

VAPING TOOL KIT

FROM

Prevention
Action Alliance

Providing:

- Vaping White Paper
- Infographic
- Educator and Caring Adults Resources
- Resources to help youth quit
- Vaping 101 Presentation

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ELECTRONIC NICOTINE DELIVERY SYSTEMS (ENDS)

WHY WE NEED TO TALK ABOUT ENDS

Smoking is the leading cause of preventable death. In fact, over 16 million Americans live with a disease caused by smoking (CDC, 2021). Although traditional cigarette use has declined significantly over the past several decades among youth and young adults, there has been a significant increase in the use of Electronic Nicotine Delivery Systems (ENDS), also referred to as e-cigarettes, e-cigs, vapes, vaporizers, vape pens, hookah pens, and e-pipes. ENDS are the most commonly used tobacco product among youth in the United States (CDC, 2016) and include a wide range of devices that allow users to inhale an aerosol of "e-liquid" that typically contains nicotine, flavorings, propylene glycol, vegetable glycerin, along with other additives. Though these devices vary in size and appearance, they largely operate in a similar way with the same components. They may look like conventional combusted cigarettes, cigars, or pipes, while others resemble pens or USB flash drives (USFDA, 2022).

Marketing ENDS to Youth

Preventing use of ENDS among youth and young adults is imperative as research suggests that approximately 9 out of 10 adult tobacco users first used during adolescence. The 2012 Surgeon General's report found that the tobacco industry's advertising and promotional activities are causal to the onset of smoking in youth and young adults (USDHHS, 2012). The 2016 U.S. Surgeon General's report focused largely on ENDS and found that e-cigarettes are marketed by promoting flavors and using a wide range of media channels and approaches that had been used in the past for marketing traditional tobacco products to youth and young adults. Those clearly marketed to young populations include flavors such as banana split, cotton candy, Kool-Aid, sweet tarts, Hawaiian Punch, Rocket Pop, gummy bears, Fruit Loops, and Skittles. Additionally, many e-juice flavors are named after cartoon characters, such as Curious George, Poppa Smurf, and Daisy Duck.

ENDS Use

Vast strides had been made in preventing the use of traditional tobacco products. However, this did not prevent the use of ENDS among youth and young adults when they gained popularity. In fact, use of e-cigarettes tripled between 2013 and 2014. The 2016 Surgeon General's report explains that the upward trend in use of e-cigarettes is concerning considering the impact nicotine exposure can have on the developing brain and the research that identifies variability in the chemicals within e-cigarettes, including toxic substances (Cheng, 2016). Of the 3.57 million middle and high school students who reported current e-cigarette use, 82.9% of these youth reported using flavored e-cigarettes (CDC, 2020).

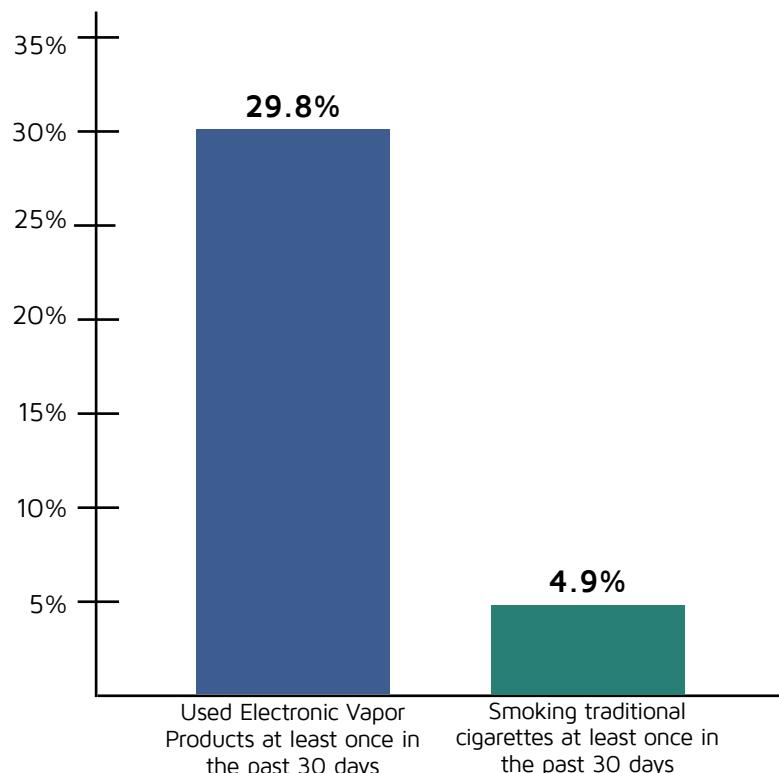
ELECTRONIC NICOTINE DELIVERY SYSTEMS (ENDS)

ENDS Use Continued

In February 2020, the FDA implemented a policy prioritizing enforcement against the manufacture, distribution, and sale of certain unauthorized flavored prefilled pod or cartridge-based e-cigarettes (CDC, 2020). Though 2020 data shows a decline in e-cigarette use from 5.35 million in 2019, we cannot ignore the more than 3.5 million youth who still use these products.

