

December 19, 2014






# Share the Wellness Tip

## The Fiery Debate over Electronic Cigarettes

A new Centers for Disease Control and Prevention study on youth e-cigarette usage found that the number of youth who never smoked but used e-cigarettes tripled from 2011 to 2013. Additionally, those using e-cigarettes were twice as likely to start smoking traditional cigarettes and roughly 75 percent of teen smokers continue to smoke as adults. Many health advocacy groups and tobacco regulators are now calling for stricter guidelines on the sale of e-cigarettes to young people.

### What Are e-Cigarettes?

These devices deliver nicotine without tobacco. They often look like cigarettes, or sometimes pipes, pens or lipstick. Typically, e-cigarettes have three parts:

-  A cartridge full of liquid, which contains nicotine and other chemicals and flavorings
-  A vaporizer that heats up the liquid
-  A battery that powers up the vaporizer when it's puffed on

Users inhale the vapors from the heated liquid. The process is called "vaping." And it's become increasingly popular among people of all ages. In fact, e-cigarette use by both teens and adults has more than doubled in recent years.

### Are They Safer Than Cigarettes?

Experts aren't certain yet. On one hand, the vapors do not contain the same chemicals as tobacco smoke. But e-cigarette users still breathe in nicotine, a highly addictive drug. In the short term, inhaling the vapors may cause coughing, sore throats and other minor complaints. But no long-term studies have yet examined their safety.

### Can They Help Smokers Quit?

Some studies suggest they might. But many doctors remain skeptical. The U.S. Food and Drug Administration (FDA), which regulates medications and tobacco products, has not approved them for this use. A problem is that adults might reach for e-cigarettes to help them quit or cut back on smoking, but this might actually increase kids' risk of smoking later on, rather than decreasing it.

### What's the Bottom Line?

Because e-cigarettes aren't regulated by the FDA, it's hard to know exactly how much nicotine and other chemicals they contain. Doctors have much more to learn about the effects of these devices on the human body and the environment.

It is estimated that there are almost 500 different e-cigarette brands out today, with more than 7,700 different flavors. A 2014 study showed wide ranging nicotine levels in e-cigarettes and significant differences between listed and actual nicotine levels. In 2009, the FDA conducted initial lab tests and found detectable levels of toxic cancer-causing chemicals — including an ingredient used in anti-freeze — in two leading brands of e-cigarettes and 18 various cartridges.

Researchers have also raised concerns about secondhand exposure to vapors from e-cigarettes. Some people, including pregnant women and former smokers, could face harm from nicotine in the air.

Two initial studies have found formaldehyde, benzene and tobacco-specific nitrosamines (a carcinogen) coming from secondhand emissions. Other studies show that chemicals exhaled by users also contain formaldehyde, acetaldehyde and other potential irritants. More research is needed to understand these effects, too.

In the meantime, experts say, it's safest not to introduce new chemicals into clean air — or clean lungs. If you're trying to quit smoking, ask your doctor about methods that have been shown to help, including other nicotine replacement products.

**Sources:** American Lung Association, Centers for Disease Control and Prevention

