed in my background information on the K2 herb or “spice”, similar substances that are found in marijuana, THC, have “synthetic cannabinoids that turn on the cannabinoid receptors found in many cells in the body”, including the brain (WebMD 1).
  - To continue research about these “herbal incense products”, Auwarter and a colleague decided to test K2 herb on themselves to see if the “products really had any activity” (WebMD 3). They rolled 300 milligrams of “spice diamond” which is similar to the substances in K2 herb, between Auwarter and his colleague. After 5 minutes of nothing happening, Auwarter noticed “reddening of the eyes, very dry mouth, and his heart rate doubled, from 60 to 120 beats per minute” (WebMD 3). His side effects didn’t wear off for 6 hours. Also there was a report of a girl who though she was smoking pot, but it was K2, and she had side effects for up to a week (WebMD 3).
- **Web site #2 Name: Strategic Analysis and Information Center: “Situational Awareness: Background and use of Synthetic Marijuana”**
- **Web address:** <http://info.publicintelligence.net/OhioSyntheticMarijuana.pdf>
- **Summary of the research:**
  - K2 Herb or “spice” “was first synthesized in an academic chemistry lab in South Carolina for pharmaceutical research” (SAIC 2). This drug was grown in Asia and now it is almost anywhere. The National Capital Region Intelligence Center, in

Fairfax County, Virginia, found acetone, which is used also in marijuana, so the plant can be smoked (SAIC 2). Acetone is also found “in the production of explosives”. (SAIC 2). Further tests have been done by the Customs and Border Protection Laboratory at Chicago, Illinois. “CBP officers tested the plant-like material with field test kits for marijuana, and the results were negative” (SAIC 3). What the CBP laboratory found is that HU-210 is the chemical found in K2 herb, THC, which causes a person to get “high” after smoking this product (SIAC 3).

- **Web site #3 Name:** MSNBC: “Fake pot that acts real stymies law enforcement”
- **Web address:** <http://www.msnbc.msn.com/id/35444158>
- **Summary of the research:**
  - A Chemistry professor at Clemson University, Dr. John Huffman, “was researching the effects of cannabinoids on the brain” (MSNBC para 10). He found the method and ingredients to make this substance and he discussed this process in one of his papers he wrote in 1995. (MSNBC para 10). Because K2 herb shows similar side effects of getting high off of marijuana, many people who have a preference of smoking marijuana, used this process Dr. Huffman wrote in his paper, to spray onto dried flower, herbs, and tobacco (MSNBC para 10).
  - Since there is very little research about this drug, which is why the drug is still legal in some places, it is easy for children or teenagers to get access to this drug to experiment. A 20 year old boy, Conner Moore, read online articles about the K2 herb (MSNBC para 18). When he was looking up these sites, he mentioned that none of these sites showed what was actually in K2; he only saw reviews of how people felt about the drug, which is comparable to a high when smoking marijuana. The problem in researching the effects of this drug, is that this drug was not around long enough to have “date on the drug’s toxicity or how long it stay in the body” (MSNBC para 20). The DEA can only base the effects on experiments placed on mice, which shows “lower body temperature, partial paralysis and the temporary inability to feel pain” (MSNBC para 20).

### Section 3: Statistics

**Web site #1 Name:** ABC News: “Synthetic Marijuana: 'Legal' High a Dangerous Thrill for Young Americans”

- **Web address:** <http://abcnews.go.com/US/synthetic-marijuana-legal-drug-scary-consequences/story?id=12211253>
- **Summary of the statistics:**
  - Marijuana, cocaine, or other illegal drugs that is consumed for the satisfaction of getting a high, are difficult to get and risky because there is always a middle man between person getting the drug and the drug itself. Usually people have to go out of their way to find a “connect” where a drug dealer is usually involved, which is highly illegal and dangerous. Now, since K2 herb or synthetic marijuana was introduced as a legal drug, people don’t have to put themselves or others in

danger to get high from a substance just as powerful as illegal drugs. Since the drug is so accessible in 32 states in America, people can go to head shops, tobacco stores, or gas stations to get this drug, which has made the popularity of the drug increase drastically (ABC para 2). “In the past year, there have been over 500 cases of adverse reactions to synthetic marijuana across the country” (ABC para 5). But the year before that there were only 6 reported incidents of adverse reactions.