ENDS Use In Ohio

In 2019, 29.8% of high school students in Ohio reported using electronic vapor products on at least one occasion in the past 30 days compared to 4.9% that reported smoking traditional cigarettes at least once in the past 30 days (Truth Initiative, 2020). In July 2015, Ohio enacted a cigarette tax of \$1.60 per pack, compared to the national average of \$1.82 per pack. Other tobacco products are taxed at a rate of 17% of the wholesale price. In December 2019, the United States raised the federal minimum age of sale of all tobacco products to 21. This also includes any product related to a vaping device. Retailers are also required to post signs stating that the sale of tobacco products to minors is prohibited (Truth Initiative, 2020). Ohio's state quit line invests \$1.46 per smoker, compared to the national average of \$2.14 per smoker. (Truth Initiative, 2020)



As Ohioans, we must support evidence-based efforts to educate, inform, and delay the onset of tobacco use, including ENDS, as well as efforts to regulate e-cigarettes and their components, all while addressing health disparities related to tobacco use.

RECOMMENDATIONS FOR PREVENTION PROFESSIONALS

Ohio is a leader in prevention. Working together on a comprehensive prevention plan to address vaping among youth and young adults, we can make strides in developing healthier communities. It is recommended that prevention professionals who care about this issue take a strong stance with advocacy and a powerful youth voice at the center of their messaging, including:

Implement evidence-based strategies to prevent youth tobacco use:

1. Involve youth in strategic planning processes related to tobacco use.
2. Support youth in the development and implementation of tobacco prevention campaigns.
3. Engage youth in point-of-sale environmental scans.
4. Develop or strengthen community partnerships that support tobacco prevention efforts.
5. Educate youth on alternative coping strategies and tobacco industry marketing strategies.

Implement counter-marketing strategies and support policies restricting access and availability:

1. Make recommendations to tobacco retailers to limit advertisements and discounts on tobacco products and to keep tobacco products out of sight and reach.
2. Utilize various media channels to disseminate information about risks of vaping, benefits of cessation, industry marketing tactics, and cessation resources

Promote tobacco cessation and access to services:

1. Support and promote tobacco cessation programs across Ohio, including quit line services, individual and group counseling, and other evidence-based strategies.
2. Work with community partners to expand access to and availability of cessation programs.

Monitor and evaluate tobacco use to strengthen Ohio's tobacco prevention efforts:

1. Train adult allies to hold youth focus groups to gather knowledge, skills, and attitudes toward tobacco use to gather valuable youth data.
2. Support efforts for statewide data collection on tobacco use.

Advocate for stricter policies on ENDS:

1. Support efforts on the state and local levels to supplement FDA regulatory actions.
2. Support efforts to address vape shops through zoning guidelines to limit density and proximity of these establishments to youth-sensitive and low-income areas.
3. Encourage college campuses to include vaping specific language in their tobacco-free policies.
4. Support efforts to limit advertisement and sale of flavored products, including menthol.

ABOUT PREVENTION ACTION ALLIANCE

PAA is a nonprofit that helps prevent substance misuse and promote mental health and wellness. We provide resources and technical assistance to individuals, families, and communities to help educate, empower and advocate.

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ELECTRONIC NICTOTINE DELIVERY SYSTEMS (ENDS)

Background and Recommendations

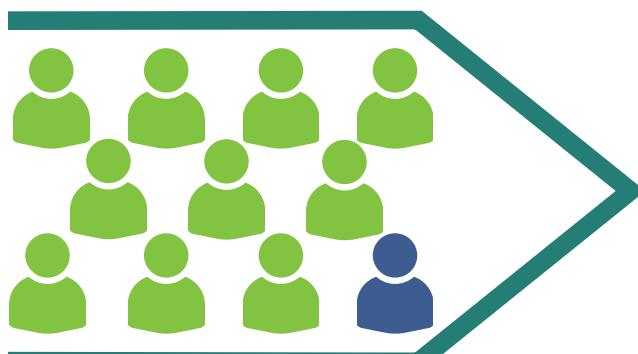


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BACKGROUND

Smoking is the leading cause of preventable death. Although traditional cigarette use has declined significantly over the past several decades among youth and young adults, there has been a significant increase in the use of Electronic Nicotine Delivery Systems (ENDS), also referred to as e-cigarettes, e-cigs, vapes, vaporizers, vape pens, hookah pens, and e-pipes. ENDS are the most commonly used tobacco product among youth in the United States (CDC, 2016) and include a wide range of devices that allow users to inhale an aerosol of "e-liquid" that typically contains nicotine, flavorings, propylene glycol, vegetable glycerin, along with other additives. Though these devices vary in size and appearance, they largely operate in a similar way with the same components. They may look like conventional combusted cigarettes, cigars, or pipes, while others resemble pens or USB flash drives (USFDA, 2022).

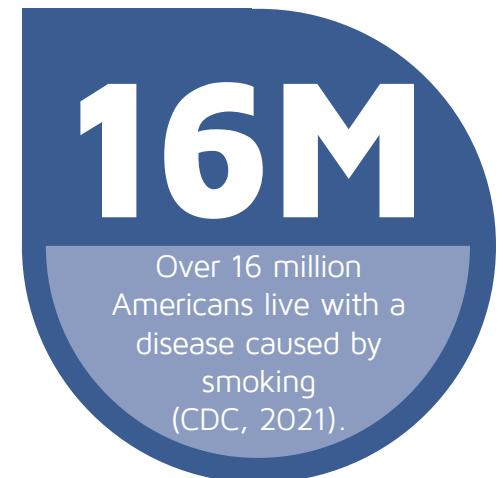


Approximately 9 out of 10 adult tobacco users first used during adolescence.

Preventing use of these devices among youth and young adults is imperative as research suggests that approximately 9 out of 10 adult tobacco users first used during adolescence. The 2012 Surgeon General's report found that the tobacco industry's advertising and promotional activities are causal to the onset of smoking in youth and young adults (USDHHS, 2012). The 2016 U.S. Surgeon General's report focused largely on ENDS and found that e-cigarettes are marketed by promoting flavors and using a wide range of media channels and approaches that had been used in the past for marketing traditional tobacco products to youth and young adults.

