

## **E-cigarettes mess with your heart**

Even though e-cigarettes don't contain tobacco, they still hold plenty of nicotine, and can cause many of the same nicotine-related heart problems as regular smokes. According to Michael Fiore, MD, director for the Center of Tobacco Research and Innovation at the University of Wisconsin, nicotine falls in the 'stimulant' category of drugs, leading your heart to beat faster than usual and potentially causing high blood pressure. Even worse, research presented at the 2013 American Society of Cell Biology annual meeting found that nicotine can damage heart cells and [contribute to heart disease](#).

## **E-cigarettes irritate your eyes and respiratory tract**

A 2014 study by the University of California-San Francisco's Center for Tobacco Control Research and Education found that in addition to [causing cancer](#), the formaldehyde found in some e-cigarettes can also irritate the eyes, throat, and nose. Additionally, the researchers noted that propylene glycol causes irritation in the eyes and respiratory track, and eventually can harm the central nervous system and spleen. And according to Dr. Fiore, nicotine found in e-cigarettes can occasionally cause nausea, dizziness, and vomiting, especially in new users. These are [shocking diseases eye doctors can find first](#).

## **E-cigarettes trigger your brain to release dopamine, leading to addiction**

Similar to regular cigarettes, the nicotine in e-cigarettes causes a release of dopamine throughout the body, which often leads to a nicotine addiction, Dr. Fiore says. 'Nicotine is the psychoactive, addictive part of tobacco,' Dr. Fiore explains. 'What we know is in individuals, young and old, it can rapidly lead to dependence with some pretty substantial changes in brain chemistry as a result.' Dopamine is the main agent in cigarette addiction, he says, since it causes a soothing, pleasurable sensation that smokers come to crave.

## **E-cigarettes can poison you (or a child) if you swallow the liquid**

Like any drug, consuming too much nicotine can be toxic, and Dr. Fiore says that swallowing nicotine in its concentrated, liquid form puts consumers at an elevated risk of overdosing. He especially warns against the danger of leaving e-cigarettes out in front of children, who may not understand these risks. 'Many children have ingested this juice or liquid and have gotten very sick, and sadly, some of them have even died from this,' Dr. Fiore says. 'It's one of the leading reasons today that poison response centers have calls.' If you do choose to use an e-cigarette around children, be sure to keep it hidden and locked away to avoid such a tragic mistake. Here are other [lifesaving tips from poison control centers](#).

## **E-cigarettes may harm brain development in teens**

About 13 percent of high school students in 2014 admitted to using e-cigarettes, according to the CDC. Unfortunately, research shows that teens and children who can get their hands on these devices may face some serious long-term brain development issues due to their nicotine content. A 2012 study found that consuming nicotine during adolescence can worsen your working memory and attention and increase your chances of developing mental and behavioral problems such as major depressive disorder, panic disorder, or antisocial personality disorder.

## **E-cigarettes can cause cancer**

Even without many of the cancer-causing agents found in tobacco cigarettes—like tar, ammonia, and DDT—recent research shows that e-cigarettes can contain high levels of formaldehyde, another carcinogen. According to a 2015 study by researchers at Portland State University, the process of heating propylene glycol and glycerol (the two most common ingredients of e-cigarette liquid) in the presence of oxygen, as is done when vaping, can result in the release of formaldehyde. In order for this to happen, the study says the device needs to reach a rather high voltage—five volts—but unfortunately, many e-cigarettes on the market can indeed heat up to this [level](#). Watch for these [signs of lung cancer](#) you might be ignoring.

## **E-cigarettes may help wean you off cigarettes—but alternate methods are better**

Many people report using e-cigarette as a means to quit cigarette smoking. Because vaping does not burn tobacco, Dr. Fiore says, e-cigarettes are probably a healthier alternative than smoking, though there is no substantive long-term research to determine this for sure. However, he suggests instead using an FDA-approved method to quit smoking, such as nicotine patches or nicotine gum. These products, Dr. Fiore says, are safe, regulated, and proven to help smokers quit. Here are other [proven ways to quit bad habits](#).