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.
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 NOW THE MOST COMMONLY USED TOBACCO PRODUCT AMONG U.S. YOUTH.

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

- **4.3%** MIDDLE SCHOOL STUDENTS
- **11.3%** HIGH SCHOOL STUDENTS

Among current e-cigarette users aged 18–24 years, **40.0%** had NEVER BEEN cigarette smokers.

In 2015, among adult e-cigarette users overall:

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

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

Teens are more likely to use e-cigarettes than cigarettes.¹

8th grade: 3.6% cigarettes, 9.5% e-cigarettes
10th grade: 6.3% cigarettes, 14.0% e-cigarettes
12th grade: 11.4% cigarettes, 16.2% e-cigarettes

2x as many boys use e-cigs as girls

Teen e-cig users are more likely to start smoking.²

Start Smoking Within 6 Months
- E-cig user: 30.7%
- Non-user: 8.1%

What do teens say is in their e-cig?

- 66.0% Just flavoring
- 13.2% Nicotine
- 5.8% Marijuana
- 13.7% Don’t know
- 1.3% Other

High teen exposure to e-cig advertising³

7 in 10 exposed to ads

Retail ads: 58.3%
Internet ads: 42.9%
TV/movie ads: 34.1%
Newspaper & magazine ads: 38.4%

³ MTE 2015; ² Leatherhal 2015; ¹ Statag 2015

Manufacurers don’t have to report e-cig ingredients, so even don’t know what’s actually in them.
We are fortunate in Bucks County to be able to access important data collected by our own youth. Since 1989, Pennsylvania has conducted a survey of school students in the 6th, 8th, 10th and 12th grades to learn about their behavior, attitudes and knowledge concerning alcohol, tobacco, other drugs and violence. The Pennsylvania Youth Survey – or PAYS – is sponsored and conducted every two years by the Pennsylvania Commission on Crime and Delinquency. Vaping/E-Cigarette use was added to the survey; below is some data from the most recent survey conducted in the Fall of 2017.

**How is Vaping Defined?**

Vaping is an emerging method of drug use where a device with a heating element is used to vaporize and inhale the psychoactive ingredients in tobacco (or sometimes marijuana). While it is often portrayed as a safer alternative to smoking, the data on vaping is scant and the risks are poorly understood.

**Questions Asked:**

1. How frequently have you used an electronic vapor product such as e-cigarettes, e-cigars, e-pipes, vape pens, e-hookahs or hookah pens during the past 30 days?

2. If you used an electronic vapor product such as e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs or hookah pens during the past 12 months, with which substances did you use it? (Mark all that apply.)
   - a. Just flavoring
   - b. Nicotine
   - c. Marijuana or hash oil
   - d. Other substance
   - e. I don’t know

**The Results:**

Which substances are Bucks County students vaping?

![Pie chart showing vaping substance use]

- Just Flavoring
- Nicotine
- Marijuana or Hash Oil
- Other Substance
- I don’t know
- 69.1% of 6th grade students responded “I don’t know” to what substances they are vaping.
- 32.9% of 12th grade students in Bucks County who responded are vaping marijuana or hash oil.
- Bucks County student percentages for vaping just flavoring, nicotine, and marijuana or hash oil are all higher than state percentages.

According to the 2017 Pennsylvania Youth Survey data, vaping use is increasing among students in Bucks County.

Looking at the PAYS data from 2015 to 2017, 30-day vaping use increased in 8th, 10th, and 12th grades.

In all grades for 2017, vaping use is the same (for 8th grade) and higher in Bucks County than the state averages for all other grades.
Electronic cigarettes (e-cigarettes) are battery-powered devices that can deliver nicotine and flavorings to the user in the form of an aerosol. E-cigarettes come in many shapes and sizes.

WHAT’S THE BOTTOM LINE?

A new e-cigarette shaped like a **USB** flash drive is being used by students in schools.

Nicotine is highly addictive and can **harm brain development**, which continues until about age 25.

The use of any tobacco product — including e-cigarettes—is **unsafe** for young people.