ENDS' and E-Juice flavors clearly marketed to young populations include:

- banana split
- cotton candy
- kool-aid
- gummy bears
- fruit loops
- skittles
- rocket pop
- sweet tarts
- hawaiian punch
- curious george
- poppa smurf
- daisy duck



Of the 3.57 million middle and high school students who reported current e-cigarette use, 82.9% of these youth reported using flavored e-cigarettes (CDC, 2020).



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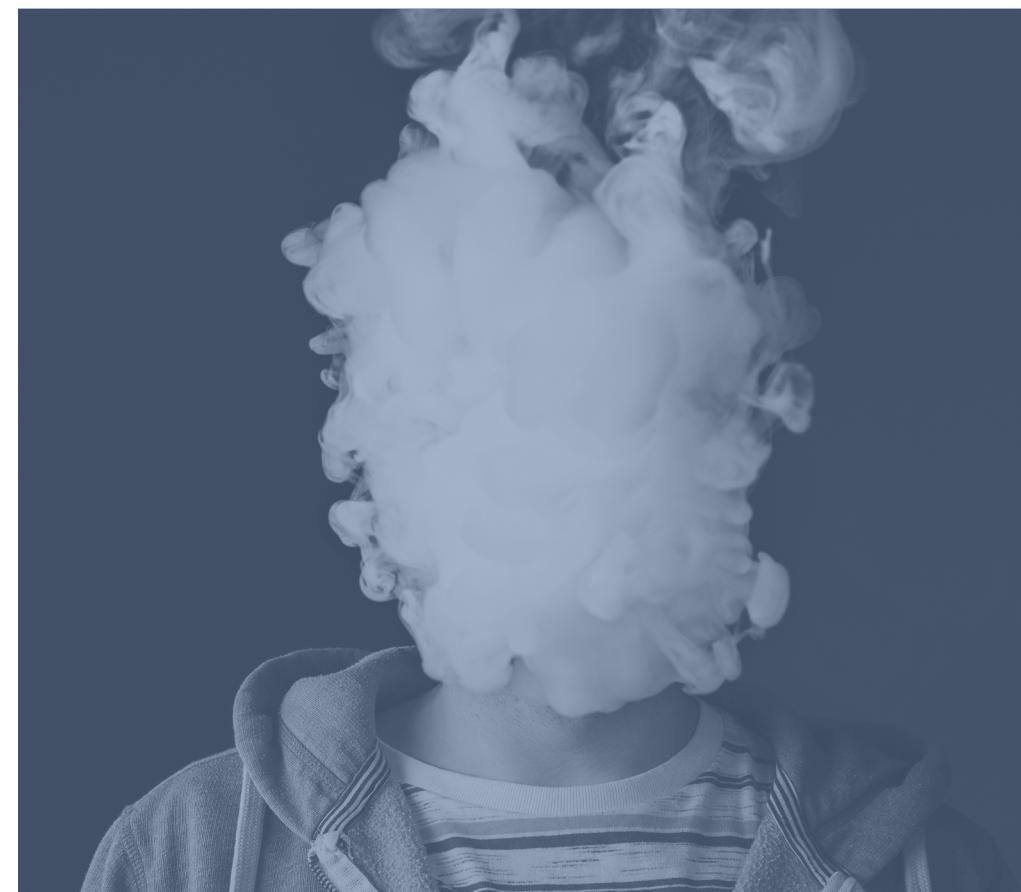
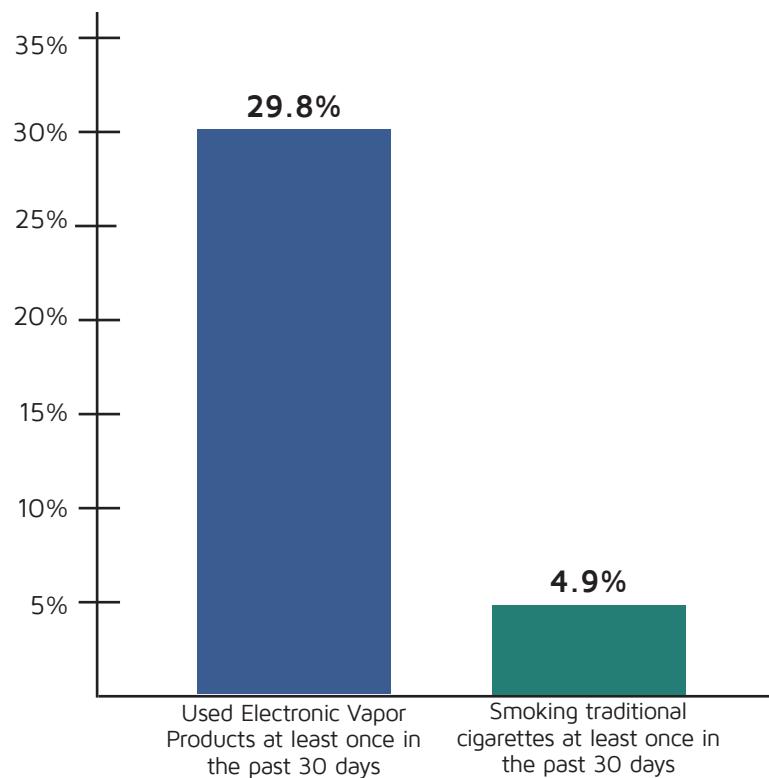
A single vape pod often contains more nicotine than 20 cigarettes (Truth Initiative, 2018)

