

# Vaping: What to do? What to do?

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# Conflict of Interest



The speakers have no conflicts of interest to disclose.

# What are the issues with vaping?



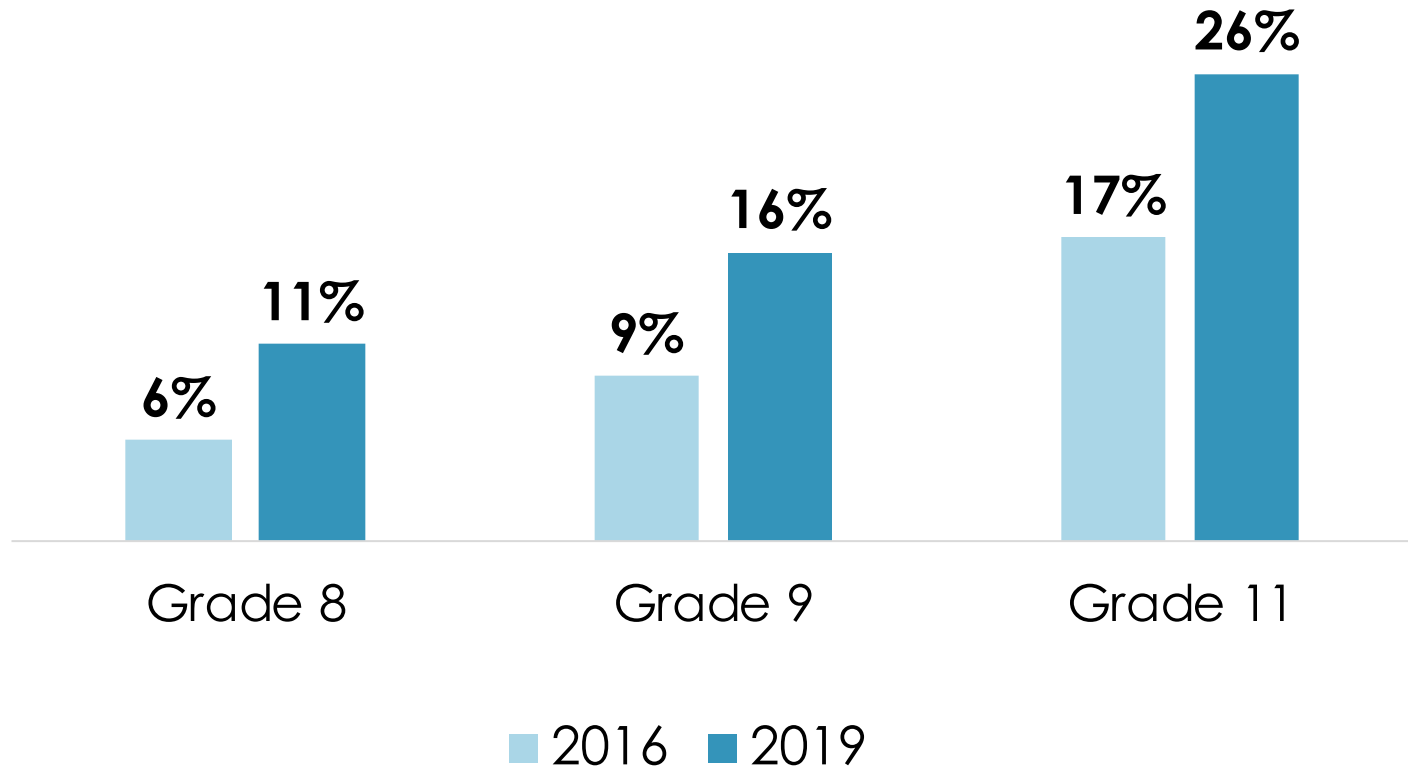
There are at least 3 distinct issues with vaping that must be acknowledged

- Nicotine addiction → smoking tobacco
- THC (marijuana) poisoning
- Lung tissue injury and destruction from diluents and unknown chemicals

