



E-Cigarettes and Youth Toolkit for Partners:

How You Can Help End the Epidemic

www.CDC.gov/e-cigarettes



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention



Dear Colleagues:

E-cigarette use among youth has become an epidemic in the United States. According to the National Youth Tobacco Survey, current (past 30 day) use of e-cigarettes increased 78% among high school students and nearly 50% among middle school students during 2017–2018. In 2018, more than 3.6 million youth in the United States were current e-cigarette users.

The Surgeon General has called for aggressive steps to protect our children from the risks of e-cigarettes. In December 2018, the U.S. Surgeon General issued an [Advisory on E-Cigarette Use Among Youth](#). It noted that nicotine exposure during adolescence can harm the developing adolescent brain, impacting learning, memory, and attention. Youth who use e-cigarettes also may be more likely to smoke regular cigarettes in the future and be at increased risk for addiction to other drugs.

In his advisory, the Surgeon General issued a critical call to action:

“We must take action now to protect the health of our nation’s young people. To achieve success, we must work together, aligning and coordinating efforts across both old and new partners at the national, state, and local levels. Everyone can play an important role in protecting our nation’s young people from the risks of e-cigarettes.”

-U.S. Surgeon General VADM Jerome M. Adams, MD, MPH

CDC is pleased to offer this digital toolkit, which provides information and resources to take action. Inside this toolkit, you’ll find evidence-based messaging on the risks of e-cigarette use among young people. The toolkit includes free media and communications resources with ideas for using them to reach parents, educators, and health care providers—key groups whom we must engage to help end this epidemic.

Sincerely,

Corinne Graffunder, DrPH, MPH
Director
Office on Smoking and Health
Centers for Disease Control and Prevention

WHAT IS IN THIS TOOLKIT

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- 10** **FREE MEDIA AND COMMUNICATIONS MATERIALS:** This section includes a variety of materials to educate key youth influencers, including:
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- 15** **FREQUENTLY ASKED QUESTIONS:** This section provides in-depth information on questions that the general public, the media, or decision-makers might ask.
- 20** **KEY RESOURCES:** This section provides links to evidence-based websites, resources, and reports that have served as references for the information in this toolkit.

Information and links to non-federal organizations are provided solely as a service. Information and links do not constitute an endorsement of any organization by CDC or the Federal Government, and none should be inferred. CDC is not responsible for the content found at non-federal links or at links from other federal agencies.

Centers for Disease Control and Prevention
Office on Smoking and Health
www.CDC.gov/tobacco
August 19, 2019



KNOW THE FACTS

Youth tobacco product use increased during 2017-2018.

In 2018, about 4.9 million middle and high school students used a tobacco product in the last 30 days, up from 3.6 million in 2017. This increase was driven by a startling increase in e-cigarette use—a 78% increase among high school students and nearly 50% increase among middle school students. Since 2014, e-cigarettes have been the most commonly used tobacco product among youth.

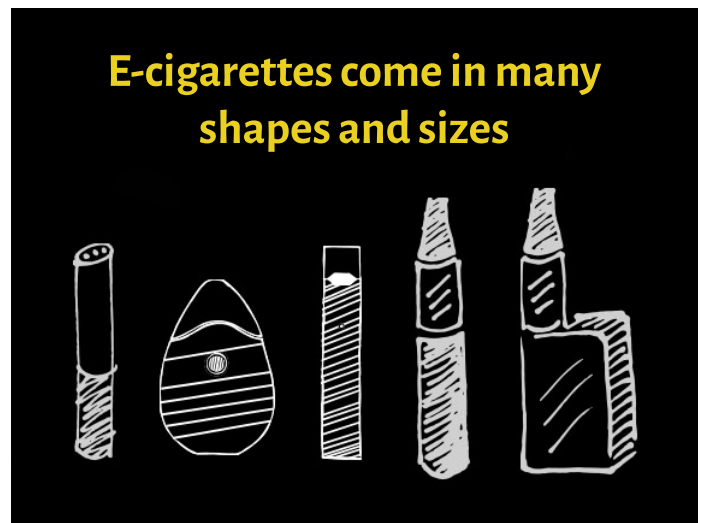
What is an e-cigarette?

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. Some e-cigarettes look like regular cigarettes, cigars, or pipes. Some look like USB flash drives, pens, and other everyday items that are easy to conceal.

JUUL, an e-cigarette shaped like a USB flash drive, is now the most commonly sold e-cigarette in the United States. JUUL uses liquid nicotine refills called “pods,” which contain at least as much nicotine as a pack of cigarettes.

What is in the aerosol?