ENDS USE

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PAGE 04

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- Educate youth on alternative coping strategies and tobacco industry marketing strategies

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Implement counter-marketing strategies and support policies restricting access and availability

- Make recommendations to tobacco retailers to limit advertisements and discounts on tobacco products and to keep tobacco products out of sight and reach
- Utilize various media channels to disseminate information about risks of vaping, benefits of cessation, industry marketing tactics, and cessation resources

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Promote tobacco cessation and access to services

- Support and promote tobacco cessation programs across Ohio, including quit line services, individual and group counseling, and other evidence-based strategies
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Monitor and evaluate tobacco use to strengthen Ohio's tobacco prevention efforts

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Advocate for stricter policies on ENDS

- Support efforts on the state and local levels to supplement FDA regulatory actions
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EDUCATE
INFORM
DELAY



Vaping Prevention and Intervention Resources for Educators and School Administrators

At Prevention Action Alliance, we believe everyone has a role in prevention, and we know that Educators and coaches can have a strong influence on the students they work with, including when it comes to discussions about vaping.

With youth vaping rates on the rise, we feel there's never been a more important time for educators, coaches, and school administrators to talk to their students about the risk of vaping. We've put together some resources below to help you find out how to start the conversation, educate adolescents on the health risks and other effects of e-cigarettes, and where to find help to support a student who is in the process of quitting vaping. For more tips to help prevent substance misuse among youth, subscribe to our "Know! Tips" at <https://bit.ly/PAA-newsletter-signup>. Know! provides ongoing, timely, and relevant information about the latest trends in behavioral health and substance misuse prevention with an eye towards how parents and teachers can use that information to support young people.

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

This fact sheet from the [Centers for Disease Control and Prevention](#) highlights key information adults should know so they can identify when a student might be using e-cigarettes and facilitate meaningful conversations.

E-cigarettes, "Vapes", and JUULs: What Schools Should Know

Created by [The American Lung Association](#), this fact sheet serves as a primer for educators and school staff on teenagers' use of e-cigarettes and what can be done at the school level to educate adolescents, to prevent initial use of vaping products, and to support students who are in the process of quitting vaping.

JUUL in School: Teacher and Administrator Awareness and Policies of E-Cigarettes and JUUL in U.S. Middle and High Schools

Conducted by [Truth Initiative](#), this national survey of middle and high school teachers and administrators measured e-cigarette awareness, policies, and barriers to enforcement in schools. In addition to the survey, the report also includes insights and recommendations for how schools can address the issue of adolescents using e-cigarettes.

The Real Cost of Vaping

Created in partnership with the U.S. Food and Drug Administration and hosted by [Scholastic's teacher resources directory](#), this lesson plan guide provides tools for educators working with students in grades 6–8 and 9–12 to discuss the health risks and other effects of e-cigarette use. The kit includes articles for students to read, activities, and more.

Tobacco, Nicotine and Vaping Lesson Plan and Activity Finder

[The National Institute on Drug Abuse for Teens](#) offers a myriad of resources, including a lesson plan library for educators. The directory includes a section on tobacco, nicotine, and vaping, which provides lesson plans for different age groups ranging from grades 5–8 to grades 9–12.

Stanford Tobacco Prevention Toolkit

You and Me, Together Vape-Free curriculum, which is part of the Stanford Tobacco Prevention Toolkit, is a 6-lesson theory-based and evidence-informed curriculum created by the Stanford REACH Lab as well as by Stanford's Youth Action Board, educators, healthcare providers, and scientists across the United States.

Ohio's E-Cigarette Regulations

This website, put together by the [Public Health Law Center at Mitchell Hamline School of Law](#), answers frequently asked questions regarding e-cigarette regulations within the state of Ohio - linking to the specific codes within Ohio law.

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Vaping Prevention and Intervention Resources for Caring Adults

At Prevention Action Alliance, we believe everyone has a role in prevention, and we know that parents and caregivers play a huge role in the prevention of substance misuse among our youth, and believe it or not, you are still one of the biggest influences in your teen's life. Even though you may feel your teen starting to pull away, ready to conquer the world on their own, deep down they still want and need you to be involved in their lives.

With youth vaping rates on the rise, we feel there's never been a more important time for parents and caregivers to talk to their children and teens about the risk of vaping. We've put together some resources below to help you find out how to start the conversation, how to keep it going, and where to find help if you feel your child may need help to quit vaping.

For more tips to help prevent substance misuse among youth, check out our "Everyday Prevention" tips at <https://preventionactionalliance.org/learn/everydayprevention/>. These tips were designed to help you support a happy, healthy, safe, and drug-free family, home, and community.

Facts For Parents & Caregivers About E-Cigarettes & Vaping

Curated by the American Academy of Pediatrics, this fact sheet provides bulleted, easy-to-scan information about vaping and e-cigarette use among teenagers. The organization also provides links to other resources for parents seeking additional information on how to talk to their children about their health.

Know the Risks: E-cigarettes & Young People

After releasing an official advisory on e-cigarette use among youth in 2018, the [U.S. Surgeon General](#) partnered with the [Centers for Disease Control and Prevention](#) to create this comprehensive informational website for parents and teenagers. Its resources aim to help families get the facts, know the risks, and take action to prevent e-cigarette use and support teenagers who want to quit vaping.

