

What is Vaping?



Vape Stats 2017-2018

- According to the CDC, 38% of high schoolers and 13% of middle schoolers have tried vaping.

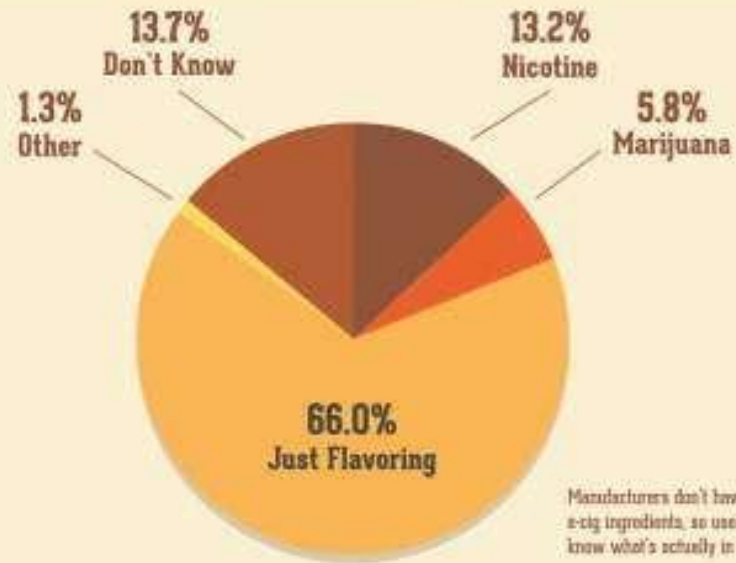
TEEN E-CIG USERS ARE MORE LIKELY TO START SMOKING.*²

Start Smoking Within 6 Months



*Includes combustible tobacco products (cigarettes, cigars, and hookahs)

WHAT DO TEENS SAY IS IN THEIR E-CIG?³



Manufacturers don't have to report e-cig ingredients, so users don't know what's actually in them.

- **WHAT IS A VAPORIZER?**

- A vaporizer is an electric device that turns vaping material into vapor. A vaporizer usually consists of battery, main console or housing, cartridges, and atomizer or cartomizer. The battery generates the power for the heating element in the atomizer or cartomizer, which contacts the vaping material and transforms it into vapor for inhalation.



PORTABLE VAPORIZERS

Device – Vaping devices can come in a large variety of colors and shapes often dependent on their specific uses. Some might look like a traditional cigarette while others might resemble a pen, a tube, a box, or other forms but they all serve the same purpose ultimately. To take the power supplied by the battery and deliver it to the atomizer.



Pen



Pod

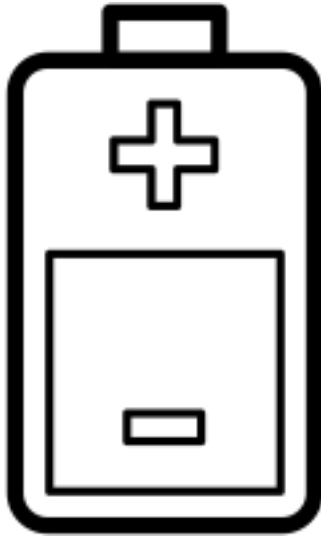


Mod

- **WHAT IS THE VAPOR IN A VAPORIZER?**
- Vapor is defined as “a substance diffused or suspended in the air which is originally a liquid or solid turned into a gaseous form.” The vapor in a vaporizer is the gaseous form of any of the vaping materials. The vapor looks thicker than smoke, however, smells much better, and quickly dissipates into the air.
- Vapor does NOT replicate the unmistakable odor of marijuana or cigarettes which makes it hard to detect



Empty Vape Tank that Would Be Connected To A Device



What's in E-cigarettes/Vape Pens?

- A vapor is a chemical that has evaporated
- An aerosol is a mixture of liquid particles suspended in a gas and can contain many chemicals
- Instead of just mixing with the air like a pure gas, aerosols can leave drops behind.