Parents, educators, & health care providers can help prevent and reduce the use of all tobacco products, including e-cigarettes, by young people.

>> Learn HOW in this fact sheet.
AN INCREASINGLY POPULAR E-CIGARETTE DEVICE, CALLED JUUL, IS SHAPED LIKE A USB FLASH DRIVE.

Use of JUUL is sometimes called “JUULing.”

JUUL’s nicotine liquid refills are called “pods.” JUUL is available in several flavors such as Cool Cucumber, Fruit Medley, Mango, and Mint.

All JUUL e-cigarettes have a high level of nicotine. According to the manufacturer, a single JUUL pod contains as much nicotine as a pack of 20 regular cigarettes.

JUUL became available for sale in the United States in 2015. As of December 2017, JUUL is the top-selling e-cigarette brand in the United States.

News outlets and social media sites report widespread use of JUUL by students in schools, including in classrooms and bathrooms.

Other devices are becoming available that look like USB flash drives. Examples include the MarkTen Elite, a nicotine delivery device, and the PAX Era, a marijuana delivery device that looks like JUUL.
E-cigarette aerosol is not harmless. It can contain harmful ingredients. However, e-cigarette aerosol generally contains fewer harmful chemicals than smoke from burned tobacco products, like regular cigarettes.

Most e-cigarettes contain **nicotine**, which is highly addictive and can **harm brain development**, which continues until about **age 25**.

**YOUNG PEOPLE WHO USE E-CIGARETTES MAY BE MORE LIKELY TO GO ON TO USE REGULAR CIGARETTES.**
PARENTS, EDUCATORS, AND HEALTH CARE PROVIDERS CAN HELP PREVENT AND REDUCE THE USE OF E-CIGARETTES BY YOUNG PEOPLE.

PARENTS CAN:
» Learn about the different shapes and types of e-cigarettes and the risks of all forms of e-cigarette use for young people.
» Talk to their children about the risks of e-cigarette use among young people. Express firm expectations that their children remain tobacco-free.
» Set a positive example by being tobacco-free.

EDUCATORS CAN:
» Learn about the different shapes and types of e-cigarettes and the risks of all forms of e-cigarette use for young people.
» Develop, implement, and enforce tobacco-free school policies.
» Reject youth tobacco prevention programs sponsored by the tobacco industry. These programs have been found to be ineffective for preventing youth tobacco use.

PEDIATRIC HEALTH CARE PROVIDERS CAN:
» Ask about e-cigarettes, including devices shaped like USB flash drives, when screening patients for the use of any tobacco products.
» Warn patients about the risks of all forms of tobacco product use, including e-cigarettes, for young people.
TEACHERS AND PARENTS:
That USB Stick Might Be an E-cigarette

Some e-cigarettes don't look like tobacco products, so some kids use them unnoticed in schools, including in classrooms and bathrooms.

JUUL delivers a high dose of nicotine. Nicotine is highly addictive and can harm adolescent brain development.

E-cigarettes are the most commonly used tobacco product among U.S. middle and high school students.

An increasingly popular e-cigarette, called JUUL, is shaped like a USB flash drive.

TOBACCO PRODUCT USE IN ANY FORM, INCLUDING E-CIGARETTES, IS UNSAFE FOR YOUTH.

LEARN MORE about the risks of e-cigarettes for youth and access tips for talking to youth at: https://e-cigarettes.surgeongeneral.gov/resources.html
Including Vaping/E-Cigarettes in Your Current ATOD Policy

The information below provides sample information you can include to your district’s existing ATOD policy around tobacco by officially prohibiting the possession, use and sales of vape products on school property.

Because we recognize the hazards caused by exposure to environmental tobacco smoke and vape, as well as the life-threatening diseases linked to the use of all forms of nicotine addiction, it shall be the policy of [SCHOOL DISTRICT], effective [DATE], to provide a nicotine-free environment for all students, staff, and visitors. This policy includes the smoking or vaping of any tobacco/nicotine products and the use of oral tobacco/nicotine products, and it applies to students, employees, and non-employee visitors of [SCHOOL DISTRICT].