E-Cigarettes: Talk to Youth About the Risks

This information page created by the [Centers for Disease Control and Prevention](#) provides an overview about the health effects and risks associated with adolescents using e-cigarettes. Available in both English and Spanish, this resource can serve as a starting point for adults who want to talk to teenagers about this topic.

The Vape Talk

Is there a difference between an e-cigarette and a vape pen? For parents who are looking for information that starts with an explanation of vaping products and continues with more in-depth information on health concerns and guidance on how to support their children in avoiding or quitting vaping, this website created by [The American Lung Association](#) is a beneficial tool.

Quitlogix

Quitting tobacco is a process. Whether you are thinking about quitting, are not yet ready to quit, or have already quit, Ohio's Free, Convenient, Safe & Secure Tobacco Quit Line can help you with each step of the way.

Helping Teens Quit Smoking and Vaping

**Quitting vaping is a process that requires support from friends and loved ones. This resource page from the [American Lung Association](#) focuses specifically on how parents can help teenagers quit using nicotine products, including tobacco cigarettes, and vaping products.

***If you find that your child/teen cannot stop vaping on their own, or with the help of your support, they may be addicted, and will need professional help to stop. We recommend talking to your pediatrician, or consulting an outpatient behavioral health center for adolescents, to see what treatment options are available.*

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Helping Youth Quit: Vaping Intervention & Cessation Resources for Teens

Vapes and e-cigarettes pose significant risks to young people who use them. At Prevention Action Alliance, we believe everyone has a role in prevention. And although preventing vape and e-cigarette use before it starts is the goal, many young people are already vaping. You may not want to believe that a young person in your life may be using vapes or experiencing nicotine addiction but, unfortunately, vaping device usage among young people is more common than you may think -- about 1 in 5 high school students vape. Below we have compiled a list of vaping intervention and cessation resources for teens along with a teen vaping self-assessment to determine whether or not they are addicted to vaping.

Anxiety, Stress, and Vaping

For teenagers struggling to quit vaping, stress and anxiety can trigger cravings. This article from [Smokefree Teen](#), a resource provided by the National Cancer Institute, provides tips and actionable steps teenagers can take to manage stress and seek support for more serious symptoms of anxiety.

This is Quitting

This is Quitting is a free mobile program from [Truth Initiative](#) specifically designed to help young people (ages 13–24) quit vaping. Communicating through text messages, users can sign up for the program and provide their age and quit date to receive tailored messages once per day. Those who are not ready to quit yet can also sign up to receive messages that include words of encouragement, information about the health effects of vaping, and tips for quitting.

How To Quit Vaping

If a teenager is in the process of assessing why they should quit using e-cigarettes, this step-by-step guide from [Smokefree Teen](#) can help them reflect, set a quit date, speak with friends and family for support, and know what challenges to expect when quitting vaping, such as withdrawal symptoms.

Vaping Addiction and Nicotine Withdrawal

For individuals who are addicted to nicotine, quitting vaping can result in withdrawal symptoms ranging from headaches and increased sweating to insomnia and irritability. This resource from [Smokefree Teen](#) provides information about what to expect from the withdrawal process, as well as actionable advice on how teenagers can deal with these symptoms in a healthy way.

BecomeAnEx Smoker

Developed by [Truth Initiative](#) in partnership with the [Mayo Clinic Nicotine Dependence Center](#), BecomeAnEx is an online community and support system that helps individuals with nicotine cessation, including users of traditional tobacco products and e-cigarettes. In addition to the community function, this resource provides access to tools to create a customized quit plan, interactive guides, and other information about smoking and vaping, and it allows users to sign up for support text messages.

Help! I Want to Quit Smoking!

This article provides an overview of information on how individuals can be successful in quitting smoking, vaping, or using other tobacco products. Created by the [American Heart Association](#), the information page includes organizations, tools, and methods for nicotine cessation. This resource can serve as a starting point for teenagers who are early in the quitting process.

Lung HelpLine and Tobacco QuitLine

Individuals who want their questions answered one-on-one by a health care expert can utilize the American Lung Association's [Lung HelpLine and Tobacco QuitLine](#). Users have the option of calling a hotline number or submitting a question online to be answered by the organization's staff. Experts that can be reached using this resource include registered nurses, registered and certified respiratory therapists, pharmacists, and counselors.

N-O-T: Not On Tobacco

N-O-T is a nicotine cessation program designed specifically for teenagers in the process of quitting vaping or smoking tobacco. N-O-T groups are run by facilitators who have been trained and certified by the American Lung Association. Individuals looking for an in-person program to provide support during the quitting process can use the American Lung Association's program information page to find a group in their community.

quitSTART

The quitSTART app is a free smartphone app that helps users quit smoking or vaping by providing tailored tips, inspiration, and challenges. Created by the [National Cancer Institute](#), the quitSTART app provides tips and information, allows users to track progress and milestones, play games, and complete challenges as a needed distraction from cravings.

Regional Quitlines

For individuals who want to find regional support, the [North American Quitline Consortium's directory](#) of help lines is a useful resource. Users can click on their location to access hotline numbers and online services for nicotine cessation that are provided by their state. The directory includes resources for the United States and Canada.

SmokefreeTXT for Teens

For some teenagers, interacting through text messaging is more comfortable when seeking help. SmokefreeTXT for Teens, a program run through the [National Cancer Institute](#) allows individuals to sign up for a six- to eight-week program in which they receive three to five texts per day offering encouragement and advice. If a teen decides to end the program, they can easily opt out of receiving future messages.

Yale-Led Study Teaches Teens How to Quit Vaping

<https://www.yalemedicine.org/news/yale-vaping-cessation-program>

Teen Vaping Self Assessment

Are You Addicted to Vaping?