- K2 herb is affecting the population of young people. Instead of the message of how dangerous the drug is, kids are advertising this drug all over the Internet. Kids are using YouTube to show videos of smoking this drug and having funny videos, to basically “brag about finding a legal high” without getting in trouble (ABC para 9). ABC news sent this “legal” drug to a Pennsylvania laboratory, which showed that the chemicals found in synthetic marijuana could be “five times more powerful than marijuana” (ABC para 11). The wrong message is getting out to these young people about this drug, which is could possibly cause “dangerous long-term and short-term side effects, according to DEA (ABC Para 11).

- **Web site #2 Name: Marijuana Addiction**

- **Web address: [http://www.marijuana-addiction.org/Synthetic\\_Marijuana\\_Facing\\_Emergency\\_Controls.htm](http://www.marijuana-addiction.org/Synthetic_Marijuana_Facing_Emergency_Controls.htm)**

- **Summary of the statistics:**

- Only recently, people have become more aware of the dangers of this drug, K2 herb. But even though there is some awareness out about this synthetic marijuana, the federal government is still not able to do anything about this legal drug because of the little research they have on K2 herb. The action which the federal government decided to take was an “initiated emergency action” which makes the drug “illegal” in the United States for at least one year. “The DEA and the Department of Health and Human service further study whether these chemicals should be permanently controlled” (para 3).
- The DEA decided to take action after the “increasing number of reports from poison control centers, hospital, and law enforcement agencies”, about overdoses, seizures, hallucinations, addiction, and suicide (para 4). In reaction to this “initiated emergency action”, people are producing different blends of these herbs that don’t include the chemicals that are being banned from the herb by the Federal Government, like THC, (para 6). According to the American Association of Poison Control Center, they received 1,500 calls from 48 states about products sprinkled with these chemicals like THC (para 7). The populations consuming these products are being misled by these products because of the misleading labels and the legalization of this drug. This is causing people to think this drug is harmless, but these “unknown compounds” are increasing adverse effects on teens and young adults (para 8). To help solve this problem since there can be very little legal action associated with this “legal” drug, it is recommended that parents talk to their children and let them know about the harms of smoking synthetic marijuana or any drug use.

- **Web site #3: NC Department of Health and Human Services**
- **Web address: [http://www.ncdhhs.gov/pressrel/2011/2011-03-22-synth\\_marijuana.htm](http://www.ncdhhs.gov/pressrel/2011/2011-03-22-synth_marijuana.htm)**
- **Summary of the statistics:**
  - The availability of this drug is increasing the use of synthetic marijuana to the youth. To disguise what these drugs are marketed to be used for, which is “to get users high by smoking or snorting the product”, they are labeled as “incense” or “bath salts” (NCDHHS para 2). The products are sprayed by a chemical found in marijuana, cannabinoid, onto flowers, herbs, and tobacco. But when this product is sold in stores it is looked to be an incense like potpourri, and labeled “not for human consumption” (NCDHHS para 3). But youth and adults are purchasing synthetic marijuana because of the high it gives consumers, which is where the name K2 comes from, one of the world’s highest mountains (NCDHHS para 4). “Last year, there were more than 100 emergency department visits related to synthetic cannabinoids” (NCDHHS para 5). These visits were majority of young people from the ages of 13-24, complaining of the common symptoms of synthetic cannabinoids, which is difficulty breathing, chest pains, rapid heart rate, and abdominal cramps. And the first two months of 2011, there were already 20 E.R. visits relating to these side effects because of the abuse of this legal drug (NCDHHS para 5). This use of this drug in the young population is increasing. To help control the situation the Senate Bill 7, had North Carolina add K2 to the list of controlled substances (NCDHHS para 6). This bill makes it illegal to sell manufacture, deliver, transport or posses any synthetic cannabinoids. And the consequences for violating this bill is misdemeanor or felony (NCDHHS para 6).

## **Section 4: Consumer Information**

All Web sites should be gov, edu or org. Some .com sites may be acceptable, see Instructions document about this.

