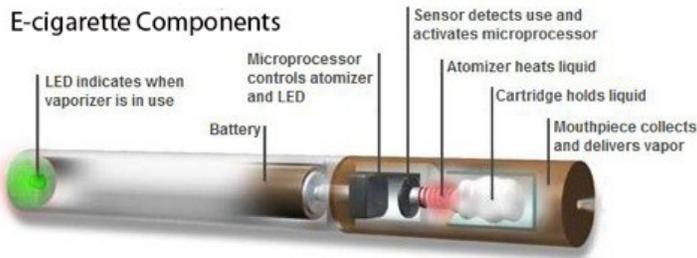


# The Truth *About E-Cigarettes*



## How do e-cigarettes work?

- Electronic cigarettes, or e-cigarettes, are battery-powered devices that deliver doses of nicotine and other additives to the user in an aerosol. Depending on the brand, e-cigarette cartridges typically contain nicotine, a component to produce the aerosol or vapor (e.g., propylene glycol or glycerol), and flavorings (e.g., fruit, mint, or chocolate).
- The manufacturers report that the cartridges typically contain between 6 and 24 mg. of nicotine, but sometimes refill cartridge liquid can contain 100 mg. nicotine/ml. Nicotine is a poison, and in the form of tobacco products, is an addictive chemical.

## Are e-cigarettes safe?

- Nicotine, inhaled, ingested, or in direct contact with the skin, can be particularly hazardous to the health and safety of certain people, such as children, pregnant women, nursing mothers, people with heart conditions, the young and the elderly.
- E-cigarettes and their nicotine cartridges and refill accessories must be kept out of the reach of young children at all times because they pose a risk of choking or nicotine poisoning, including death.
- Potentially harmful additives also have been documented in some e-cigarette aerosols (exhale), including respiratory irritants, heavy metals, and substances which worsen asthma symptoms and can cause cancer.

- The safety of e-cigarettes has not been scientifically demonstrated. Furthermore, scientific testing indicates that the products vary widely in the amount of nicotine and other chemicals they deliver. Because they are not regulated nor have clear manufacturing standards or full labeling of ingredients, there is no way for consumers to find out what is actually delivered to their body. The potential risks they pose for the health of users and bystanders remain a concern.

## Are e-cigarettes an effective method for quitting tobacco smoking?

- The possible effectiveness of e-cigarettes for helping people to quit smoking has not been sufficiently studied. E-cigarettes are often touted as tobacco replacements, smoking alternatives or smoking cessation aids. The U.S. Food and Drug Administration (FDA) has not approved e-cigs as tobacco cessation aids. Other FDA approved cessation aids exist (patches, gum, lozenges).
- When e-cigarettes are used as cessation aids, they are intended to deliver nicotine directly to the lungs. None of the FDA approved, regulated cessation aids, such as nicotine patches and chewing-gum, deliver nicotine to the lungs.
- The implied health benefits associated with e-cigarettes are unsubstantiated or may be based on inaccurate or misleading information, and do not include all the risks.
- Nicotine raises blood pressure and heart rate, increases blood clotting (leading to risks of heart attack and stroke), and has a number of other negative health effects on the body, in addition to addiction. Nicotine crosses the placenta and can damage the developing fetus. The delivered dose may vary notably by product, which contain nicotine in various concentrations.



### **Are there other types of electronic nicotine delivery devices?**

- Most e-cigarettes are designed to resemble other tobacco products including conventional cigarettes, cigars, and pipes. Some e-cigarettes are even designed to appear as everyday objects including pens, magic markers, musical instruments and USB memory sticks.



### **Why should e-cigarettes be regulated?**

- E-cigarettes come in many flavors, (fruity, candy) which make them more appealing for youth to try them. Once a person is hooked on the nicotine in an e-cigarette, they sometimes try other tobacco products too.
- Seeing smoking or “vaping” behavior can be a trigger for smokers trying to quit and can glamorize the behavior for youth.
- According to the latest data from the Centers for Disease Control and Prevention, the number of never-smoking U.S. middle and high school students who have used e-cigarettes tripled from 79,000 in 2011 to 263,000 in 2013.
- In 2012, the total number of tweens and teens nationwide who had tried e-cigs was 1.78 million. Seventy-six percent of youth who used e-cigs within the past 30 days, also smoked conventional tobacco cigarettes during the same period.

### **How are e-cigarettes being marketed to be attractive to youth?**

- E-cigarette manufacturers continue to market e-cigarette cartridges in a variety of candy-like flavors that appeal to youth, such as bubble gum, chocolate, and mint. They are sold at mall kiosks, where young people often gather, as well as online, where safeguards against youth access can be breached more easily than in face-to-face purchases.

### **Risks or injuries associated with e-cigarettes**

- Explosions and burns (including the face while driving); choking (on e-cig cartridge), childhood poisoning and possible death.
- Most e-cigarettes contain propylene glycol, which is a known respiratory irritant when inhaled. The testing of some of these products also shows the presence of other toxic chemicals, aside from nicotine.
- These products pose a risk for accidental nicotine poisoning and such calls to poison control centers have markedly increased. About 10 mg nicotine is lethal to a child; 30-60 mg is lethal in adult. Nicotine refill cartridges can contain up to 100 mg nicotine/ml.

### **Are big tobacco companies promoting e-cigarettes?**

- All three major U.S. tobacco companies (Altria, Reynolds American, Lorillard) have entered the e-cigarette market. These companies have a long history of marketing to kids and have rarely acted in the interest of the public’s health.

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