1. Do you continue to vape even though you want to stop or think it's hurting you in some way?
2. Do you feel anxious or irritable when you want to use your vape but can't?
3. Do thoughts about vaping interrupt you when you're focused on other activities?
4. Do you still vape after getting in trouble with your parents or at school for vaping?
5. Have you ever tried to stop vaping but couldn't?
6. Do you feel like you have lost control over your vaping?

If you answered YES to one or more of these questions you may be addicted to vaping, and it's time to seek help.

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Lifetime Prevention | Lifetime Wellness

Vaping 101

For Adults



Before you begin...

- Lots of ever-changing information
- Terms to know
 - ENDS (Electronic Nicotine Delivery Systems)
 - Vapes & E-cigarettes (Juuls included)
- Nicotine – Addictive chemical in traditional cigarettes and ENDS
- THC (delta 9-tetrahydrocannabinol) – The psychoactive ingredient in cannabis
- EVALI – E-cigarette or Vaping use-Associated Lung Injury

What do we know?

- Cigarettes contain about 600 ingredients and create more than 7,000 chemicals when burned - at least 70 of these are cancer-causing.
- Some of the chemicals found in cigarettes include ammonia, carbon monoxide, formaldehyde, lead, nicotine, and tar.
- The FDA regulates the manufacture, import, packaging, labeling, advertising, promotion, sale, and distribution of cigarettes.

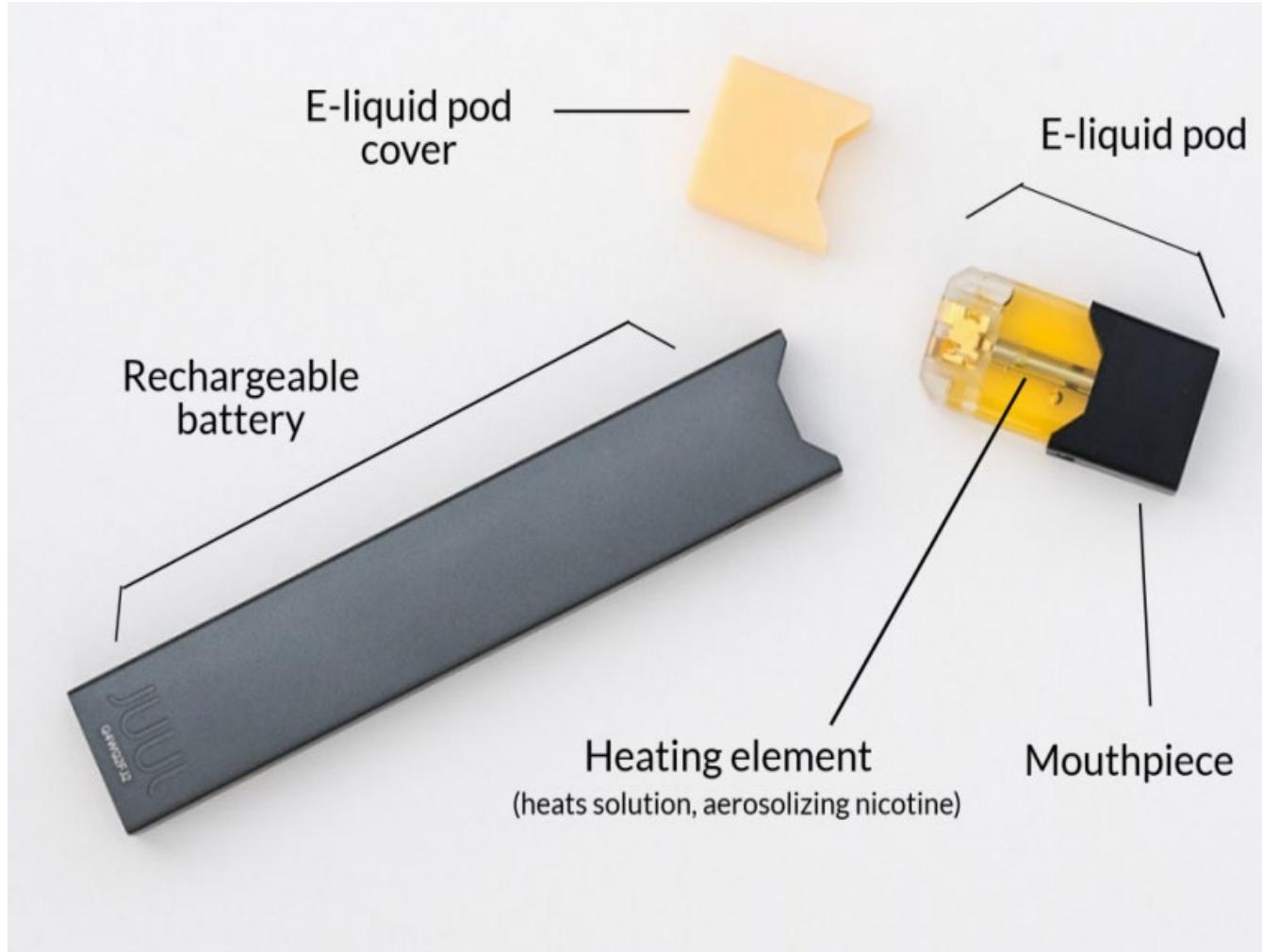


What do we know?