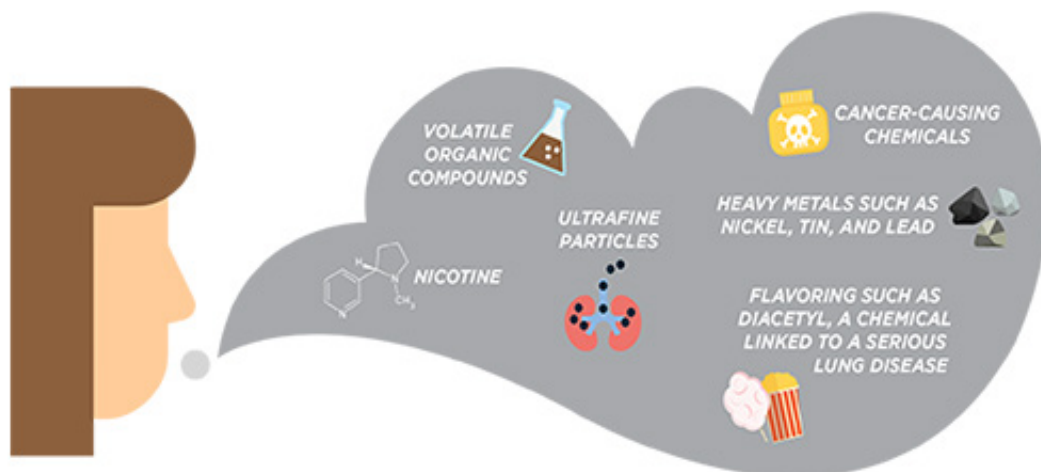
E-cigarette aerosol is not harmless water vapor. In addition to nicotine, the aerosol that users inhale and exhale from e-cigarettes can expose both themselves and bystanders to other harmful substances, including heavy metals, volatile organic compounds, and



ultrafine particles that can be inhaled deeply into the lungs. Some of the flavorings used in e-cigarettes may also have health risks when inhaled.

Youth use of any tobacco product, including e-cigarettes, is unsafe.

Scientists are still learning about the long-term health effects of e-cigarettes, but we know enough to take action to protect kids from known risks of these products. Most e-cigarettes contain nicotine – the same addictive drug in regular cigarettes, cigars, and other tobacco products. Nicotine exposure during adolescence can harm the developing brain, and impact learning, memory, and attention. Using nicotine during adolescence can also increase risk for future addiction to other drugs.



KNOW THE FACTS



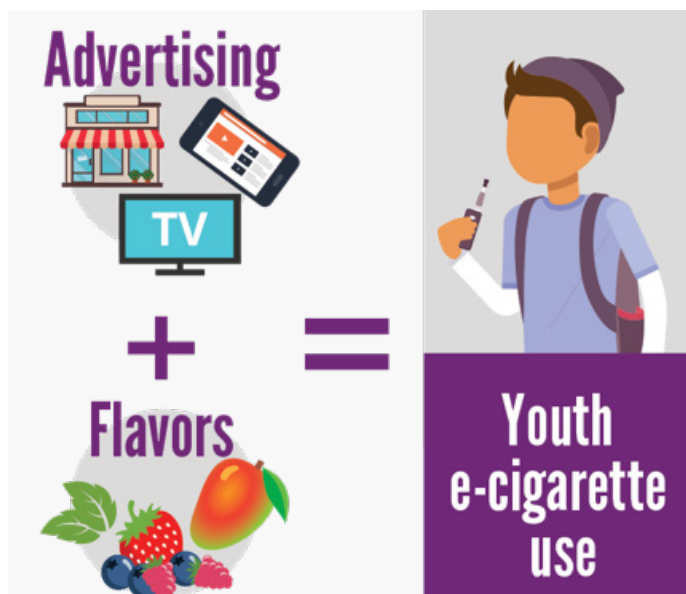
All JUUL e-cigarettes contain a high level of nicotine.

These products also use nicotine salts, which allow particularly high levels of nicotine to be inhaled more easily and with less irritation than the free-base nicotine that has traditionally been used in tobacco products, including e-cigarettes. This is of particular concern for young people, because it could make it easier for them to initiate the use of nicotine through these products. But despite these risks, approximately two-thirds of JUUL users aged 15–24 do not know that JUUL always contains nicotine.

Other health risks for youth and young adults.

Young people who use e-cigarettes may be more likely to go on to use regular cigarettes. E-cigarettes also can be used to deliver other drugs, including marijuana; in 2016, approximately one-third of U.S. middle and high school students who have ever used an e-cigarette reported using marijuana in the device.

Also, defective e-cigarette batteries have caused fires and explosions, a few of which have resulted in serious injuries. Children have also been poisoned by swallowing, breathing, or absorbing e-cigarette liquid through their skin or eyes. Nationally, approximately 50% of calls to poison control centers for e-cigarettes are for kids 5 years of age or younger.



Flavors and marketing make e-cigarettes appealing to youth.

Many e-cigarettes come in fruit, candy, and other kid-friendly flavors, such as mango and crème. A majority of youth e-cigarette users report using flavored varieties, most youth e-cigarette users first start using e-cigarettes with a flavored variety, and flavors are a primary reason youth report using e-cigarettes.