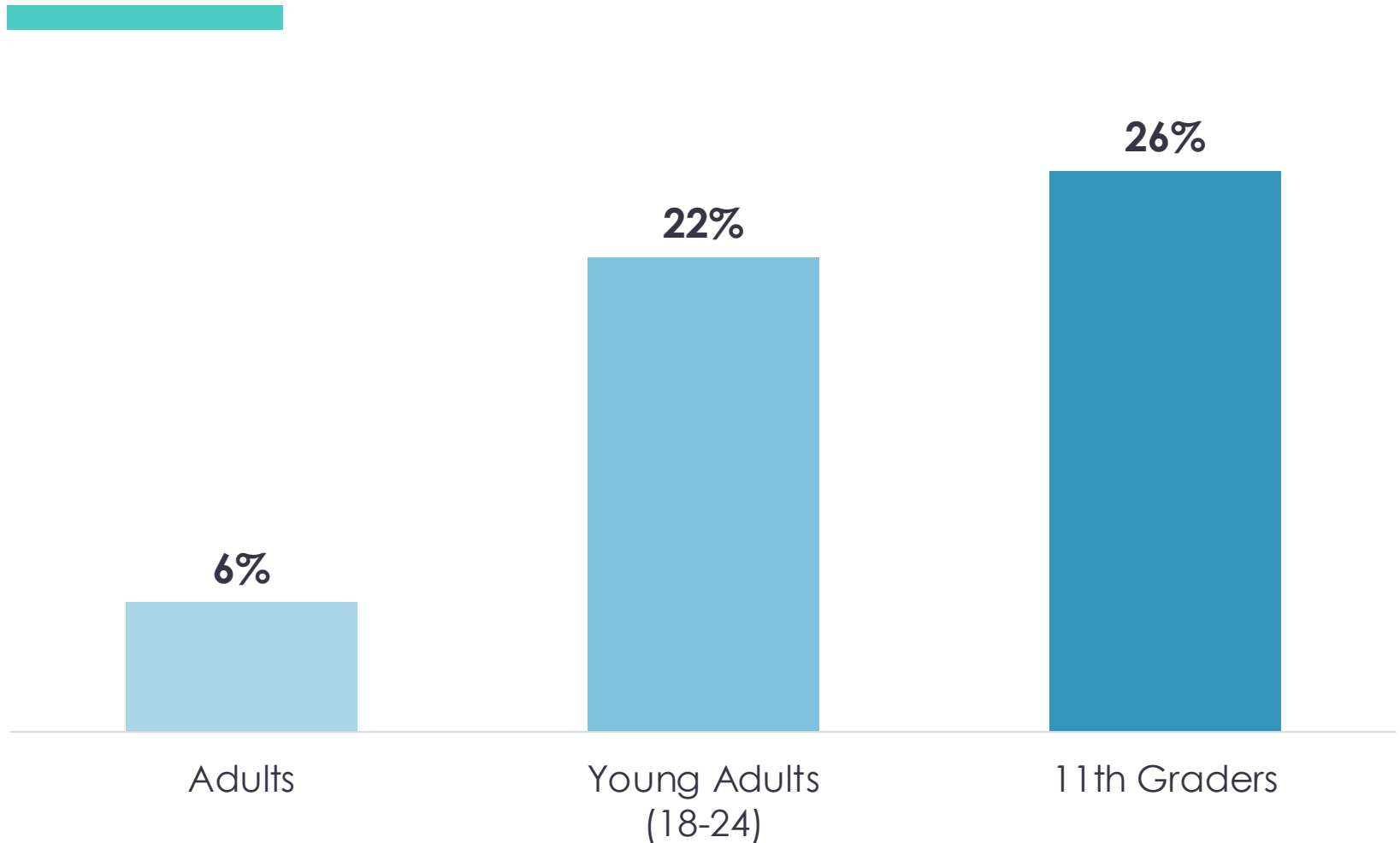
# The Rapid Rise of Vaping



# MN Student Vaping

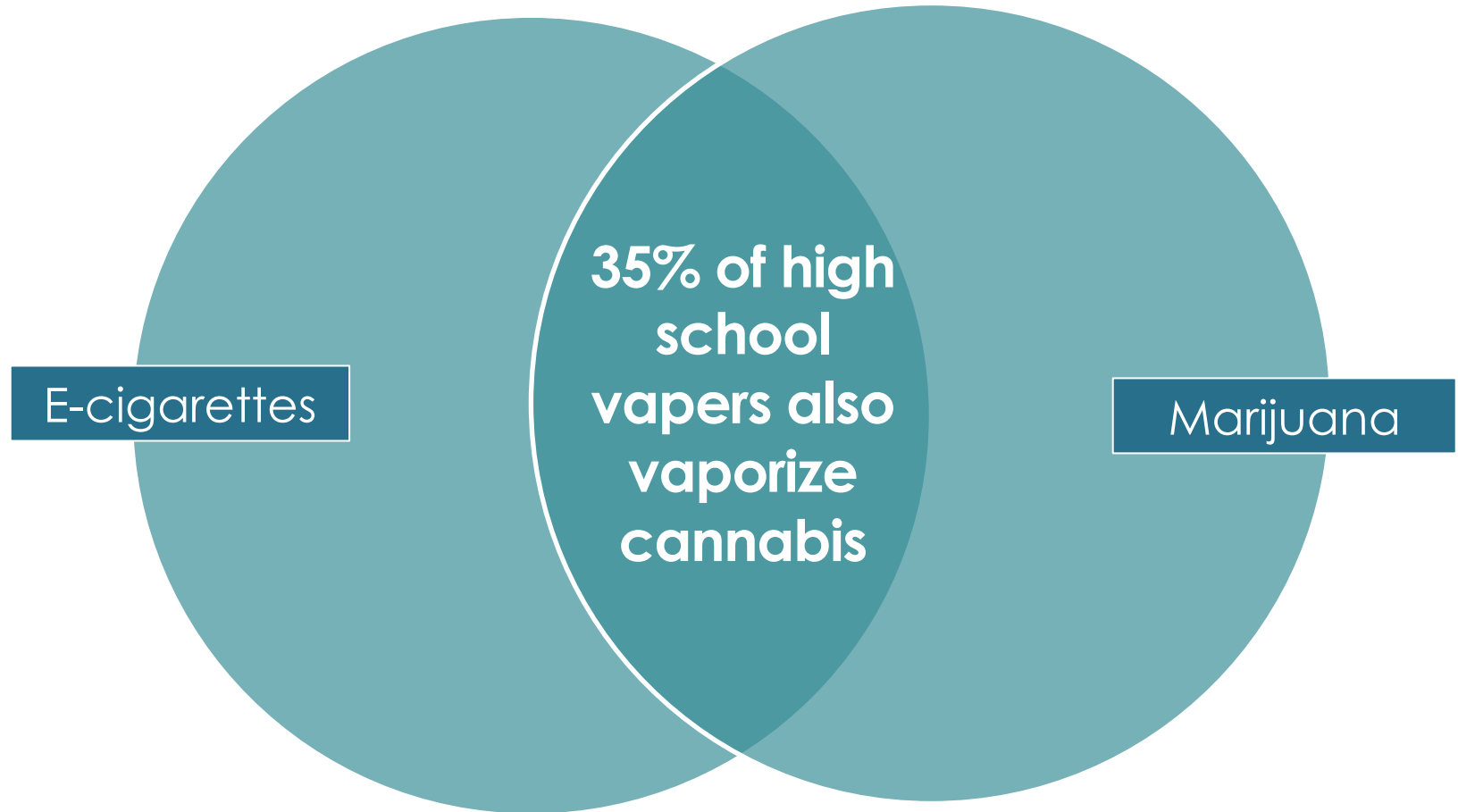


# E-cigarette Use by Age



# Dual Use: Marijuana

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# Prevalence of Reported Marijuana Vaping in past 30 days

	2017	2018	2019
Past 30 d			
No. of 8th graders <sup>b</sup>	4869	4465	8701
Prevalence,% (95% CI)	1.6 (1.3-2.1)	2.6 (2.0-3.4)	3.9 (3.3-4.7)
No. of 10th graders <sup>b</sup>	4412	4666	9026
Prevalence, % (95% CI)	4.3 (3.5-5.3)	7.0 (5.9-8.3)	12.6 (11.1-14.3)
No. of 12th graders <sup>b</sup>	4073	4247	8314
Prevalence, % (95% CI)	5.0 (4.1-6.0)	7.5 (6.2-8.9)	14.0 (12.6-15.5)

Miech RA, Patrick ME, O'Malley PM, Johnston LD, Bachman JG. Trends in Reported Marijuana Vaping Among US Adolescents, 2017-2019. *JAMA*. 2019.