- ENDS use a battery to heat up a special liquid into an aerosol that users inhale; it's not just harmless water vapor.
- Some of the chemicals found in these include nicotine, propylene glycol, acrolein diacetyl, diethylene glycol, heavy metals, cadmium, benzene and other ultrafine particles.
- “E-juice” that fills the cartridges contains nicotine. Studies have shown that even products claiming to be “nicotine-free” contain trace amounts of nicotine.



How do ENDS work?



Regulation

- The World Health Organization proclaimed that it does not consider e-cigarettes to be a legitimate smoking cessation aid.
- Studies found that while e-cigarettes contained less harmful chemicals than cigarettes, they still contained about the same amount or more nicotine.
- Many countries have banned the sale of ENDS.
- In 2009, Amazon.com prohibits the sale of electronic tobacco products on its website.

FDA NEWS RELEASE

FDA finalizes enforcement policy on unauthorized flavored cartridge-based e-cigarettes that appeal to children, including fruit and mint

Companies that do not cease manufacture, distribution and sale of unauthorized flavored cartridge-based e-cigarettes (other than tobacco or menthol) within 30 days risk FDA enforcement actions

Regulation

- Many different e-cigarette companies sued
 - Misleading, contained chemicals that they said it did not contain
- Many states began to include e-cigarettes in their smoking bans.
- Some e-cigarette companies pulled all flavor products from shelves except for traditional tobacco flavor and menthol
- Many campaigns were created to inform the public about the potential dangers of ENDS.

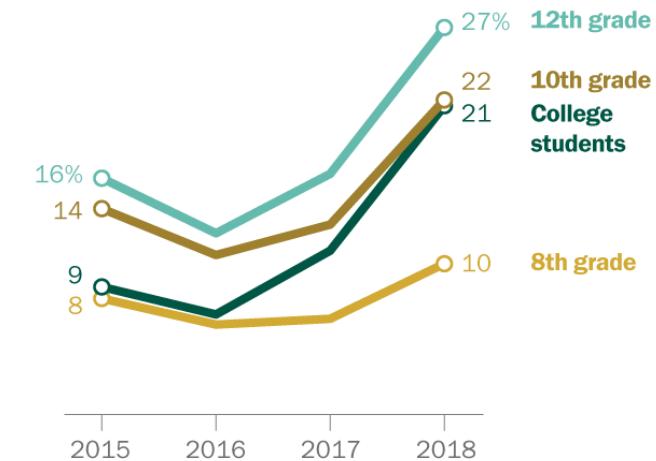


An Epidemic

- November 2014, Oxford Dictionaries word of the year is “vape.”
- Youth and young adult vaping increases exponentially
- Juuling considered an epidemic among high school and college students
- The FDA issued 1,300 warning letters to retailers who were illegally selling Juuls to minors
- It was found that Juul intentionally marketed products to teens
- Juul apologizes to parents of teens addicted to its vaping products

Growing shares of U.S. secondary school, college students vape regularly

% who reported any vaping during the last 30 days



Note: Pre-2017 survey asked about “any vaping.” Data after 2017 based on separate questions about vaping nicotine, marijuana, and just flavoring.

Source: University of Michigan Monitoring the Future survey.

PEW RESEARCH CENTER

Impact

- Juul CEO warns people against using Juuls due to unknown long-term health effects
 - Criminal investigations into Juul begin and they stop sales of flavored products
- Hundreds of cases of severe lung problems pop up in every state across the US (Later called EVALI)
 - Vitamin E Acetate is found to be the cause of many of the severe lung problems, which was mainly found in black market vape products that contained THC

Most Recent Updates

- CDC authored a new study, based on a January-May 2022 online survey of about 28,000 middle and high school students.
 - 17% of teens reported vaping, 14% vaped recently
 - Of those who vape, 28% said they use every day
 - Of those who vape, about 85% used flavored products
 - Favored products included Puff Bar and Vuse, followed by Hyde and Smok
- The FDA recently took action against the makers of Puff Bar and Hyde.
 - Sent a warning letter to EVO Brands, stating that the company never obtained US permission to sell its products and they are being marketed illegally

Most Recent Updates

- “In the last three years, federal and state laws and regulations have raised the purchase age for tobacco and vaping products and banned nearly all teen-preferred flavors from small, cartridge-based e-cigarettes.”
- In the recent survey, about 1/5 of teens who vape reported recently using Juul. In 2019, more than half of teens who vaped reported Juul as their usual brand.
- The U.S. Food and Drug Administration banned Juul products from being sold in the U.S. by issuing marketing denial orders (MDOs) on June 23, 2022, but the agency has since put an administrative hold on the ban until it can review Juul's marketing application again.





What about vape products that contain
THC?



Let's Compare!