E-cigarettes are also advertised using the same themes and tactics that have been shown to increase youth initiation of other tobacco products, including cigarettes. In 2016, about 8 in 10 middle school and high school students—more than 20 million youth—said they had seen e-cigarette advertising.

Refer to the [Frequently Asked Questions](#) section for additional information on youth and e-cigarettes.

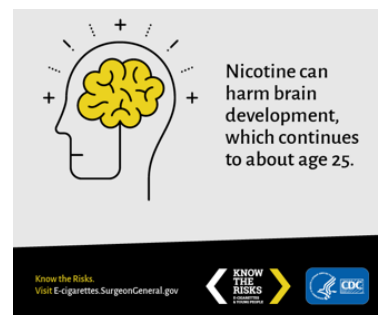
TAKE ACTION TO PROTECT YOUTH

The U.S. Surgeon General has declared that youth e-cigarette use is an epidemic in the United States. Fortunately we know what works to prevent youth tobacco product use, and we can apply these proven strategies to protect youth from e-cigarettes.

Everyone can play an important role in protecting our nation's young people from the risks of e-cigarettes. To achieve success, we must work together, aligning and coordinating efforts across both old and new partners at the national, state, and local levels. Public health professionals, parents, educators, and health care providers can all take action. This toolkit provides activities each of these groups can consider, along with supporting media and communications materials.

WHAT PUBLIC HEALTH PROFESSIONALS CAN DO:

- Use the materials in this toolkit to educate key youth influencers such as parents, educators and health care providers about the harms of e-cigarette use by youth.
- Encourage state and local health officials to issue a health advisory on e-cigarettes and youth. For examples, consider the [Surgeon General's Advisory on E-cigarette Use Among Youth](#), the [Minnesota Department of Health Advisory](#) or the [Wisconsin Department of Health Services Public Health Advisory](#).
- Implement evidence-based public education campaigns. CDC's [Media Campaign Resource Center](#) has materials you can use, including the following free ads and public service announcements (PSAs):
 - » [One Brain](#) radio PSA
 - » [It's Not Like You Can Buy A New Brain](#) (Vending Machine) print ad
 - » [It's a Fact](#) radio PSA
 - » [Any Volunteers?](#) video PSA
 - » *E-Cigarettes Risky for Youth* [digital](#) and [social](#) media images
 - » [E-Cigarettes, Nicotine, and Brain Development](#) social media image
 - » [Protecting Young People from E-cigarettes](#) digital and social media images (please filter by Media Type "Digital Display" or "Social Media Materials" to find all relevant materials)
- Link to CDC's web page at www.CDC.gov/e-cigarettes or include syndicated CDC content on your site. Syndicated content is available at CDC's [Public Health Media Library](#) by searching for "e-cigarettes" under the type "microsites".
- Issue press releases, Opinion Editorials or letters to the editor to draw attention to the issue of youth e-cigarette use and to highlight steps that states and communities can take to address the problem.
- Issue a letter to school administrators that promotes effective prevention strategies, such as the inclusion of e-cigarettes in school tobacco-free policies. Consider these examples from state health departments:
 - » Letter from [North Carolina Division of Public Health and State Education Partners](#)
 - » Letter from [Minnesota Department of Health to School Administrators](#)



TAKE ACTION TO PROTECT YOUTH

- Support the sustained implementation of proven population-based strategies, that complement tobacco product regulation by the U.S. Food and Drug Administration (FDA). Effective strategies that states and localities are undertaking include:
 - » Incorporating e-cigarettes into smoke-free indoor air policies.
 - » Restricting youth access to tobacco products in retail settings.
 - » Licensing tobacco retailers.
 - » Setting pricing policies.
 - » Establishing packaging requirements.
 - » Increasing the minimum age of sale of tobacco products to 21 years.
 - » Restricting the sale of flavored tobacco products.
 - » Curbing tobacco advertising and marketing that are appealing to young people.
 - » Implementing evidence-based public education initiatives.

ENCOURAGE PARENTS TO:

- Set a positive example by being tobacco-free. Make their homes and cars tobacco-free. If they use tobacco products, they can visit [Smokefree.gov](https://www.smokefree.gov) or call 1-800-QUIT-NOW for free help to quit.
- Read the [E-Cigarettes and Youth: What Parents Need to Know](#) fact sheet to educate themselves about e-cigarettes and the risks to youth.
- Use the [Talk with Your Teen about E-Cigarettes: Parent Tip Sheet](#) to start a conversation with their child about tobacco products, including e-cigarettes.
- Talk to school administrators to make sure their child's school has a tobacco-free policy and teaches an evidence-based tobacco prevention curriculum that is not funded by the tobacco industry and includes information on e-cigarettes.
- Ask their child's health care provider to speak with their child about the health risks of using tobacco products, including e-cigarettes.
- Learn more about the risks of youth e-cigarette use at the CDC Office on Smoking and Health e-cigarette web pages at www.CDC.gov/e-cigarettes.

