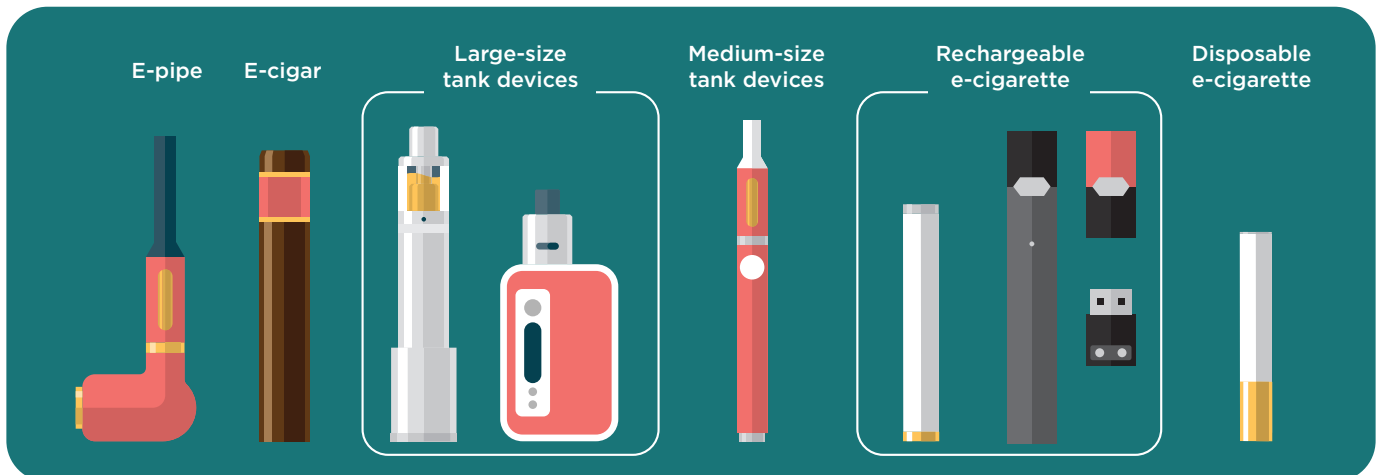


- » E-cigarettes have the potential to benefit adult smokers who are not pregnant if used as a complete substitute for regular cigarettes and other smoked tobacco products.
- » E-cigarettes are not safe for youth, young adults, pregnant women, or adults who do not currently use tobacco products.
- » While e-cigarettes have the potential to benefit some people and harm others, scientists still have a lot to learn about whether e-cigarettes are effective for quitting smoking.
- » If you've never smoked or used other tobacco products or e-cigarettes, don't start.

## WHAT ARE E-CIGARETTES?

- » E-cigarettes are known by many different names. They are sometimes called “e-cigs,” “e-hookahs,” “mods,” “vape pens,” “vapes,” “tank systems,” and “electronic nicotine delivery systems.”
- » Some e-cigarettes are made to look like regular cigarettes, cigars, or pipes. Some resemble pens, USB sticks, and other everyday items.
- » E-cigarettes produce an aerosol by heating a liquid that usually contains nicotine—the addictive drug in regular cigarettes, cigars, and other tobacco products—flavorings, and other chemicals that help to make the aerosol. Users inhale this aerosol into their lungs. Bystanders can also breathe in this aerosol when the user exhales into the air.
- » E-cigarettes can be used to deliver marijuana and other drugs.

