



e-Cigarettes, Vape Pipes, Hookah Pens: Nicotine Vapor Products & Your Health

Since the first “electronic cigarettes” were sold as novelty items in 2008, nicotine vapor products have become extremely popular. Industry experts estimate that 2.5 million U.S. adults smoke e-cigarettes, and the Centers for Disease Control recently reported that 1 in 10 adolescents have tried nicotine vapor products. Since tobacco-related illnesses account for 1 in every 5 deaths in the United States, many people wonder about the potential health risks of e-cigarettes and similar products. Are these cigarette-like products safe? **Read on** to find out more.

Know What You’re Buying

Nicotine vapor products are known by many names—a number of specific brand names as well as slang terms such as “vape pipes,” “hookah pens,” and “e-hookahs.” Regardless of the name, the mechanics of the devices are essentially the same. A battery powers a tiny heating coil that vaporizes a liquid solution, which the user then inhales. The liquid comes in a wide range of flavors, from tobacco and coffee to kid-friendly flavors like cherry and watermelon. The appearance of nicotine vapor products also varies widely. Some resemble cigarettes, while others look like colorful candy straws.

In fact, some nicotine vapor products look so little like cigarettes that many buyers don’t realize they are purchasing a product that contains **nicotine**, the substance in tobacco that makes it highly addictive. Nicotine carries health risks, including increased heart rate and blood pressure. E-cigarette manufacturers are not required to list nicotine content prominently on the packaging or indicate how much nicotine is in a cartridge. A good rule to follow is to look carefully at the packaging of any product designed to be inhaled.

Know What You (and Those Around You) Are Inhaling

What’s in the vapor, and is it safe? There are as yet no long-term studies on the effects of nicotine vapor products; however, many healthcare professionals are concerned about possible health risks. The contents of vapor cartridges vary from brand to brand, but the majority contain three primary elements: nicotine; some type of flavoring; and other chemicals, usually propylene



glycol and glycerine. All three of these elements are vaporized and inhaled by the user and by anyone nearby.

Is second-hand vapor a health risk? Second-hand vapor, as shown by a recent study, is a health concern for bystanders. Trace amounts of nicotine, flavoring, glycerine, and propylene glycol are present in the vapor the user exhales. Some people have reported respiratory irritation, nausea, and headaches from inhaling second-hand vapor. Many cities have already banned indoor use of e-cigarettes.

The U.S. Food and Drug Administration (FDA) classifies propylene glycol and glycerine as chemicals that are “generally recognized as safe.” However, no medical studies have been conducted on the long-term effects of inhaling glycerine, propylene glycol, or any kind of flavoring.

Nicotine carries heart risks. Cases of **nicotine overdose** have been recorded with nicotine vapor products. This is a particular concern to heart patients, as nicotine overexposure causes heart rate and blood pressure to fluctuate dangerously. E-cigarette cartridges can contain anywhere from zero to 24 milligrams of nicotine (the amount you’d find in one pack of cigarettes). Since users don’t necessarily have to go outside to “vape,” it can be easy to take in too much nicotine. The appealing flavors can also speed consumption and lead to overexposure.



Take care with small children. There have been cases of small children chewing on and swallowing the liquid in nicotine vapor cartridges. All parts of nicotine vapor products should be kept out of reach of small children, and Poison Control should be contacted immediately if you suspect a child may have ingested any liquid from a nicotine vapor product.

Risks to Teens

Currently, there are no federal age restrictions on the purchase of nicotine vapor products, though legislation to impose restrictions is under review as of October 1, 2013. While no studies have yet linked e-cigarette use to smoking, concerns have been raised that nicotine vapor products could be a “gateway” to smoking. Because most lifetime tobacco smokers start before they turn 18, some healthcare professionals worry that exposing adolescents to nicotine in any form is a step toward addiction that raises the likelihood that they could become lifelong smokers.

Could Nicotine Vapor Products Help Me Quit Smoking?

Some people try nicotine vapor products to help them quit smoking cigarettes. To date, no nicotine vapor product has been approved by the FDA as a smoking cessation device, and no definitive studies have found that e-cigarettes are an effective way to quit smoking.

Gradually reducing your nicotine intake is a popular method of quitting because it minimizes withdrawal symptoms. However, unlike the nicotine patch or gum, the amount of nicotine in an e-cigarette cartridge is not regulated and may contain as much nicotine as you would get from 20 cigarettes. With so much variation in nicotine content, e-cigarettes don’t offer a reliable way to reduce nicotine intake. In fact, some smokers find they unintentionally *increase* their nicotine intake with e-cigarettes.

That being said, it is generally agreed that e-cigarette vapor is not as harmful to your health as tobacco smoke. For this reason, e-cigarettes may present a viable alternative to smoking tobacco for some frustrated smokers who have had enormous difficulty quitting. If you are considering using e-cigarettes as an alternative to smoking, discuss this option with your doctor.

Questions to Ask Your Doctor About Nicotine Vapor Products

- I’ve tried to **quit smoking** but haven’t found an effective method to stop. Could e-cigarettes help me? Can you recommend other proven methods for quitting?



- Someone I know wants to quit smoking. **How can I support their efforts?**
- Do I have **any health conditions that would be made worse** by nicotine or the chemicals in e-cigarette vapor?
- I don’t use e-cigarettes, but someone I live with does. Should I be concerned about **second-hand vapor**?
- I’m concerned that **my teen** is using nicotine vapor products. How can I encourage him/her to stop?

What Should I Do If I Have More Questions?

Ask them. Contact your healthcare provider and ask all of your questions about nicotine vapor products. Any time you have health questions, the conversations you have with your doctor are the key to successful results. Ask every question you have.

We hope you will use SecondsCount.org to learn more about your cardiovascular health and treatment options. **SecondsCount.org** was developed by the Society for Cardiovascular Angiography and Interventions (SCAI), the medical society for interventional cardiologists.

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