

# UC Riverside

## UCR Honors Capstones 2016-2017

### Title

The Effects of Hookah

### Permalink

<https://escholarship.org/uc/item/15c1g386>

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### Publication Date

2017-12-11

The Effects of Hookah

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A capstone project submitted for  
Graduation with University Honors

May 11, 2017

University Honors  
University of California, Riverside

APPROVED

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### *Abstract*

The effect of hookah smoking versus cigarette smoking is a controversial topic argued among people of all ages. Over the years, smoking hookah has transitioned from being part of an ancient cultural tradition, to a social construct. Whether the smoker smokes to relieve stress from work or school, to fit in, or because of peer pressure, more and more individuals are smoking hookah at a young age. Many believe that the health hazards of tobacco smoke is decreased as the smoke in hookah passes through water before inhalation; however, research has shown that smoking hookah is just as harmful as smoking a cigarette. The Centers for Disease Control and Prevention (CDC) has conducted multiple experiments proving that hookah, when compared to cigarettes, is not less harmful, and may even be more harmful, because of its nicotine levels, amount of smoke inhaled by the smoker, and burning chemical compounds in the coals. The CDC also confirmed that herbal shisha flavor, a proposed alternative, has much worse effects on the body than regular shisha flavor. It is important for people to get educated on hookah and how much harm it does to a smoker's body.

### *Acknowledgements*

I would like to acknowledge the support of Dr. Richard T. Rodriguez, who helped me stay organized and always offered his help with editing and revising my paper. Each week, Dr. Rodriguez would ask for updates and give his input on everyone's capstone in HNPG 151. His attention and availability to all his students was very much appreciated, and his lectures and guidance allowed me to complete my capstone efficiently.

## *Table of Contents*

Introduction	1
Background and Origin	1
Tobacco and its Harm	2
Smoke and its Harm	3
Coals and its Harm	4
Hookah versus Cigarettes	5
Prevention	6
Alternatives	7
Conclusion	8
Bibliography	9

## **Introduction**

The routine consumption of both smoke and smokeless tobacco often leads to addiction in users of all ages. Nicotine, a drug naturally found in tobacco, is one of the most addictive substances in our society that can have fatal effects on an individual. Chewing tobacco and smoking are known as the two common ways of ingesting nicotine. As there are many systems used to consume nicotine, smoking hookah is considered to be one of the most harmful methods. Hookah is an oriental system used to smoke flavored tobacco products. Over the years, smoking hookah has transitioned from being a part of an ancient cultural tradition, to a social construct. The reasons for smoking hookah varies across culture and age group, though smokers are unaware of the harm it does to their bodies from the nicotine levels, amount of smoke inhaled, and coals that burn the tobacco.

## **Background and Origin**

Hookah, also known as narghile or shisha in other cultures, first originated hundreds of years ago in the northwestern provinces of India and Ancient Persia. In the past, people would smoke hookah as part of their traditions and cultures; however, these traditions migrated through different countries and came to the United States, where the product is being manipulated. A hookah set consists of a head, hookah stem - also known as the water pipe, vase, and a hose with a mouthpiece. To smoke, users start by filling the vase with water. After the vase is filled to an appropriate amount to assure airflow, the stem is placed into the vase and tightly sealed. The user then packs the bowl with flavored tobacco, covers the bowl with aluminum foil, and pokes holes in the foil. Next, the bowl is placed on the stem. In the center of the stem, there is a protruding pipe where

one end of the hose should be connected. The final procedure is to place the lit charcoal atop the tobacco-filled head, and smoke. Its inventor, Hakim Abdul Faith, was a physician from India who believed that health hazards of tobacco smoke were decreased as they passed through water before inhalation; however, research today proves Faith's argument to be false.

Many people smoke hookah to relieve stress from work or school, while some smoke it to fit in, and others smoke it to do impressive tricks with the smoke. According to the Centers for Disease Control and Prevention, one in five high school seniors in the United States have smoked hookah at least once in their lives. Today, restaurants, cafes, and bars serve hookah for anyone over the age of twenty-one. Hookah lounges are now appearing near college campuses, targeting the young adult society. Consequently, colleges and dormitories are now allowing hookah smoking on campus and dormitories in designated areas, even though many college students are under the legal smoking age. In recent years, there has been an increase in hookah use around the world, most notably among youth and college students.