The Truth Initiative [recently surveyed educators and parents](#) about youth and e-cigarettes and found:

- Many teachers and school administrators lacked knowledge about the harms and addictiveness of e-cigarettes, including JUUL.
- Only 1 in 4 parents recalled receiving e-cigarette communication from their schools.

TAKE ACTION TO PROTECT YOUTH

ENCOURAGE EDUCATORS TO:

- Read the [E-Cigarettes and Youth: What Educators and Coaches Need to Know](#) fact sheet to learn about the risks of e-cigarettes to youth.
- Develop, implement, and enforce tobacco-free school policies that include e-cigarettes. The Public Health Law Center has [information and resources](#) on tobacco-free schools.
- Promote cessation support for students who use tobacco products, including free resources such as the Truth Initiative® [E-cigarette Quit Program](#) (Text QUIT to 202-804-9884), and the National Cancer Institute’s [SmokefreeTeen](#) website.
- Educate parents, using the [E-Cigarettes and Youth: What Parents Need to Know](#) fact sheet. Other ideas include:
 - » Use content from the CDC feature article [Keep Kids E-Cigarette Free](#) in parent communications (e.g., newsletters or blog postings).
 - » Show the [Any Volunteers?](#) video PSA at parent meetings.
 - » Link to CDC’s web page at www.CDC.gov/e-cigarettes or include syndicated CDC content on your site. Syndicated content is available at CDC’s [Public Health Media Library](#) by searching for “e-cigarettes” under the type “microsites”. CDC also has [infographics on youth and e-cigarettes](#) that can be embedded on a website or shared on social media.
- Educate students using evidence-based tobacco prevention materials that are free from tobacco industry influence. For instance:
 - » CDC [Know the Risks: A Youth Guide to E-cigarettes](#) presentation, a PowerPoint deck with talking points
 - » FDA e-cigarette prevention posters, available for download from the [FDA Exchange Lab](#)
 - » FDA lesson plan and activity [The Real Cost of Vaping: Understanding the Dangers of Teen E-Cigarette Use](#), developed in collaboration with Scholastic
 - » The Stanford Medical School [Tobacco Prevention Toolkit](#) module on e-cigs, vapes, and pods
 - » The University of Texas Health Science Center at Houston [Catch My Breath Youth E-Cigarette and JUUL Prevention Program](#)
- Learn more about the risks of youth e-cigarette use at the CDC Office on Smoking and Health e-cigarette web pages at www.CDC.gov/e-cigarettes.



TAKE ACTION TO PROTECT YOUTH



ENCOURAGE HEALTH CARE PROVIDERS TO:

- Read the [E-Cigarettes and Youth: What Health Care Providers Need to Know](#) fact sheet to learn about e-cigarettes and the risks to youth.
- Screen for all tobacco product use, including e-cigarettes, among youth and young adults.
- Use the [Health Care Provider Conversation Card](#) to educate patients to prevent initiation.
- For their young patients who use tobacco products, including e-cigarettes, promote free resources that support quitting, such as the Truth Initiative® [E-cigarette Quit Program](#) (Text QUIT to 202-804-9884), and the National Cancer Institute's [SmokefreeTeen](#) website.
- Learn more about the risks of youth e-cigarette use at the CDC Office on Smoking and Health e-cigarette web pages at www.CDC.gov/e-cigarettes.

FREE MEDIA AND COMMUNICATIONS MATERIALS

FACT SHEETS FOR PARENTS, EDUCATORS, AND HEALTH CARE PROVIDERS

These fact sheets can be used to educate key youth influencers. Distribute them at community events, meetings, conferences, etc.



E-cigarettes and Youth: What Educators and Coaches Need to Know

WHAT ARE E-CIGARETTES?
Electronic cigarettes (e-cigarettes) are battery-powered devices that deliver nicotine, flavorings, and other ingredients to the user. Using e-cigarettes is sometimes called "vaping." E-cigarettes do not create harmless "water vapor"—they create an aerosol that can contain harmful chemicals.

HOW MANY YOUTH ARE USING E-CIGARETTES?

- E-cigarettes have been the most commonly used tobacco product among U.S. youth since 2014.
- In 2018, CDC and FDA data showed that more than 3.6 million U.S. youth, including 1 in 5 high school students and 1 in 20 middle school students, were past-month e-cigarette users.
- During 2017 and 2018, e-cigarette use skyrocketed among youth, leading the U.S. Surgeon General to call the use of these products among youth an epidemic in the United States.

WHAT ARE THE RISKS FOR YOUTH?

