

Hookah smoking remains popular among college students despite known risks

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Two recent studies have highlighted the potential dangers and confusing messaging surrounding hookah pipe smoking, which appears to be particularly popular among college students and young adults.

One study, conducted at the University of Pittsburgh School of Medicine, found that college students are more likely to start smoking hookah tobacco if they perceive the behavior as “attractive and romantic.” When these perceptions are present, the study noted, students often initiate the habit despite knowledge of its risks.

A second study, published in *Cancer Epidemiology, Biomarkers and Prevention*, reported that after one evening of [smoking](#) a water pipe in a hookah bar, young adults had increased levels of nicotine, cotinine, tobacco-related carcinogens and volatile organic compounds in their urine.

These findings suggest a possible correlation between water pipe smoking and an increased risk for cancer and other diseases.

Despite these risks, said researcher **Jaime Sidani, PhD**, senior research specialist in the Program for Research on Media and Health at the University of Pittsburgh, young adults remain largely undeterred from initiating hookah smoking.

“Hookah tobacco smoking does not seem to be hampered by many of the negative social stigmas of [cigarette smoking](#),” Sidani said in a press release. “If educational programs can help students to cut through the positive portrayals and marketing of hookah smoking, it may be possible to make hookah smoking less attractive and socially acceptable, resulting in less initiation.”

Exposure to carcinogens

The study published in *Cancer Epidemiology, Biomarkers and Prevention*, conducted by researchers at the University of California at San Francisco, sought to determine the levels of exposure to various harmful substances incurred from a single night of hookah smoking.

The researchers evaluated 55 experienced water pipe smokers aged between 18 and 48 years, who were considered to be in good health. They were instructed to discontinue all smoking for 1 week. At the end of this period, the participants provided a baseline urine sample. They then smoked water pipes at their preferred hookah bar in the San Francisco Bay area.

According to self-reported details of the smoking sessions, they spent an average of 74 minutes smoking water pipes, and smoked an average of 0.6 bowls of water pipe [tobacco](#) per participant. They provided urine samples shortly after the hookah bar visit, as well as a first-voided urine sample the next morning.

The researchers found that in the samples taken immediately after the evening of smoking, participants had a 73-fold increase in nicotine, a fourfold increase in cotinine, and twice their baseline levels of NNAL, a metabolite of a tobacco-specific nitrosamine that can lead to lung and [pancreatic cancers](#). They also had between 14% and 91% increases in breakdown products of volatile organic compounds (VOCs), including benzene and acrolein, also known carcinogens and triggers of [cardiovascular](#) and respiratory diseases.

Nicotine, cotinine and NNAL were also elevated in the next-day samples vs. the baseline samples. Nicotine was 10.4-fold higher; cotinine was 3.2-fold higher and NNAL was 2.2-fold higher, according to a press release.