

# Danger in the Vapors

**K**evin Cameron had been smoking cigarettes for over 25 years when he finally decided, at age 43, that it was time to quit. His doctor and wife had been advising and pleading with him to stop smoking for some time because of the known risks, like having a heart attack or developing cancer. Initially, Kevin tried some over-the-counter Nicorette gum. Unfortunately, he found that the gum wasn't very helpful. He still craved the "rush" he felt from taking a long drag of a cigarette. Then, one of his buddies at work suggested that he try one of the new e-cigarettes. His friend mentioned that these cigarette look-alikes—electronic nicotine delivery pens—gave a smoker the same sensation of smoking a real cigarette but were supposed to be a "safer" alternative because they released less tar.

## BY DR. TIMOTHY SANBORN

After using for a while, Kevin eventually saw some of the latest Juul devices at the checkout counter next to the e-cigarettes. These sleek vaping devices came in colorful containers and had the appearance of slim, compact, easy to use USB sticks, and they were sold in various flavors like mango, banana and strawberry. He enjoyed these flavored Juul pods so much that soon he began using 3-4 pods a day.

Then, one Sunday afternoon, Kevin developed severe pains in the center of his chest while getting excited watching the Bears game. After the pain didn't go away with a sip of Diet Coke, he decided it was time to call 911. When the paramedics arrived and performed an electrocardiogram, it was obvious; Kevin was having a heart attack. Quickly, the EKG was



transmitted electronically to the hospital emergency room where my staff and I had been paged to come in immediately and take care of him. In less than an hour, Kevin had an emergent coronary angiogram and a stent placed in one of his coronary arteries to relieve his chest pain.

During recovery, while reviewing Kevin's risk factors, we determined that Kevin had no history of traditional risk factors such as diabetes, hypertension or high cholesterol. His only risk factor was his prior smoking and current vaping habit.

"Kevin, you should know that one Juul pod has the same amount of nicotine as a whole pack of cigarettes. If you are inhaling 3-4 pods per day, your intake of nicotine is equivalent to smoking 3-4 packs of cigarettes per day."

"Wow, Doc! I didn't realize that. But aren't these nicotine devices supposed to help you quit smoking?"

"Unfortunately, there's not a lot of data to support that claim. Most scientific studies conclude that e-cigarettes don't help with smoking cessation. One recent study from England did report that e-cigarettes were twice as effective in smoking cessation compared to nicotine patches or gum. However, 80% of those using e-cigarettes were still vaping after one year, as compared to only 9% of those who still used nicotine gum or patches for smoking cessation."

"So they were still hooked on the nicotine in e-cigarettes?"

"That's right. More alarming for our next generation, studies of high school students in Los Angeles and Hawaii found that kids using e-cigarettes or vaping were much more likely to become cigarette smokers in the future compared to non-users. There is also a new study which found that people

who use electronic cigarettes are twice as likely to have a heart attack as compared to non-users."

"I guess that includes me," Kevin said as he shook his head in disgust.

"Don't feel ashamed, Kevin. You didn't know the risks of e-cigarettes and Juul devices," I said as I rested my hand on his shoulder. "Unfortunately, there's a lot of confusion and not a great deal of accurate information available for the public to learn about e-cigarettes. I am very passionate about the health risks of smoking and nicotine. Smoking is the number one preventable cause of death in the US, and tobacco kills almost half a million people each year; more than automobile crashes, gun violence and opiate overdoses combined."

"That's impressive," said Kevin as he looked up and acknowledged my concern for him.

"It may also be helpful for you to know that the vapors released when inhaling contain certain carcinogens like formaldehyde. There's also a chemical named diacetyl, which can cause a chronic lung disease called 'popcorn lung.' This chemical was detected in 37 of 51 e-cigarettes tested. I'm sure the tobacco industry doesn't want you to know about that. Hopefully, all these facts about nicotine and smoking will help you stop using nicotine products all together."

"Well, this certainly has been educational. No more vaping for me," he concluded.

"Yes, there are many dangers in the vapors, whether the vapors come from regular cigarettes, e-cigarettes or the latest, trendy Juul devices," I told Kevin, hoping one more patient was going to change his lifestyle for the better with more education on prevention. □