- Most e-cigarettes contain nicotine, which is highly addictive. Nicotine exposure during adolescence can:
 - Harm brain development, which continues until about age 25.
 - Impact learning, memory, and attention.
 - Increase risk for future addiction to other drugs.
- Young people who use e-cigarettes may be more likely to go on to use regular cigarettes.
- Many e-cigarettes come in kid-friendly flavors—including mango, fruit, and crème—which make e-cigarettes more appealing to young people.
- E-cigarette aerosol is not harmless. It can contain harmful substances, including:
 - Nicotine
 - Ultrafine particles
 - Cancer-causing chemicals
 - Flavorings that have been linked to lung disease
 - Volatile organic compounds
 - Heavy metals such as nickel, tin, and lead

www.CDC.gov/e-cigarettes



E-cigarettes and Youth: What Parents Need to Know

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www.CDC.gov/e-cigarettes



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www.CDC.gov/e-cigarettes



Click image to download fact sheet.

SAMPLE HEALTH ADVISORY

Encourage state and local health officials to issue a health advisory on e-cigarettes and youth. For examples, look at the [Surgeon General's Advisory on E-cigarette Use Among Youth](#), this [Minnesota Department of Health Advisory](#) or this [Wisconsin Department of Health Services Public Health Advisory](#).

FREE MEDIA AND COMMUNICATIONS MATERIALS

SAMPLE NEWSLETTER ARTICLE/BLOG POST

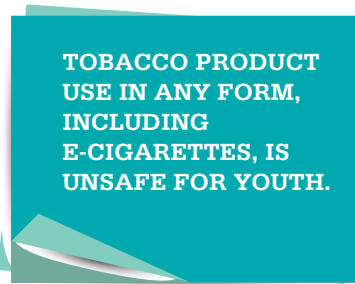
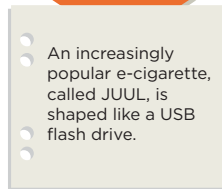
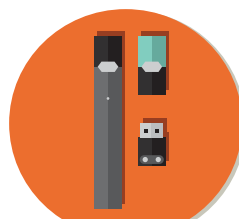
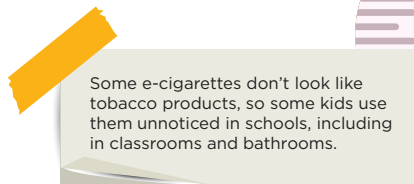
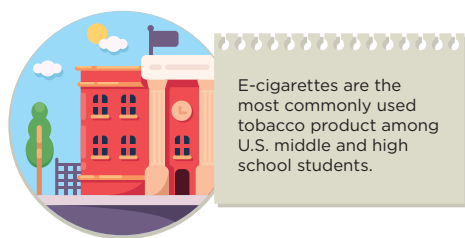
Use the CDC feature article [Keep Kids E-Cigarette Free](#) in your various communications channels to share information and resources with key stakeholders (e.g., blog post, print or electronic newsletter, listserv).

DIGITAL AND SOCIAL MEDIA MATERIALS

CDC has free resources you can use in your digital and social media efforts. Some of these materials are available for order through the [Media Campaign Resource Center](#):

- [Protecting Young People from E-cigarettes](#) digital and social media images (please filter by Media Type “Digital Display” or “Social Media Materials” to find all relevant materials)
- *E-Cigarettes Risky for Youth* [digital](#) and [social](#) media images
- [E-Cigarettes, Nicotine, and Brain Development](#) social media image

Other graphics, with code to embed on a website, are available on the [CDC Youth Tobacco Product Use Infographics](#) page. Here is an example of the type of data and facts found in these infographics to build awareness among target audiences:



FREE MEDIA AND COMMUNICATIONS MATERIALS

CDC TobaccoFree social media channels frequently feature new graphics and information about e-cigarettes and youth. Please like and follow us at **CDC Tobacco Free** on [Facebook](#) and [Twitter](#). [Stay Connected](#) offers a one-stop shop to link to all of CDC's tobacco control social media channels. The images on this page are examples of the type of graphics that have been shared on these channels.