### **Tobacco and its Harm**

One of the most dangerous components of hookah is the tobacco being smoked. To smoke a hookah, specially made tobacco is heated using coals, causing smoke to pass through water and into the hose, which makes its way to a mouthpiece and into the smoker's lungs. Tobacco, a leafy green plant that smokers have grown to love, is a natural product that stems from nicotine - a stimulant found in the tobacco plant. This substance creates a pleasurable sensation for the smoker, but also increases the smoker's heart rate and blood pressure. The tobacco used in hookah is different from the tobacco

used in other smoking devices. Shisha tobacco is very moist and sticky, and has been soaked in honey or molasses - a thick, dark brown syrup obtained from raw sugar during the refining process; therefore, hookah tobacco does not contain pure tobacco, as it is mixed with many different types of chemicals and syrups to attract customers.

Consequently, different hookah flavors may contain harmful ingredients that the smoker is not fully aware of. According to the Centers for Disease Control and Prevention, hookah flavor is mixed with fruity syrups, which often contain poison that can harm lung and esophagus tissue in the smoker's body, whereas cigarettes typically only contain pure, dried tobacco leaves. For this reason, hookah is often considered to be one of the most harmful systems used to smoke nicotine. In addition to being different from other smoking devices, the tobacco for hookah that is sold in the United States also differs from the tobacco flavor sold in other countries. United States companies infest the tobacco with chemicals and "several toxic agents known to cause lung, bladder, and oral cancers," according to the Centers for Disease Control and Prevention. These chemicals contain glycerin, a chemical that gives the smoker a lightheaded feeling. The consumption of hookah is a very harmful pastime for people of all ages and should be stopped as soon as possible. The juices from the flavors travel through the hookah and into the smokers' mouths, often causing irritation and significantly increasing the chances of developing oral cancers.

### **Smoke and its Harm**

Another major difference between smoking hookah and smoking cigarettes is the amount of smoke that is inhaled into the smoker's lungs. With this large amount of smoke come higher levels of carbon monoxide, nicotine, and environmental degradation



through air pollution. In fact, “smoking a shisha gives off as much carbon monoxide as fifteen to fifty-two cigarettes”(Centers for Disease Control and Prevention). Hookah plays a big role in contributing to air pollution in closed and covered areas, also known as “hot boxing” a room, garage, etc. One round of hookah smoking produces the same amount of air pollution as roughly seventy drags on a cigarette. Compared to a single cigarette, hookah smoke is known to contain higher levels of arsenic, lead, and nickel, thirty-six times more tar, and fifteen times more carbon monoxide than cigarettes. Smoking hookah requires taking longer and harder drags, rather than a cigarette, which requires shorter and smaller drags. This causes increased levels of inhaled nicotine and carcinogens in the lungs. An average cigarette smoker who takes eight to twelve puffs inhales 0.5 to 0.6 liters of smoke in less than ten minutes, whereas a hookah smoker takes anywhere from twenty to two hundred puffs in one smoking session, with each puff averaging about one liter of smoke each. This allows smokers to conclude that one hookah smoking session, depending on its duration, could be equivalent to smoking forty to four hundred cigarettes. Not only does the smoke affect your health, but sharing a mouthpiece can also cause countless diseases that vary in severity. Diseases, such as mononucleosis, strep throat, oral herpes, or even the common flu, can be passed by sharing the same mouthpiece on a hookah hose. Smoking hookah can lead young adults down the wrong path, where they develop nicotine addiction and further habitual cigarette smoking and health consequences.

### **Coals and its Harm**

The coals that burn on a hookah head are also dangerous to the human body. When a hookah head is packed, it is wrapped by foil, placed on the stem, and holes are

poked for airflow. Normally, three or four coals are placed on the hookah head to heat the tobacco through the poked holes. Once the coals are placed on the foil, they slowly burn the tobacco. These coals consist of concentrated carbon, which is very harmful to the body. Including the list of harmful chemicals that can be found from various components of a hookah, chemicals from the aluminum foil also mix with the tobacco smoke, bringing the user to inhale an even more toxic concoction of fumes. Although scientists and researchers have not yet found conclusive evidence that suggests that this combination is harmful, the inclusion of mass produced items such as the foil can cause more damage than good.

### **Hookah versus Cigarettes**

Often times, people believe that smoking hookah is less harmful than smoking cigarettes. Hookah's inventor, Hakim Abdul Faith, was a physician who believed that the health hazards of tobacco smoke were decreased as they passed through water before inhalation; however, today's research proves Faith's argument otherwise. Faith proposed that nicotine levels dropped over half the amount by the time the smoke reaches the smokers mouth. When directly comparing cigarette and hookah smoking in a clinical laboratory, the total amount of nicotine exposed during forty-five minutes of hookah smoking is "approximately 1.7 times greater...than after a single cigarette"(*Tobacco Smoking Using a Waterpipe*). With such a high amount of nicotine, hookah smokers are more likely to experience "increased heart rates,...feel nausea or dizziness,...and experience mild euphoria"(*Tobacco Smoking Using a Waterpipe*). Often times, addicted cigarette smokers smoke hookah when they quit smoking cigarettes because they perceive hookah use to be less harmful than cigarettes use, not knowing that they inhale

far more smoke, and at greater lengths.

