E-cigarette use is also controversial. They are a relatively new product, so there is limited information about their safety and effectiveness.

The FDA has not approved any e-cigarettes as safe and effective for quitting smoking.

E-cigarettes are not regulated as drugs or tobacco products. The FDA has not approved any e-cigarettes to help people quit smoking. A 2016 study found that a significant number of people who used e-cigarettes did not plan to quit smoking. It’s also possible that e-cigarettes are used as a gateway for tobacco use among youth and young adults who may not have used tobacco products before.

E-cigarettes can be used to deliver nicotine, other addictive substances, and many different chemicals.

Some chemicals in e-cigarettes have been shown to cause cancer in animals.

E-cigarettes pose health risks to the user and bystanders. Users can inhale the aerosol into their lungs, and bystanders can be exposed to secondhand aerosol.

E-cigarettes can be used to deliver marijuana and other drugs.
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:

- Nicotine
- Ultrafine particles
- Flavoring such as diacetyl, a chemical linked to a serious lung disease
- Volatile organic compounds
- Heavy metals such as nickel, tin, and lead

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?

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 THE MOST COMMONLY USED TOBACCO PRODUCT AMONG YOUTH.

In 2018, more than 3.6 MILLION U.S. middle and high school students used e-cigarettes in the past 30 days, including:

- 4.9% MIDDLE SCHOOL STUDENTS
- 20.8% HIGH SCHOOL STUDENTS

In the U.S., youth are more likely than adults to use e-cigarettes.

Among current e-cigarette users aged 45 years and older in 2015, most were either current or former regular cigarette smokers, and 1.3% had never been cigarette smokers.

In contrast, among current e-cigarette users aged 18–24 years, 40.0% had never been regular cigarette smokers.

In 2015, among adult e-cigarette users overall:

- 29.8% were former regular cigarette smokers
- 58.8% were current regular cigarette smokers
- 11.4% had never been regular cigarette smokers

In 2017, 2.8% of U.S. adults were current e-cigarette users.