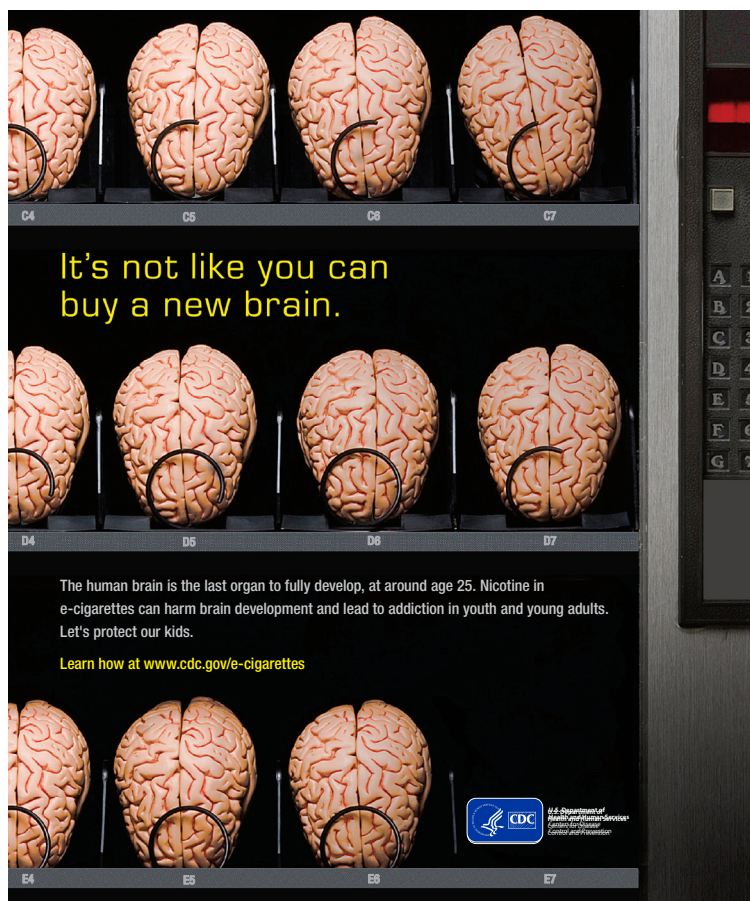


FREE MEDIA AND COMMUNICATIONS MATERIALS

FREE MATERIALS FOR USE IN PRINT, RADIO AND TELEVISION

These materials are available for order at no cost through the CDC [Media Campaign Resource Center](#). You can work with media outlets to place them for free as PSAs, or if you have the resources, they can be used in paid placements.

- [One Brain](#) radio PSA
- [It's Not Like You Can Buy A New Brain](#) (Vending Machine) print ad
- [It's a Fact](#) radio PSA
- [Any Volunteers?](#) video PSA



FREE MEDIA AND COMMUNICATIONS MATERIALS

See this letter sent by CDC to Public Service Directors to promote the [One Brain](#) radio PSA for an idea of how you could approach your local media outlets regarding PSA placement.

Dear Public Service Director,

According to the Centers for Disease Control and Prevention (CDC), last year, more than 3.6 million U.S. youth, including 1 in 5 high school students and 1 in 20 middle school students, used electronic cigarettes, also known as “e-cigarettes.” Between 2017 and 2018, e-cigarette use increased 78% among high school students and nearly 50% among middle school students. This rapid increase led the U.S. Surgeon General to call the use of these products by youth an epidemic in the United States. In adolescents, exposure to nicotine can harm brain development, which continues until about age 25.

CDC’s Office on Smoking and Health has produced the enclosed radio public service announcement (PSA) as part of an initiative to raise awareness about the increase in youth e-cigarette use. The goal is to alert influential adults – including parents, educators, coaches, and healthcare providers – about the risks of e-cigarette use among youth.

This is an urgent public health issue for your station and its listeners because nicotine exposure during adolescence can impact learning, memory, and attention, and e-cigarette use among U.S. youth is skyrocketing. Youth who use e-cigarettes also may be more likely to progress to regular cigarettes and be at increased risk for future addiction to nicotine and other drugs.

Please help us raise awareness of the dangers of youth e-cigarette use by running this PSA frequently. For more information about e-cigarettes and risks among youth, please visit: www.CDC.gov/e-cigarettes.

Thank you for your time and support.

Sincerely,

Brian King, PhD, MPH
Deputy Director for Research Translation
Office on Smoking and Health
National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention

FREQUENTLY ASKED QUESTIONS

WHAT IS AN E-CIGARETTE?

- E-cigarettes are devices that heat a liquid into an aerosol that the user inhales. E-cigarettes come in many shapes and sizes. Most have a battery, a heating element, and a place to hold a liquid.
- 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 are known by many different names. They are sometimes called “e-cigs,” “JUUL,” “e-hookahs,” “mods,” “vape pens,” “vapes,” “tank systems,” and “electronic nicotine delivery systems (ENDS).”
- Some e-cigarettes are made to look like regular cigarettes, cigars, or pipes. Some resemble pens, USB sticks, and other everyday items.
- E-cigarettes can be used to deliver marijuana and other drugs.

WHO IS USING E-CIGARETTES?

- In the United States, youth are more likely than adults to use e-cigarettes.
- 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% of middle school students and 20.8% of high school students.
- In 2017, 2.8% of U.S. adults were current e-cigarette users.

WHY ARE E-CIGARETTES THE MOST COMMONLY USED TOBACCO PRODUCT AMONG U.S. MIDDLE AND HIGH SCHOOL STUDENTS?

- Factors that have contributed to the increase in e-cigarette use among youth include the availability of these products in a variety of kid-friendly flavors, widespread advertising for these products, including via media for which advertising for conventional tobacco products is prohibited (e.g., TV), and the lower costs of some of these products relative to regular cigarettes.
- Many youth also report using e-cigarettes because they are curious about these new products, and because they believe these products to be less harmful than regular cigarettes.

WHY IS NICOTINE UNSAFE FOR KIDS, TEENS, AND YOUNG ADULTS?