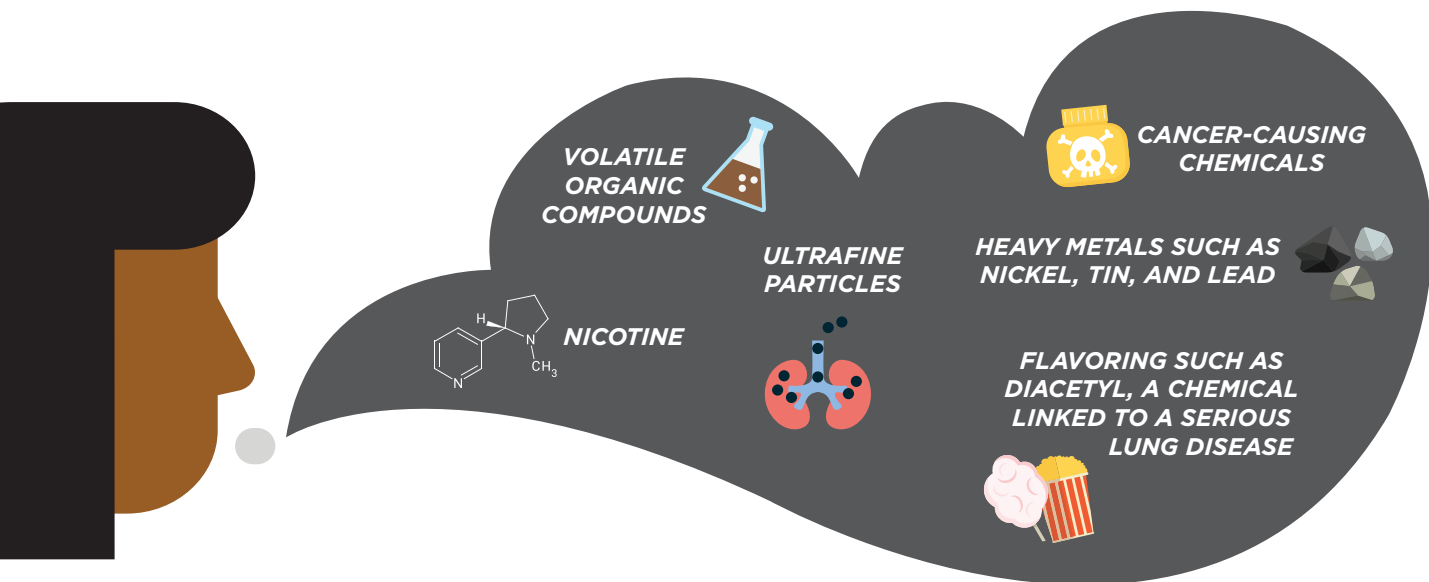


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## WHAT IS IN E-CIGARETTE AEROSOL?

THE E-CIGARETTE AEROSOL THAT USERS BREATHE FROM THE DEVICE AND EXHALE CAN CONTAIN HARMFUL AND POTENTIALLY HARMFUL SUBSTANCES:



It is difficult for consumers to know what e-cigarette products contain. For example, some e-cigarettes marketed as containing zero percent nicotine have been found to contain nicotine.

## ARE E-CIGARETTES LESS HARMFUL THAN REGULAR CIGARETTES?



**VS**



**YES**, but that doesn't mean e-cigarettes are safe.

E-cigarette aerosol generally contains fewer toxic chemicals than the deadly mix of 7,000 chemicals in smoke from regular cigarettes. However, e-cigarette aerosol is not harmless. It can contain harmful and potentially harmful substances, including nicotine, heavy metals like lead, volatile organic compounds, and cancer-causing agents.

# WHAT ARE THE HEALTH EFFECTS OF USING E-CIGARETTES?

SCIENTISTS ARE STILL LEARNING ABOUT THE LONG-TERM HEALTH EFFECTS OF E-CIGARETTES. HERE IS WHAT WE KNOW NOW.

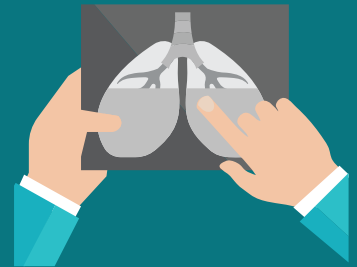
## 1 Most e-cigarettes contain nicotine, which has known health effects

- » Nicotine is highly addictive.
- » Nicotine is toxic to developing fetuses.
- » Nicotine can harm adolescent brain development, which continues into the early to mid-20s.
- » Nicotine is a health danger for pregnant women and their developing babies.



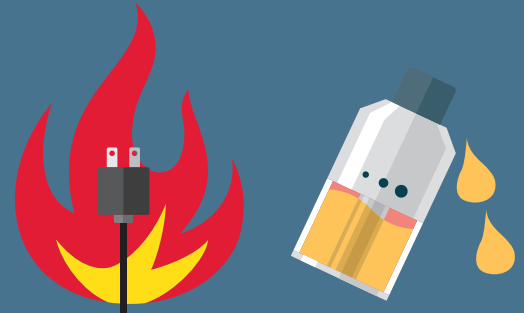
## 2 Besides nicotine, e-cigarette aerosol can contain substances that harm the body.