Vapes with Nicotine

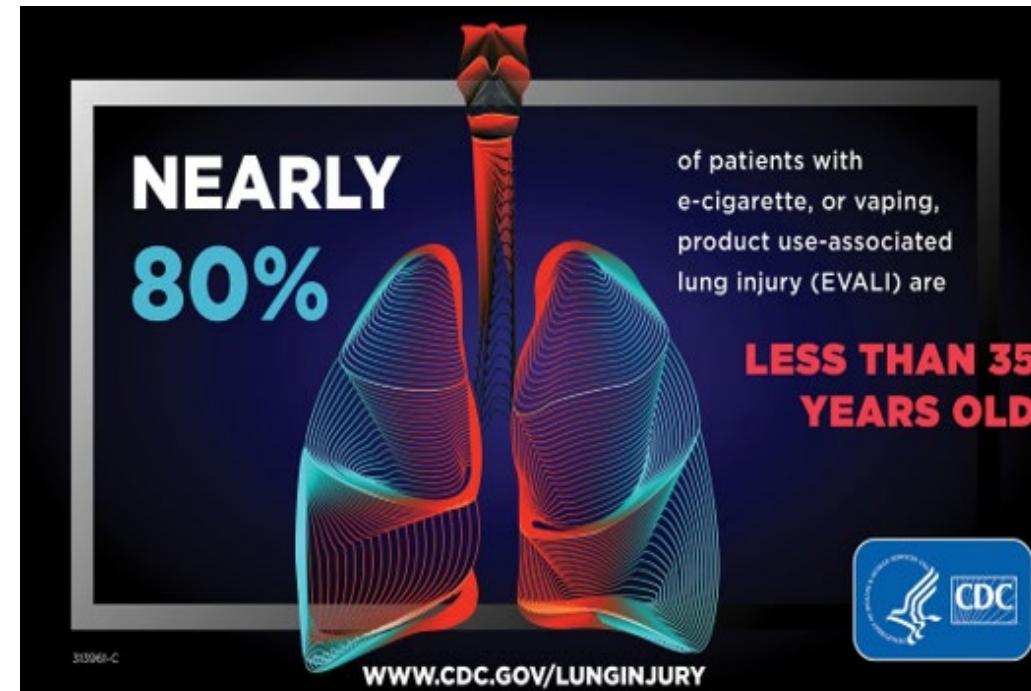
- E-liquid turns into aerosol
- Dozens of harmful chemicals – many unknown
- Has caused lung damage
- Contains addictive chemical, nicotine
- Sold in stores
- Sold on the “black market”
- Legal for people over the age of 18/21

Vapes with THC

- E-liquid turns into aerosol
- Dozens of harmful chemicals – many unknown
- Contains Vitamin E Acetate
- Has caused severe lung damage (EVALI)
- Contains psychoactive cannabinoid, THC
- Sold on the “black market”
- Illegal for people under the age of 18

EVALI (E-cigarette and Vaping use-Associated Lung Injury)

- Vitamin E acetate has been identified as the primary, but not only, cause.
- Symptoms include shortness of breath, fever and chills, cough, vomiting, diarrhea, headache, dizziness, rapid heartrate, and chest pain.
- Due to it being so new, researchers are still searching for other causes and treatments, since there hasn't been one specifically identified treatment.
- 2,807 people have been hospitalized or died from EVALI across all 50 states, DC, Puerto Rico, and the US Virgin Islands.



Is Vaping & Marijuana Connected?

- Short answer, yes.
- A study was done using thousands of college students over 4 years
- E-cigarette use was found to predict cannabis use one year later
- Previous cannabis use was also found to predict later e-cigarette use
- This suggests the relationship between the two is bidirectional
- Further research was done to see if it was just nicotine in general or specifically e-cigarettes and it was found that cigarette use had no significance





What about vape products that don't contain nicotine?



What is e-liquid?

- The liquid that ENDS vaporize.
 - Also called e-juice or vape juice
- Components vary across brands and products.
 - Generally, a blend of water, vegetable glycerin, and propylene glycol, then different flavorings or additives are included to create a specific flavor
- Many ingredients have a Generally Recognized as Safe (GRAS) certificate.
 - When they are heated and vaporized, there is little research that suggests they are safe for vaping



Effects

- “Vaping without nicotine prevents nicotine dependence... However, vaping without nicotine can also cause side effects...”
 - General toxicity
 - A 2012 study found that chemicals manufacturers used to flavor e-liquids had toxic effects on the body.
 - A 2015 study showed that heating propylene glycol and glycerol in e-liquids creates compounds that release formaldehyde, a cancer-causing carcinogen.
 - A 2018 study compared teens who used e-cigarettes daily, those who used e-cigarettes in addition to smoking standard cigarettes, and those who had never used either. Overall, vaping was less damaging than cigarette smoking, however, teens in the e-cigarette only group had significantly higher quantities of toxic chemicals in their urine compared to those in the control group.

Effects

- “Vaping without nicotine prevents nicotine dependence... However, vaping without nicotine can also cause side effects...”
 - Lung and throat irritation
 - Short-term use can irritate the lungs and throat, often referred to as a “throat hit.”
 - Can be described as a tingling, burning sensation that one feels when they inhale the vapor.
 - Inflammation
 - A 2018 study found several common e-liquid flavoring ingredients caused a damaging inflammatory response in lung cell samples. These did not contain nicotine.
 - Chronic inflammation can lead to irreversible lung scarring.

What does this mean?

- Vaping can have many side effects, even if it does not contain nicotine. Flavorings and additives can have several harmful effects.

- These chemicals may have harmful effects on lung tissue. Heating the chemicals can trigger the release of carcinogens.

- Early research shows that vaping, even without nicotine, is not a completely safe alternative to cigarette smoking.



Are there alternatives to vaping to help someone quit?



Alternatives

- Drink sparkling water
- Chew gum
- Hold a toothpick in your mouth
- Eat sunflower seeds
- Take deep breaths



Additional Resources

Prevention Action Alliance
<https://preventionactionalliance.org>



Prevention Action Alliance

Lifetime Prevention | Lifetime Wellness

THANK YOU!

<https://preventionactionalliance.org>



ABOUT PREVENTION ACTION ALLIANCE

PAA is a nonprofit that helps prevent substance misuse and promote mental health and wellness. We provide resources and technical assistance to individuals, families, and communities to help educate, empower and advocate.

614.540.9985 / preventionactionalliance.org



**Prevention
Action Alliance**