# Increased Risk of Smoking

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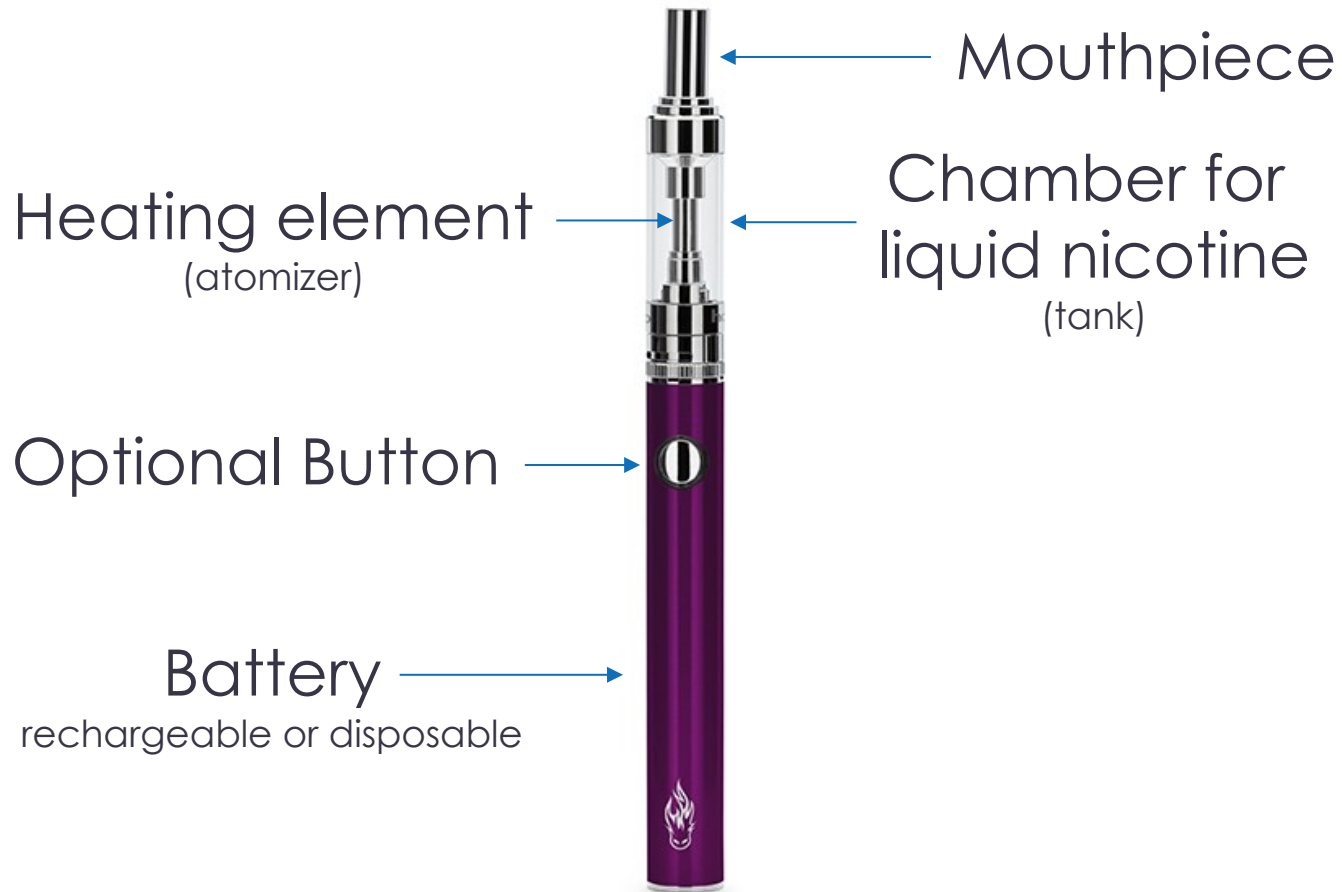
**4 times**

Teens who vape have 4x greater odds of smoking

**E-cigarettes**

# How E-cigarettes Work

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# E-liquids & Flavors

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Propylene glycol  
+  
Vegetable glycerin  
+  
Flavoring  
chemicals  
+  
Nicotine  
(extracted from tobacco)





# Then and Now

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# Health Risks of Vaping: What We Know

# Harm Perception

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3 of 4

Minnesota 11th graders don't perceive e-cigarettes as dangerous.

# Nicotine Poisoning / Sickness

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In large amounts, nicotine is a poison that can cause **vomiting, nausea and rapid breathing**

In 2014 an eighteen month old child died after accidentally drinking e-liquid

[HOME](#) / [BLOG](#) / LIQUID THC: HOW YOU CAN MAKE IT AT HOME

# Liquid THC: How You Can Make It at Home



MarijuanaBreak Staff 2019-12-24



11 min read



40 comments



Video

Like 272K



To be absolutely clear, we DO NOT recommend you make liquid THC in your home, unless you are a trained professional within a properly equipped environment, and we are not responsible for any damages or injuries caused. All activities are at your own risk.



## What Does Liquid THC Look Like?

Liquid THC can come in many different viscosities and physical appearances depending on the [strain that was used](#), the type of alcohol that was used, the temperature during extraction, etc. Realistically, there are dozens of different factors that can contribute to the appearance of a quality liquid THC tincture.

Generally speaking, though, a good liquid THC will be pretty opaque or cloudy. This means light will not be able to pass through it. Next, it will range in color from a light, limey greenish to an ultra-dark, tarry, almost black goo. The best THC oil is typically a beautiful shade of amber or gold.

Whatever the case is, your liquid THC should not be clear. Additionally, there shouldn't be any visible flakes, plant matter, etc. floating around in it.

## How Do You Use Liquid THC?



## RELATED



Cannabis Kingpins: Masters of Marijuana – Part 2: Dennis Peron

2019-12-10



Marijuana and Banking Laws: What's the Latest Scoop?