Some people smoke hookah rather than cigarettes because they believe in Hakim Abdul Faith's argument: water in the hookah vase filters out toxic ingredients in tobacco smoke. It has been proven that even with the water in a smoking device, no tobacco is filtered before entering the smokers' lungs, and the "tobacco is no less toxic" (*Smoking Tobacco Through Hookah Is No Safer Than Cigarette*). Others like to smoke hookah for the flavors. Modern day cigarettes come in a few flavors, such as mint and grape; however, hookah comes has hundreds of different tobacco flavors to choose from. These flavors include various fruits, types of candies, and even mint. The tobacco used in these flavors is mixed with syrups and sometimes even liquid forms of nicotine to enhance the smoker's experience.

### **Prevention**

Another issue with hookah use is the lack of education and resources for those struggling with addiction. There are countless resources available for youth and adults that cover a variety of drugs, both for prevention and for cessation. Examples of these drug programs include Drug Abuse Resistance Education (D.A.R.E.) and Mothers Against Drunk Driving (M.A.D.D.). These programs cover drugs like cigarettes, alcohol, cocaine, marijuana, methamphetamine, and opiates, leaving out hookah. While these programs cover many different drugs, hookah is still not addressed. Resources that help with addiction prevention include the electronic cigarette, cigarette patches, methadone, nicotine gum, Alcoholics Anonymous, Narcotics Anonymous, and rehabilitation centers in general. Instead of producing products or having classes to help addicted hookah smokers, "new forms of electronic hookah smoking, including steam stones and hookah

pens...” (*Smoking and Tobacco Use*). As is obvious, hookah addiction is not as big an issue as those that society has taken on. This is likely due to the lack of education about the harmful effects of hookah smoking.

### **Alternatives**

Though it is unrealistic to propose a solution that requires all hookah smokers to quit, there are other alternatives to help reduce the amount of hookah being smoked throughout society. Just like purchasing alcohol is strictly regulated in California, buying hookah supplies should be as well. According to the 2016 National Youth Tobacco Survey (NYTS), hookah use is not only common, but is also increasing among adolescents. Their studies showed that hookah use increases “with both age and grade” (*Hookah Use Among Adolescents in the United States*). When buying hookah supplies, state identification cards should be required and scanned in order to purchase hookah products to ensure that the buyer is old enough to buy the hookah supplies, restricting underage smokers from buying hookah products. Changing the legal smoking age from eighteen to twenty-one was a very effective for the coming generations. Most eighteen year olds are transitioning from high school to college, and often end up smoking hookah as a way to cope with their new lifestyle, giving into peer pressure, or simply smoking as a social activity.

Although the legal age to buy tobacco products recently changed to twenty-one, herbal shisha is now being produced. This tobacco is allowed to be sold to anyone over sixteen years old; however, it has been proven to be much more harmful than regular tobacco. Although it sounds natural, herbal shisha is a mixture of chemicals that are more harmful than regular tobacco. These chemicals are made artificially in factories, unlike

tobacco, which is simply a plant. They not only harm the human body, but are also extremely toxic to the environment and atmosphere. Companies that produce herbal shisha look to exploit anxious teenagers who are craving to rebel against the norm and their parents. While still not a mainstream substance of smoking, herbal shisha's popularity is on the rise. According to a study conducted by the Center for Disease Control and Prevention, teenagers and young adults who start off smoking with herbal shisha have a tendency to move on to nicotine-based drugs. While herbal shisha might seem like a healthy alternative, it is a mischievous way to take advantage of the young minds of adolescents and teenagers.

### **Conclusion**

It is obvious that any type of smoking is bad for the human body. With hookah's excessive nicotine and smoke levels, you are inhaling more of a foreign substance that is getting absorbed into the bloodstream through capillaries in your lungs, and the smoker is effectively disrupting the normal function of these structures. It is important to educate society and inform them about all the harm smoking hookah can do not only to themselves, but the environment as well. As hookah transitions from being part of an ancient cultural tradition to a social construct, more and more individuals under the legal smoking age, twenty-one, have begun smoking and are becoming addicted to nicotine. Developing this nicotine addiction can lead to further habitual cigarette smoking and health consequences. Rates of sicknesses and diseases caused by smoking, such as cancer and mononucleosis, are expected to increase and at lower ages.

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