- **Web site #1 Name: National Institute on Drug Abuse**
- **Web address: <http://www.nida.nih.gov/Infofacts/Spice.html>**
- **Summary of the information:**
  - What is interesting about K2 is the fact that no one knows what is really in this drug that causes these adverse effects on consumers of the drug. Even though this drug shows similar characteristics in marijuana, there are more chemicals involved in making the synthetic marijuana. Marijuana is usually a combination of stems, leaves, and a dry plant, which contains THC. Synthetic marijuana there are also a dried plant material but to get the high, which people are experiencing from this drug, there are chemicals added to these dry plants similar to chemicals found in cannabinoid compounds (NIDA para 5). What is dangerous is that like marijuana, these chemicals bind to the same cannabinoid receptors in the body as THC, but some of these compounds can bind more strongly to the receptor, which is why side effects of K9 have had a big affect on users (NIDA para 5). Since all these compounds in this drug still have not been identified, the U.S. Drug Enforcement Administration (DEA) has banned five synthetic cannabinoids until they can further research this drug. Also the DEA has put K2 in a Schedule 1

status under the Controlled Substances Act, which means that this drug can have potential for high abuse and there are no medical benefits from taking this drug (NIDA para 7). This ban is continued for one year in a number of states until the DEA has more information of what chemicals are in synthetic marijuana.

- **Web site #2 Name: Substance Abuse Treatment, Prevention, and Policy**
- **Web address: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3142218/>**
- **Summary of the information:**
  - The use of K2 herb is usually as a legal alternative to smoking marijuana. The population where this drug seems to target are adolescents and young adults (para 1). There was a study done September 2010, with participating students from the University of Florida (para 4). The study was done to target the population of the young people who seem to be consuming the synthetic marijuana, to see if the people who are taking this drug are typically smokers or non-smokers (Para 3). The study's objectives to see the characteristics of the people who are smoking K2, if other drugs are being associated (tobacco, marijuana), and how they are smoking K2 (hookah, cigarette) (para 4). Out of 852 college students at the University of Florida, 34% smoked cigarettes, 36% smoked marijuana, 39% smoked hookah tobacco, and 69 individuals (8%) reported that they used K2 herb before (para 7). After the studied they discovered that K2 was "significantly associated with age, gender, year in school, and ever use of other substances (para 8). The conclusion to the study is that K2 is an "emerging synthetic marijuana drug", and also it is reported that K2 may be a gateway drug to another smoking substance, like marijuana (para 9).
  
- **Web site #3 Name: Consumer Affairs. Com; "Feds, 15 States Ban 'Spice,' Synthetic Marijuana Mixture"**
- **Web address: <http://www.consumeraffairs.com/news04/2011/01/feds-15-states-ban-spice-synthetic-marijuana-mixture.html>**
- **Summary of the information:**
  - The DEA took action in the year 2010, and banned the substance, K2 herb, for up to a year until they further can identify the chemicals that people are consuming. Many people look at the DEA to "protect its children and communities from those who would exploit them for their own gain" said DEA administrator Michele M. Leonhart, (para 5). Because K2 is sold as an "incense" in the store and it is legal, this tricks customers in thinking that this "fake pot" is a harmless alternative to illegal drugs (para 5). DEA banned this drug because of the little information they know about all the chemical compounds added to the dry plants or tobacco to make this substance. They compare these synthetic chemical to playing Russian roulette "since most people are unaware of how harmful they are and what the short and long term effects are on their bodies" according to the Special Agent in charge of the DEA Philadelphia Division (para 6).
  - What is the main attraction to this drug, especially to dedicated pot smokers, is that this drug does not show up on standard drug screening tests (para 8). And the reason why this drug doesn't show up on a standard drug test is because "you have to know what chemical it is you're looking for in a drug test", according to

Dr. Kathryn Cunningham, director of the Center for Addiction Research at the University of Texas Medical Branch ( para 9).

## Section 5: Solutions to the Problem (or Issue)

- **Web site #1 Name: Sci/Tech: “Death Validates Dangers of Synthetic Marijuana”**
- **Web address: <http://blogcritics.org/scitech/article/death-validates-dangers-of-synthetic-marijuana/>**
- **Summary of the information:**
  - On June 6, 2010 in Indianola, Iowa, an 18 year old boy, David Rozga, committed suicide after he consumed K2 with his friends (Sci/Tech para 1). He was having a panic attack before he shot himself, which is one of the side effects linked to smoking K2. This is the first death reported from consuming this drug, which has “prompted the governor to issue a statewide warning about its use and potential dangers” (Sci/Tech para 2). The next step is to ban the drug, which has already been done in some states. There are an increasing number of reports about side effects like “deep depression, hallucinations, feeling of impending death, and severe panic attack” (Sci/Tech para 3). Because this drug is comparable to marijuana, many people think that the high from K2 will be similar to getting high off of marijuana. The high from marijuana appears to be more enjoyable, depending on the quantity that is consumed. But K2 herb is three to five times stronger than marijuana, and new users to this drug do not know how much to consume (Sci/Tech para 4). No store in Indianola sells this product because of the death, and awareness is being spread throughout the state. It is important for parents to let their children know about this drug, especially since there is no age restriction to consume the drug (Sci/Tech para 5).
  