2019-12-10



### Table of Contents

What Is Liquid THC?

[How to Make Liquid THC](#)

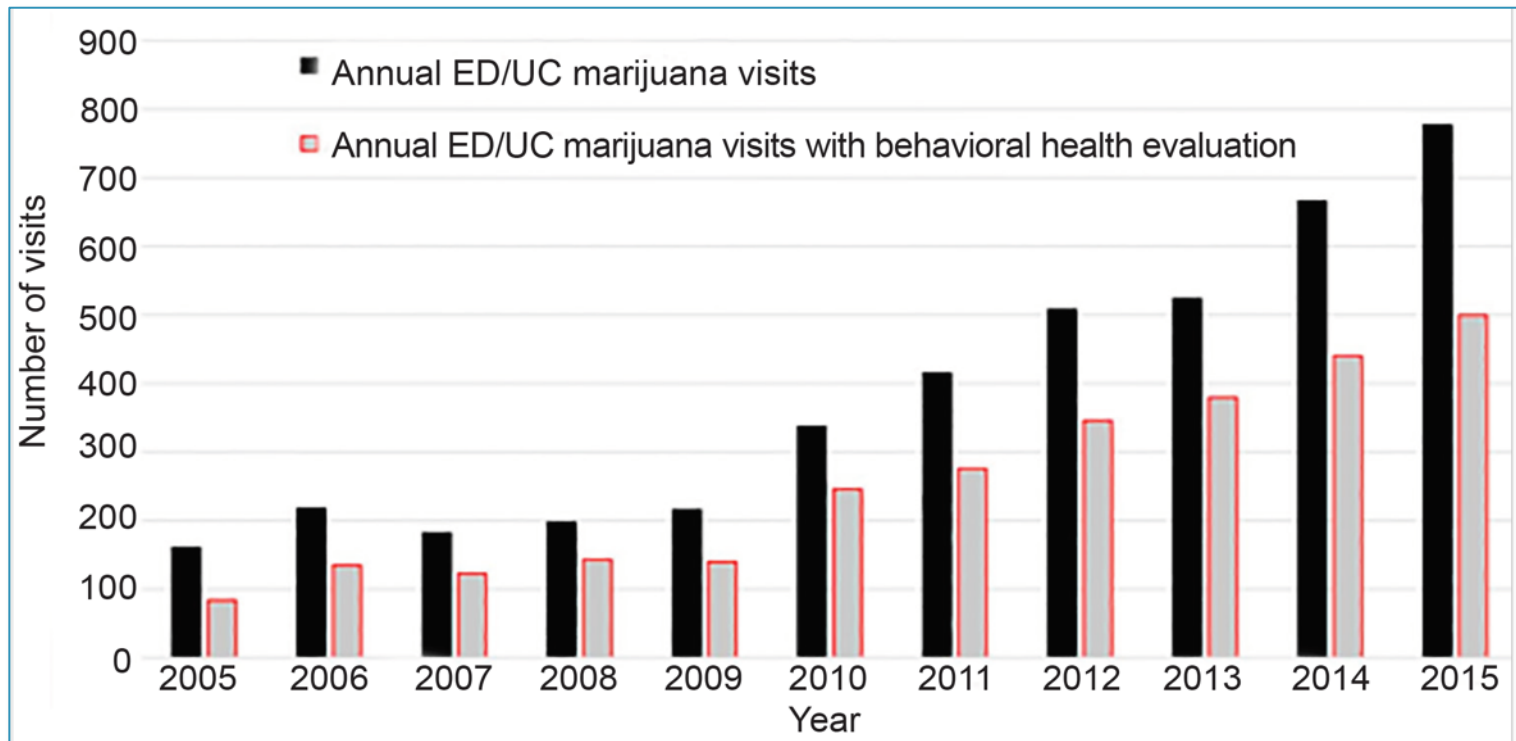
- Liquid THC: Making It at Room Temperature
- Make Liquid THC by Freezing
- Heating Method: Make Liquid THC
- Precautions to Take When Making Liquid Marijuana

## TRENDING



# Marijuana Poisoning / Sickness

Number of emergency department/urgent care visits with cannabis-associated diagnostic codes or positive urine drug screens by adolescents aged 13 to < 21 to a tertiary-care children's hospital system in Colorado by year



Roberts BA. Legalized Cannabis in Colorado Emergency Departments: A Cautionary Review of Negative Health and Safety Effects. *West J Emerg Med.* 2019;20(4):557-572.