- » This includes cancer-causing chemicals and tiny particles that reach deep into lungs. However, e-cigarette aerosol generally contains fewer harmful chemicals than smoke from burned tobacco products.

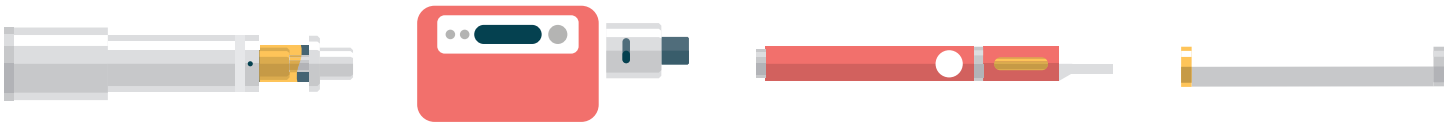


## 3 E-cigarettes can cause unintended injuries.

- » Defective e-cigarette batteries have caused fires and explosions, some of which have resulted in serious injuries.
- » In addition, acute nicotine exposure can be toxic. Children and adults have been poisoned by swallowing, breathing, or absorbing e-cigarette liquid.



## CAN E-CIGARETTES HELP ADULTS QUIT SMOKING CIGARETTES?



### **E-CIGARETTES ARE NOT CURRENTLY APPROVED BY THE FDA AS A QUIT SMOKING AID.**

The U.S. Preventive Services Task Force, a group of health experts that makes recommendations about preventive health care, concluded that the evidence is insufficient to recommend e-cigarettes for smoking cessation in adults, including pregnant women.



**HOWEVER,** e-cigarettes may help non-pregnant adult smokers if used as a complete substitute for all cigarettes and other smoked tobacco products.

### **TO DATE, THE FEW STUDIES ON THE ISSUE ARE MIXED.**

Evidence from two randomized controlled trials found that e-cigarettes with nicotine can help smokers stop smoking in the long term compared with placebo (non-nicotine) e-cigarettes.

A recent CDC study found that many adults are using e-cigarettes in an attempt to quit smoking. However, most adult e-cigarette users do not stop smoking cigarettes and are instead continuing to use both products (“dual use”). Because smoking even a few cigarettes a day can be dangerous, quitting smoking completely is very important to protect your health.

# WHO IS USING E-CIGARETTES?

E-CIGARETTES ARE NOW THE MOST COMMONLY USED TOBACCO PRODUCT AMONG U.S. YOUTH.

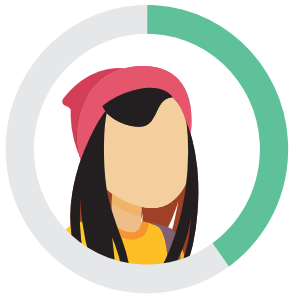
IN THE U.S., YOUTH ARE MORE LIKELY THAN ADULTS TO USE E-CIGARETTES



**4.3%**  
MIDDLE SCHOOL STUDENTS

In 2016, more than **2 MILLION** U.S. middle and high school students used e-cigarettes in the past 30 days, including:

**11.3%**  
HIGH SCHOOL STUDENTS



AMONG CURRENT E-CIGARETTE USERS AGED 18-24 YEARS, **40.0%** had **NEVER BEEN** cigarette smokers

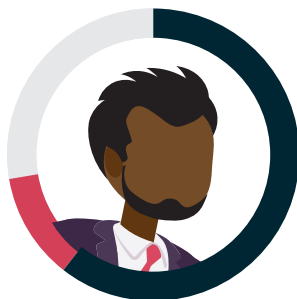
# ADULTS

In 2016, **3.2%** of U.S. adults were current e-cigarette users

IN 2015, AMONG ADULT E-CIGARETTE USERS OVERALL:

**29.8%**  
were former regular smokers

**11.4%**  
had never been regular cigarette smokers



**58.8%**  
were current regular cigarette smokers