DEFINITION

• For the purposes of this policy, tobacco shall be defined as any product containing nicotine; lighted or unlighted smoking products, vaping products or oral products.

• Tobacco shall be defined as use AND/OR possession of any smoking, vaping or oral nicotine product, included, but not limited to cigarettes, cigars, vape pens, JUUL, hookah pens, pipes, chew, spit, etc.

PUPILS

• Incidents of possession, use AND/OR sale of tobacco in violation of this policy by any students on any school property or associated property will result in [INSERT DISCIPLINARY ACTION BASED ON 1ST, 2ND AND 3RD OFFENSE].

• Tobacco Treatment Programs will be offered to violators.

EMPLOYEES

• There shall be no tobacco permitted on the property or in the vehicles of [SCHOOL DISTRICT]. This policy applies to the employees and any other persons utilizing [SCHOOL DISTRICT], property, vehicles, or equipment.

COMMUNITY/VISITORS/VOLUNTEERS

• [SCHOOL DISTRICT] prohibits tobacco use by any persons in its school buildings and on any property, buses, vans, and vehicles that are owned, leased or controlled by the school districts, including field trips, sporting events, etc.
Talk with Your Teen About E-cigarettes: 
A Tip Sheet for Parents

BEFORE THE TALK

Know the facts.


Be patient and ready to listen.

• Avoid criticism and encourage an open dialogue.
• Remember, your goal is to have a conversation, not to deliver a lecture.
• It’s OK for your conversation to take place over time, in bits and pieces.

Set a positive example by being tobacco-free.

• If you use tobacco, it’s never too late to quit. For free help, visit smokefree.gov or call 1-800-QUIT-NOW.
START THE CONVERSATION

Find the right moment.

• A more natural discussion will increase the likelihood that your teen will listen. Rather than saying “we need to talk,” you might ask your teen what he or she thinks about a situation you witness together, such as:
  » Seeing someone use an e-cigarette in person or in a video.
  » Passing an e-cigarette shop when you are walking or driving.
  » Seeing an e-cigarette advertisement in a store or magazine or on the internet.

Ask for support.

• Not sure where to begin? Ask your health care provider to talk to your teen about the risks of e-cigarettes.
• You might also suggest that your teen talk with other trusted adults, such as relatives, teachers, faith leaders, coaches, or counselors whom you know are aware of the risks of e-cigarettes.
• These supportive adults can help reinforce your message as a parent.

ANSWER THEIR QUESTIONS

Here are some questions and comments you might get from your teen about e-cigarettes and some ideas about how you can answer them.

Why don’t you want me to use e-cigarettes?

• Science shows that e-cigarettes contain ingredients that are addictive and could harm different parts of your body.

• Right now, your brain is still developing, which means you are more vulnerable to addiction. Many e-cigarettes contain nicotine, and using nicotine can change your brain to make you crave more nicotine. It can also affect your memory and concentration. I don’t want that for you!

• E-cigarettes contain chemicals that are harmful. When people use e-cigarettes, they breathe in tiny particles that can harm their lungs.

• The cloud that people exhale from e-cigarettes can expose you to chemicals that are not safe to breathe.

What’s the big deal about nicotine?

• Your brain is still developing until about age 25. The Surgeon General reported that nicotine is addictive and can harm your brain development.

• Using nicotine at your age may make it harder for you to concentrate, learn, or control your impulses.

• Nicotine can even train your brain to be more easily addicted to other drugs like meth and cocaine.
I don't say this to scare you, but I want you to have the facts because nothing is more important to me than your health and safety.

**Aren't e-cigarettes safer than conventional cigarettes?**
- Because your brain is still developing, scientific studies show that it isn't safe for you to use any tobacco product that contains nicotine, including e-cigarettes.
- Whether you get nicotine from an e-cigarette or a cigarette, it's still risky.
- Some e-cigarette batteries have even exploded and hurt people.