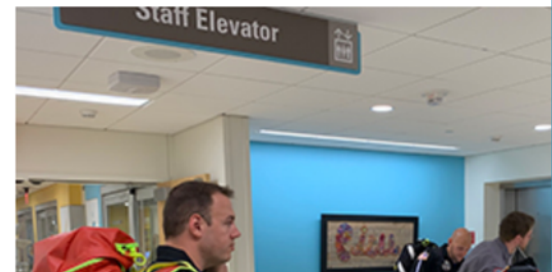
# In the News: Vaping Related Lung Illness

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## Henry Ford Health System Performs First Double Lung Transplant for Patient Injured by Vaping

November 12, 2019

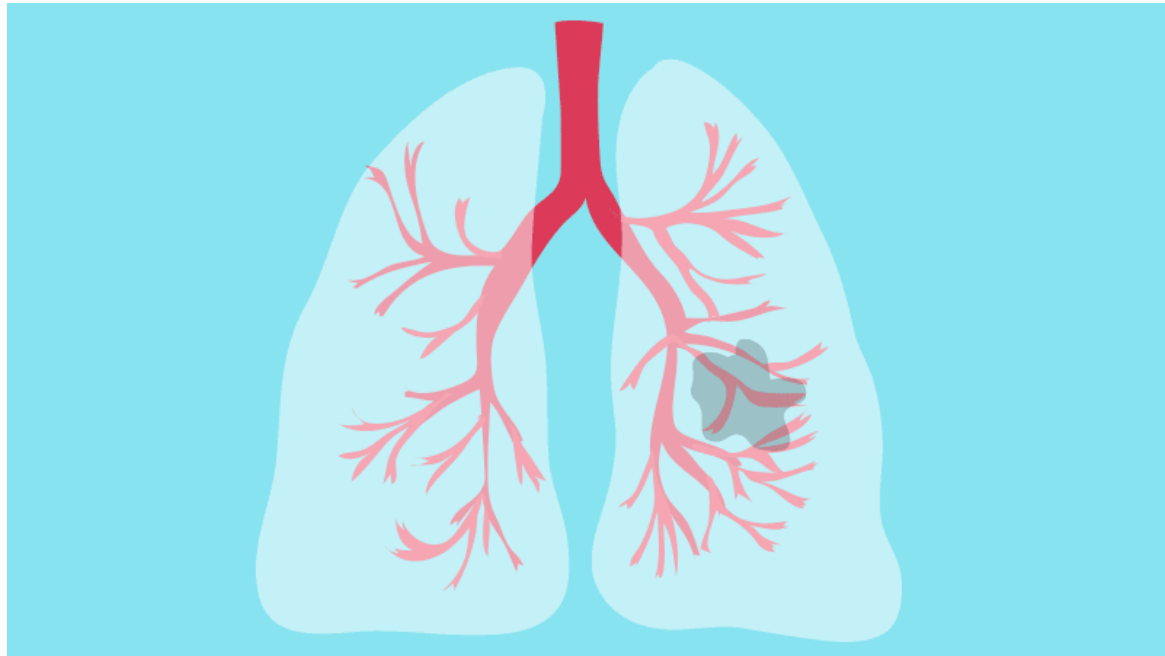
Family Hopes Sharing  
Information Saves Others from  
Tragedy





# Vaping & Respiratory Health

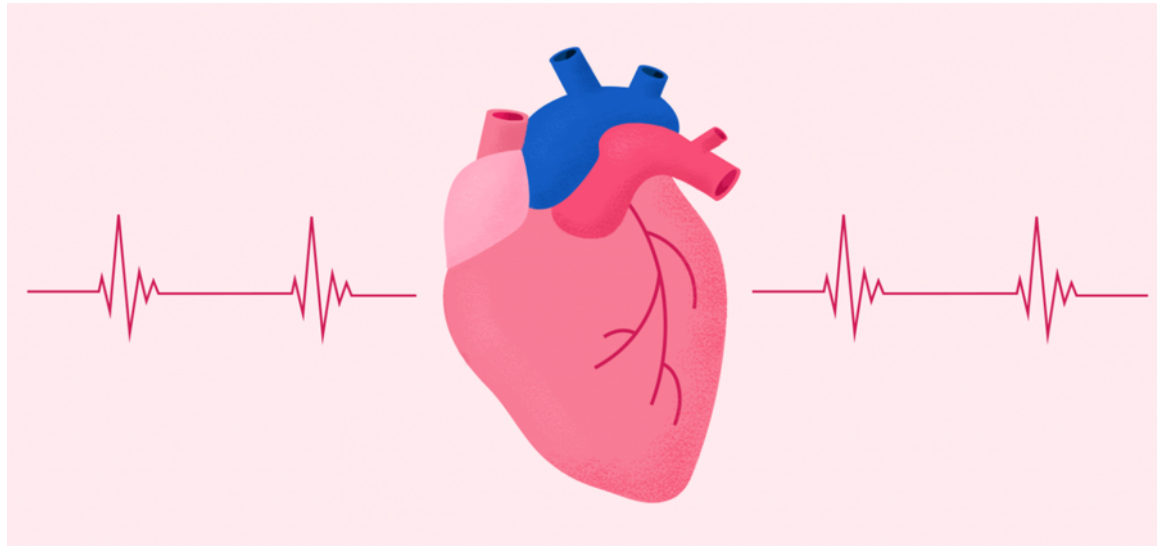
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Increased chronic respiratory issues, asthma exacerbations, aldehydes, and immune impairments