- **Web site #2 Name: Capital News Service: “Users Stocked Up on Synthetic Marijuana”**
- **Web address: <http://www.capitalnews.vcu.edu/2011/05/users-stocked-up-on-synthetic-marijuana.html>**
- **Summary of the information:**
  - Only till recently, synthetic marijuana was available at any gas station or convenient store in America. “ A lot of kids use it like it’s real weed and smoke it every day,” said 18 year old Shelby Sowers, (CNS para 5). She also said that she has seen many of her friends do crazy things, like have a panic attack, which is one of the common side effects from smoking K2 herb. Official of the American Association of Poison Control Centers said “they received 1,300 calls about synthetic marijuana” in less than a year. And the year before they received 2, 874 calls in all, which shows that the use of this drug is rising (CNS para 6). The executive director for the Drug Free America Foundation, Calvina Fay, said that “these products have become increasingly popular, especially among young people, because they are easily obtainable, cheap and legal” (CNS para 8). To solve this problem, especially for the safety of the youth, 18 states in America “have passed legislation to criminalize possession and distribution of synthetic marijuana” (CNS para 10). The DEA banned this drug for up to a year and made

synthetic marijuana as a Schedule 1 drug, which is next to cocaine and heroin (CNS para 10). When synthetic drugs were banned from many states, many users stocked up on the drug, which showed that within the past 6 months before the DEA banned the drug, the sales were higher than they were the previous two years combined (CNS para 9). Even though there is still some access to synthetic marijuana in some states, the drug still remains illegal at the federal level and under many state laws, until the DEA and the U.S. Department of Health and Human Services study these chemicals and decide whether to permanently ban the drug (CNS para 16).

- **Web site #3 Name: Synthetic Drugs: “New Drugs get same old response on Capitol Hill” by Philip Smith**
- **Web address:**  
[http://stopthedrugwar.org/topics/drug\\_war\\_issues/specific\\_drugs/synthetic\\_cannabinoids](http://stopthedrugwar.org/topics/drug_war_issues/specific_drugs/synthetic_cannabinoids)
- **Summary of the information:**
  - The congress is already focusing on “economic crisis and bipartisan warfare” for the upcoming 2012 election. One of the topics that keeps of coming up on “Capitol Hill” are the issues around banning the new synthetic drugs like, “fake weed” and “bath salts”. Congress is having “bills aimed at banning this substances”, avoiding the protests of advocates and businessmen (Smith para 1). DEA has already taken action by temporarily banning K2 or “fake weed”, but congress want to make this action move faster and make this drug illegal (Smith para 3). The synthetic Dug Control Act of 2011 and its Senate companion bill, makes K2 a Schedule 1 controlled substance, which is a drug that isn’t used from medical reasons.

## Conclusions

During my research of K2 herb or synthetic marijuana, I have learned a lot from what the drug portrays to be and what it can do to your body. Before researching this legal drug I knew as much as the new users that are trying this drug every day, “it’s just like smoking marijuana, but legal!” This drug is advertised is generally to the young people because of their innocence and their willingness to experience with drugs. This drug became increasingly popular over the past year because of the fact that this alternative drug to illegal drugs is actually legal and very easy to get. Even though I have never used this drug I have seen this drug at many gas stations and convenient stores near me. And as I researched, they are advertised as “incense” and “fake weed”. What I found interesting about this drug is that no one knows what is really in synthetic marijuana. It shows some similar chemicals as marijuana, like THC, but the chemical compounds have proven that K2 is three to five times more potent than marijuana, which is why so many reports of people having dangerous side effects from using this drug in increasing. I feel that by DEA and U.S. Department of Health and Human Services banning this drug will protect people from these unknown chemical compounds, which are causing these adverse effects and death.

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