**I thought e-cigarettes didn't have nicotine—just water and flavoring?**
- I used to think that too. But many e-cigarettes have nicotine. There are also other chemicals in them that can be harmful.
- Let's look at the Surgeon General's website on e-cigarettes (E-cigarettes.SurgeonGeneral.gov) together so you can see for yourself.

**I (or my friends) have tried e-cigarettes and it was no big deal.**
- I appreciate your honesty. In the future, I hope you (or your friends) will stay away from e-cigarettes and other tobacco products, including cigarettes. Science shows that e-cigarettes contain ingredients that are addictive and could harm different parts of your body.
- Next time we go to the doctor, let's ask about the risks of nicotine, e-cigarettes, and other tobacco products.

**You used tobacco, so why shouldn't I?**
- If I could live my life over again, I never would have started smoking. I learned that people who smoke cigarettes are much more likely to develop, and die from, certain diseases than people who don't smoke. This was really scary, so I quit smoking.
- Quitting was really hard, and I don't want you to go through that. The best thing is to not start at all.
KEEP THE CONVERSATION GOING

Many parents find that texting is a great way to reach their teens. Here are some suggestions for text messages that might catch your teen's attention. And, you can easily share pages of the website (E-cigarettes.SurgeonGeneral.gov) with your teen.

Look for this symbol, click it, type in the message you want or use the message provided, and share with your teen via Facebook, Twitter, or email.

Connect and encourage.

- You always liked science. Check out the science about e-cigarettes and young people: E-cigarettes.SurgeonGeneral.gov
- Getting off nicotine is hard but I’m so happy I quit. Don’t make that mistake and get addicted. Smoking and tobacco use, including using e-cigarettes, are unsafe for young people.

Remind and repeat.

- Most teenagers don’t use e-cigarettes. E-cigarettes with nicotine can mess with your brain, and your brain is still developing until you are at least 25.
- You might be tempted by e-cigarette flavors, but inhaling certain flavorings that have been found in some e-cigarettes can be harmful.

Share facts and resources.

- Just learned that many e-cigarettes have nicotine in them. That’s the drug that makes cigarettes so addictive. Nicotine can also mess with your brain development.
- Just saw a report from the Surgeon General that e-cigarettes can mess with how your brain develops and might even affect your mood and focus. Please don’t use any products that contain nicotine.
- Hope none of your friends use e-cigarettes around you. Even breathing the cloud they exhale can expose you to nicotine and chemicals that can be dangerous to your health.
NATIONAL & LOCAL RESOURCES

National Resources

  - Online toolkit for K-12 educators; includes modules for educators, administrators, parents/guardians & others working with youth
- The Truth Initiative: https://truthinitiative.org/
- National Institute of Health: https://www.teen.smokefree.gov/
- Operation Parent: https://www.operationparent.org/
- Science on E-Cigarettes and Youth: https://e-cigarettes.surgeongeneral.gov/
- Partnership for Drug-Free Kids: https://drugfree.org/

Local Resources

- Council of Southeast Pennsylvania, Inc.
  Contact: Melanie Swanson | mswanson@councilsepa.org | 215-230-8218 ext. 3145
  - Professional Development/Community Presentations
  - Variety of prevention programs and presentations to parents, schools, and the community, including topics such as vaping/e-cigarettes
  - Tobacco Control Project: The Council conducts the Youth Tobacco Survey in Bucks County schools, works to implement smoke free Parks & Recreation Centers, participates in the Young Lungs at Play Tobacco-Free Zones/Parks Initiative, provides training and technical assistance to schools to implement smoke free schools and mobilized constituents and stakeholders in support Tobacco Control advocacy efforts.
- Tobacco Cessation Classes: These five-session programs are designed to help you quit smoking comfortably. For more information about where you can find a Stop Smoking Class near you, please visit https://www.bchip.org/quit-smoking-programs/.
For more information on where to turn for help with drugs and alcohol, please contact Bucks County Drug & Alcohol Commission, Inc. 215-773-9313