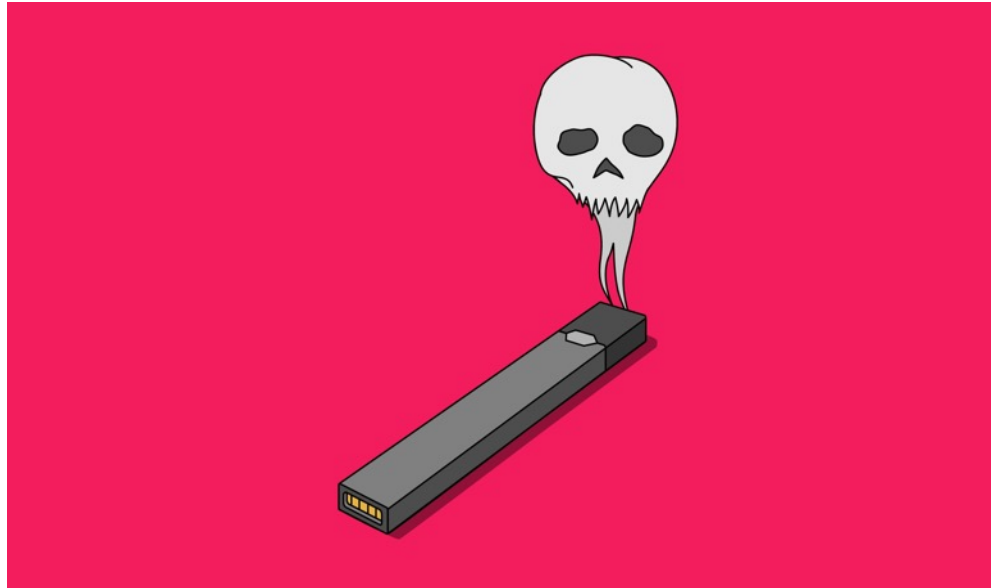
# Vaping & Cardiovascular Health

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Early signs of cardiovascular damage like blood vessel damage, reduced blood flow, and decreased nitric oxide production

# Vaping, Carcinogens & Harmful Chemicals



Vapes contain chemicals like formaldehyde, volatile organic compounds, heavy metals (lead, chromium, nickel), and N-nitrosornicotine (NNN)

# Tools to Address Vaping in the School

# School Toolkit: Addressing Student Use of E-cigarettes and Vapes



## School E-cigarette Toolkit

### ADDRESSING STUDENT USE OF E-CIGARETTES AND OTHER VAPING PRODUCTS

For the first time since 2000, overall youth tobacco use has increased in Minnesota. The rapid uptake of e-cigarettes and other vaping devices has suddenly reversed a trend of declining teen tobacco use in Minnesota, and recent data show one in five high school students use e-cigarettes, a nearly 50 percent increase since 2014.

This toolkit provides tools and resources for Minnesota school staff, including administrators, educators, teachers and health services staff, who are working to address the use of e-cigarettes and other vaping products in schools. This toolkit outlines opportunities for action that can be taken by various school staff, along with resources and tools to help.

### E-cigarettes and other Vaping Products

E-cigarettes are battery-powered devices that allow users to inhale, or vape, aerosolized liquid (e-juice). E-cigarettes, "vapes", vape or hookah pens, e-pipes, and other vaping products recently surpassed conventional cigarettes as the most commonly used tobacco product among youth<sup>11</sup> so it is critical that public health officials and the general public understand the potential risks of using them.



Nearly all e-cigarettes contain nicotine.<sup>12</sup> Nicotine is highly addictive and can harm the developing adolescent brain.<sup>13,14</sup> Because the brain is still developing until about age 25, youth and young adult exposure to nicotine can lead to addiction and disrupt attention and learning.<sup>15</sup> No amount of nicotine is safe for youth.

