



“I know cigarettes are dangerous. Are e-cigarettes and vaping safe alternatives?”



E-cigarettes are high-potency nicotine delivery devices that have been increasing in popularity in the U.S. The mid-to-long-term consequences are not yet known, but any inhalation of harmful chemicals can cause irreversible lung damage and lung diseases.

What are e-cigarettes?

E-cigarette and vaping devices are often called “e-cigs,” “e-hookahs,” “mods,” “vape pens,” “vapes” and “tank systems.” The electronic device has liquid or e-liquid that is heated by a battery, and produces a vapor which is inhaled. Some vaping devices look like regular cigarettes, cigars or pipes while others can look like USB flash drives, pens and other everyday items.

What is in an e-cigarette?

The e-liquids in e-cigarettes and the vapor they produce are **not** made of water. The vapor contains harmful chemicals and small particles that are inhaled into the lungs and exhaled into the environment. The FDA included e-cigarettes as tobacco products in 2016. However, manufacturers have until 2022 to include a list of ingredients on their packaging. This makes it is hard to know what is contained in e-cigarette products on the market. E-cigarettes may contain:

- Small particles that can get into the lungs and make it harder to breathe
- Flavorings containing chemicals that may cause lung disease
- Chemicals that may cause cancer
- Metals such as nickel, tin and lead. Some e-cigarettes contain two to 100 times more of these chemicals than cigarettes contain.
- Nicotine, the highly addictive substance also found in cigarettes

The amount of nicotine in e-cigarettes varies greatly

The nicotine content in e-cigarettes can range between 0 and over 30 mg/ml. Although there are e-cigarette liquids that claim they contain zero percent nicotine, studies have found they may still have traces of this addictive substance. Some e-cigarette producers have developed e-liquids that are smoother and more palatable when inhaled, mimicking the sensation of smoking a regular cigarette. This allows someone to inhale higher concentrations of nicotine, which may lead to higher amounts of nicotine in the blood in a shorter amount of time. This potentially makes them more addictive than regular e-liquids.

Nicotine poisoning

The type of e-liquid, the e-cigarette or vaping device, and the way the devices are used can all affect the amount and the speed at which a user can get nicotine into the body. When a person ingests too much nicotine, it can lead to nicotine poisoning. This is possible in any individual, including adults, but children are at a greater risk. In small children, accidental exposure to the nicotine in e-liquid products, even in relatively small amounts, could be toxic and lead to seizures, comas, respiratory arrest and potentially death from cardiac arrest.

Can e-cigarettes and vaping be used as quit aids?

E-cigarettes and vaping devices are not currently approved by the FDA as aids to quitting smoking. Most adult e-cigarette users do not stop smoking cigarettes and are instead continuing to use both products, known as “dual use.” Dual use is not an effective way to safeguard your health. Smoking even a few cigarettes a day can be dangerous. Quitting smoking completely is very important to protect your health. Although it is recognized that some tobacco products have the potential to be less harmful than others, more evidence is needed before any products other than approved nicotine replacement therapies (NRTs) are recommended as aids to quit smoking. FDA approved NRTs include the nicotine patch, gum, lozenges, inhaler as well as certain medications.

Talk to your doctor about all your options to help you quit smoking.

Learn more about our tobacco treatment program, **Quit to Win:**

QuitToWin@fallonhealth.org

1-888-807-2908

Monday–Friday, 8:30 a.m.–4:00 p.m.