- Most e-cigarettes contain nicotine—the addictive drug in regular cigarettes, cigars, and other tobacco products. Nicotine can harm the developing adolescent brain. The brain keeps developing until about age 25.
- Using nicotine in adolescence can harm the parts of the brain that control attention, learning, mood, and impulse control.
- Each time a new memory is created or a new skill is learned, stronger connections—or synapses—are built between brain cells. Young people’s brains build synapses faster than adult brains. Nicotine changes the way these synapses are formed.
- Using nicotine in adolescence may also increase risk for future addiction to other drugs, and increases the likelihood that they will go on to smoke regular cigarettes.

FREQUENTLY ASKED QUESTIONS

HOW DO E-CIGARETTES HARM BRAIN DEVELOPMENT?

- The brain is the last organ in the human body to develop fully. Brain development continues to about the early to mid-20s.
- E-cigarettes typically contain nicotine. Nicotine disrupts the development of brain circuits that control attention and learning, and young people who use e-cigarettes and other tobacco products are at risk for deficits in these areas.
- Adolescence is a critical period for brain development, and brain development continues into young adulthood. Young people who use e-cigarettes and other tobacco products are uniquely at risk for long-term, long-lasting effects of exposing their developing brains to nicotine. In addition to learning and cognitive deficits, and susceptibility to addiction, these risks include mood disorders and permanent lowering of impulse control.
- The nicotine in e-cigarettes and other tobacco products can also affect the development of the brain's reward system, priming the adolescent brain for addiction to other drugs such as cocaine and methamphetamine.

WHAT ARE THE OTHER RISKS OF E-CIGARETTES FOR KIDS, TEENS, AND YOUNG ADULTS?

- Scientists are still learning about the long-term health effects of e-cigarettes. However, we know that e-cigarette aerosol can contain harmful ingredients. For example, some flavorings used in e-cigarettes may have been approved as additives to food but are not safe to inhale.

- Defective e-cigarette batteries have caused some fires and explosions, a few of which have resulted in serious injuries. Children and adults have been poisoned by swallowing, breathing, or absorbing e-cigarette liquid through their skin or eyes.

WHAT IS IN E-CIGARETTE AEROSOL?

- While e-cigarettes are less harmful than combustible cigarettes, e-cigarette aerosol is NOT harmless “water vapor.” The e-cigarette aerosol that users breathe from the device and exhale can contain harmful and potentially harmful substances, including:
 - » Nicotine
 - » Ultrafine particles that can be inhaled deep into the lungs
 - » Flavoring such as diacetyl, a chemical linked to a serious lung disease
 - » Volatile organic compounds
 - » Cancer-causing chemicals
 - » 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.

FREQUENTLY ASKED QUESTIONS

CAN USING E-CIGARETTES LEAD TO FUTURE CIGARETTE SMOKING AMONG KIDS, TEENS, AND YOUNG ADULTS?

- Many young people who use e-cigarettes also smoke cigarettes. There is a growing body of scientific evidence that young people who use e-cigarettes may be more likely to smoke cigarettes in the future than young people who do not use e-cigarettes.
- A [2018 National Academies](#) report found that among young people, there was some evidence that e-cigarette use increases the frequency and amount of cigarette smoking in the future.
- But any e-cigarette use among young people is unsafe, even if they do not progress to future cigarette smoking.

DO ALL E-CIGARETTES CONTAIN NICOTINE?

- Most e-cigarettes contain nicotine, and all JUUL brand e-cigarettes contain nicotine. A recent CDC study found that 99% of the e-cigarettes sold in assessed venues in the United States contained nicotine.
- Some e-cigarette labels do not disclose that they contain nicotine, and some e-cigarettes marketed as containing 0% nicotine have been found to contain nicotine.
- Some of the new products, including JUUL, use nicotine salts, which allow particularly high levels of nicotine to be inhaled more easily and with less irritation than the free-base nicotine that has traditionally been used in tobacco products, including e-cigarettes. This is of particular concern for young people, because it could make it easier for them to initiate the use of nicotine through these products.

E-cigarettes typically contain nicotine, which is addictive and can harm brain development.

Know the Risks >

[E-cigarettes.SurgeonGeneral.gov](https://www.e-cigarettes.surgeongeneral.gov)



WHAT IS JUUL?

- JUUL is a brand of e-cigarette that is shaped like a USB flash drive. Like other e-cigarettes, JUUL is a battery-powered device that heats a nicotine-containing liquid to produce an aerosol that is inhaled.
- 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.
- News outlets and social media sites report widespread use of JUUL by students in schools, including classrooms and bathrooms.
- Although JUUL is currently the top-selling e-cigarette brand in the United States, other companies sell e-cigarettes that look like USB flash drives. Examples include the PHIX, a nicotine delivery device, and the PAX Era, a marijuana delivery device that looks like JUUL.

FREQUENTLY ASKED QUESTIONS

ARE E-CIGARETTES REGULATED AT THE FEDERAL LEVEL?