### Learn more about e-cigarettes and nicotine

- [Health Advisory: Nicotine and the Escalating Risk of Addiction for Youth \(PDF\)](#)
- [Health Risks of Nicotine for Youth](#)
- [E-cigarettes and other Vaping Products](#)
- [Factsheet: Youth Tobacco Use Rises for First Time In 17 Years \(PDF\)](#)
- [E-Cigs 2.0: The Next Generation \(PDF\)](#) (Association for Non smokers – Minnesota)
- [E-cigarettes, "Vapes", and Juuls: What Schools Should Know \(PDF\)](#) (American Lung Association)
- [The Impact of E-cigarettes on the Lung \(PDF\)](#) (American Lung Association)

**health.mn.gov/ecigarettes**

# Educating Students: Not Just for Health Class

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TCMS Lesson Plan  
(1 session)

The Real Cost of Vaping  
(1 session)

Catch My Breath  
(multi-session)

Stanford Tobacco Prevention Toolkit  
(multi-session)

## Formaldehyde

### Also found in:

- Embalming fluid
- Nail polish
- Foam insulation

### Potential health effects:

This substance can cause irritation to the nose, eyes, skin, and throat. It is also linked to increased risk of certain types of cancer.



# Nicotine Addiction

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Many teens who vape may already be addicted to nicotine or have no desire to stop, **so simply telling them to stop probably won't work.**

# K-12 School Model Policy & Alternative Measures



PUBLIC HEALTH  
LAW CENTER  
at Mitchell Hamline School of Law

MINNESOTA

October 2019



## STUDENT COMMERCIAL TOBACCO USE IN SCHOOLS

### Alternative Measures



School policies regulating the use and possession of commercial tobacco products,<sup>1</sup> including electronic delivery devices (e.g., e-cigarettes, vaping devices, JUUL, Suorin), often contain punitive measures for student violations.

This publication provides sample language and ideas for evidence-based solutions and information as to why these alternative measures may be more effective than suspension and expulsion at addressing student tobacco use and nicotine addiction as part of a school's Commercial Tobacco-Free Policy.



1. The tobacco industry has historically and continues to target youth to maintain profits, especially in and around schools.<sup>2</sup> Schools should consider these predatory tactics when creating or modifying a policy to address youth possession and use of commercial tobacco in schools.

When considering how to effectively address youth use and possession of commercial tobacco products in schools, it is important to understand how pervasive the industry's targeting of youth and young adults with these highly addictive products has been for several decades. Overwhelming evidence, including the



# INDEPTH

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## Helping Teens Quit

[www.lung.org](http://www.lung.org) > Stop Smoking > Helping Teens Quit

### INDEPTH: An Alternative to Teen Nicotine Suspension or Citation



# But we also need to ask...



...why are students vaping?

- Oppositional behavior
- Search for alternative states of consciousness
- Escape
- Self-medication

Human beings seem to have a universal drive to achieve alternative states of consciousness. We will be helping students if we teach them how to do this without drugs.

# Public Policy Solutions

# New Federal Regulations

**CNN health** Food Fitness Wellness Parenting Vital Signs

## US raises legal age to buy cigarettes, vapes to 21



By **Jacqueline Howard**, CNN

Updated 11:20 PM ET, Fri December 20, 2019



**Los Angeles Times**

POLITICS

Trump administration imposes ban on some, but not all, vaping flavors in retreat on earlier plan



# The President's approach won't be enough

The New York Times

## *With Partial Flavor Ban, Trump Splits the Difference on Vaping*

An initiative to reduce the use of e-cigarettes by teenagers led to compromise. Sales of most flavored pods popular with youth will be forbidden, but flavored liquid nicotine for open tank devices will be exempt.



January 3, 2020

# JUUL has teamed up with Big Tobacco

Altria Buys 35 Percent Stake In E-Cigarette Maker Juul

December 20, 2018 - 6:18 PM ET

LAUREL WAMSLEY

*Juul Replaces Its C.E.O.  
With a Tobacco Executive*



So don't expect the solution to come out of Washington

# Minnesota Public Policy Options



- Restrict flavored tobacco and/or e-cigarettes to adult-only tobacco shops
- Ban the sale of flavored tobacco products
- Ban the sale of all vaping devices
- Fund statewide tobacco prevention and treatment programs



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- Ban the sale of flavored tobacco products
- **Ban the sale of all vaping devices**
- **Fund statewide tobacco prevention and treatment programs**



# Steps to Vaping Control



- AMSD BOD endorses vape sale ban and asks school districts to endorse ban
- School districts endorse ban and ask municipalities to ban sale of vape products
- Municipalities ban sale of vape products and ask their state representatives and senators to ban sales statewide
- Municipalities ask Minnesota League of Cities (MLC) to endorse statewide ban
- MLC, and everyone else, asks legislature to ban sale of vape products.

Questions?