- Yes. In August 2016, the regulatory authority of the FDA was extended to cover e-cigarettes through the agency’s “deeming rule.”
- Through authority granted by the Family Smoking Prevention and Tobacco Control Act (FSPTCA), FDA has authority over the manufacturing, marketing, and sale of e-cigarettes.
- However, the FSPTCA does not prevent states and communities from adopting many strategies related to e-cigarettes. There are also many strategies that FDA does not have authority to implement and that states can do, such as including e-cigarettes in smoke-free policies, pricing strategies, and increasing the age of sale for tobacco products to 21.

ARE THERE ANY NATIONAL PUBLIC EDUCATION PREVENTION CAMPAIGNS FOCUSED ON YOUTH AND E-CIGARETTES?

- Yes. In 2018, [the FDA expanded its successful youth tobacco prevention campaign](#), “The Real Cost,” to reach the more than 10 million youth aged 12–17 who have used e-cigarettes or are open to trying them. The campaign educates youth about the potential risks of using e-cigarettes.
- The “Real Cost” reaches teens where they spend most of their time: in school and online. The campaign is also placing e-cigarette prevention materials in high schools across the nation, both in school bathrooms and on educational digital platforms accessed by students during the school day.
- The Truth Initiative® launched the “Safer ≠ Safe” campaign in 2018, focusing on correcting youth misperceptions and providing accurate information

about e-cigarettes and youth. The campaign is being promoted on digital and social media, including the [Safer ≠ Safe website](#), which features videos, articles and interactive activities for youth.

WHAT ELSE CAN BE DONE BY PUBLIC HEALTH TO REDUCE YOUTH E-CIGARETTE USE AND INITIATION?

- Regulating the sale, distribution, and marketing of tobacco products, coupled with proven population-based strategies, can reduce youth tobacco product use and initiation.
- These proven strategies include increasing prices of tobacco products, protecting everyone from exposure to secondhand smoke and e-cigarette aerosol, and sustaining hard-hitting media campaigns like FDA’s “The Real Cost” campaign that warns youth about the dangers of tobacco product use, including e-cigarettes.

WHAT CAN PARENTS DO TO PROTECT AND PREVENT THEIR CHILD FROM USING E-CIGARETTES?

- Parents can set a positive example by being tobacco-free, and ensuring that their kids aren’t exposed to the secondhand emissions from any tobacco products, including e-cigarettes.
- We know e-cigarettes are now the most commonly used tobacco product among youth and that many youth aren’t aware of the dangers of these products, including the negative impacts of nicotine exposure on the developing adolescent brain. Therefore, ensuring that youth are aware of the risks of using all forms of tobacco products, including e-cigarettes, is critical.

FREQUENTLY ASKED QUESTIONS

WHAT DO WE KNOW ABOUT HEATED TOBACCO PRODUCTS?

- Heated tobacco products (HTPs) like IQOS and Eclipse, sometimes marketed as “heat-not-burn” technology, represent a diverse class of products that heat the tobacco leaf to produce an inhaled aerosol. They are different from e-cigarettes, which heat a liquid that can contain nicotine derived from tobacco.
- HTPs are available in at least 40 countries and several have recently been authorized for sale in the United States by the FDA. In 2018, few U.S. adults (2.4% of all surveyed, including 6.7% of current smokers surveyed) had ever used HTPs. Youth use of HTPs is unknown, but monitoring is underway.
- Scientists are still learning about the short-term and long-term health effects of HTPs, but the available science shows they contain harmful and potentially harmful substances. Youth use of any tobacco products, including heated products, is unsafe.
- It is important that we continue to modernize proven tobacco prevention and control strategies to include newer products entering the market such as HTPs.





KEY RESOURCES

The web pages and reports listed below provide evidence-based information and media and communications materials about e-cigarettes and youth. The content of this toolkit draws from these resources, and many of the media and communications materials are referred to throughout the toolkit.

- CDC Office on Smoking and Health [e-cigarette web pages](#).
- CDC [Vital Signs: Tobacco Use By Youth Is Rising](#), including this [podcast](#) summarizing key findings and calls to action.
- Surgeon General [Know the Risks: E-Cigarettes & Young People](#) website
- [2016 Surgeon General's Report: E-Cigarette Use Among Youth and Young Adults](#)
- FDA Center for Tobacco Products [“The Real Cost” Youth E-Cigarette Prevention Campaign](#)
- National Academies Publication on [Public Health Consequences of E-Cigarettes](#)
- Free cessation resources for youth who use tobacco products:
 - » Truth Initiative® [E-cigarette Quit Program](#) (Text QUIT to 202-804-9884)
 - » National Cancer Institute’s [SmokefreeTeen website](#)

Information and links to non-federal organizations are provided solely as a service. Information and links do not constitute an endorsement of any organization by CDC or the Federal Government, and none should be inferred. CDC is not responsible for the content found at non-federal links or at links from other federal agencies.

Centers for Disease Control and Prevention, Office on Smoking and Health
www.CDC.gov/e-cigarettes