It's an Aerosol, Not a Vapor



- **WHAT MATERIALS CAN BE VAPED?**

- The vast majority of vapers use e-liquids, but other common materials include waxy concentrates and dry herbs or marijuana ground into small pieces. Different vaporizers support the vaping of different materials. For example, e-liquids vaporizers have a cartridge or tank, while a dry herb vaporizer will have a heating chamber. Multipurpose vaporizers allow you to vape different materials simply by switching cartridges.





- **Hash oil or “honey oil”** is a cannabis product derived from separating resins from marijuana.
- **E-joints** are disposable and come with a cannabis oil cartridge and no smell is released.
- **E-juice** has variable THC/CBD content.
- Marijuana use impacts memory, coordination, function, and the respiratory system.

Vaping and Marijuana

THC (tetrahydrocannabinol)

- THC is one of many compounds found in the resin secreted by glands of the marijuana plant.
- It is the chemical responsible for most of marijuana's psychological effects.
- In the marijuana plant, typical THC levels, which determine potency, range from 0.3 to 4 percent. However, some specially grown plants can contain THC levels as high as 25 percent
- Many marijuana concentrates used in vapes contain extraordinarily high THC levels ranging from 40 to over 90 percent THC amounts. This form of marijuana can be up to four times stronger in THC content than high grade or top shelf marijuana, which normally measures around 20 percent THC levels. (NIDA, 2017)

THC/CBD Oil- Is it legal in Georgia?

- In sum, **CBD/hemp oil** products are **legal in Georgia**. The products become **illegal** once they contain more than 5% THC
- Anyone caught with THC oil can be arrested/prosecuted by the law
- Police charges depend on the amount of THC in the oil
- Georgia law allows for people meeting certain medical criteria to apply for a **Low THC Oil Registry Card**
- This law did NOT make THC oil legal for sale or possession

Methods of Vaping THC

- Marijuana flowers- buds or “flowers” are ground into small pieces and a vaporizer applies heat to this material so it can be inhaled
- Oil cartridges- pre-filled oil vape cartridge that contain CO2 Oil which is compatible with vaporizer cartridges, Distillates which contain pure cannabinoids and Additives which is a thinning agent/contains hash oil
- Wax and Shatter- wax is a popular form of marijuana concentrates, Shatter is broken up pieces of wax

What is CBD? What is CBD oil?

- Cannabidiol is better known as CBD, it is one of the 104 chemical compounds known as cannabinoids found in the cannabis or marijuana plant.
- The non-intoxicating marijuana extract is being credited with helping treat a host of medical problems -- everything from epileptic seizures to anxiety to inflammation to sleeplessness.
- Some experts say the evidence is scant for most of these touted benefits.

CBD continued...

- CBD is being produced without any regulation, resulting in products that vary widely in quality.
- **CBD Oil Side Effects**
 - Dry Mouth. CBD oil can cause dry mouth. ...
 - Lower Blood Pressure. High doses of CBD oil can cause a small drop in blood pressure in some individuals. ...
 - Lightheadedness or Dizziness. ...
 - Nausea. ...
 - Sleepiness or drowsiness. ...
 - Increased Tremors in Parkinson's Disease. ...
 - Headaches.

- **WHAT IS E-JUICE AND E-LIQUID?**
- E-juice, also called [e-liquid](#), is the primary material used in vaporizers, and consists of a PG (propylene glycol) and VG (vegetable glycerin) base, flavorings, and may or may not contain [nicotine](#).
- There is a myriad variety of e-liquids available on the market, and you can find flavors ranging from the most basic fruity ones to some very innovative flavors such as desserts, candies, and so on.



Effects of Flavorings



- The various trendy flavors have been a very successful marketing strategy that allows e-cig/vape users to consume nicotine without the harsh taste of cigarettes.
- It may come as a surprise to many, but the flavors themselves pose a risk to the e-cig/vape user.
- Some flavors have been shown to be toxic due to the chemicals they contain.

Flavors



Tobacco

Vanilla

Chocolate

Coffee

Cherry Limeade

#1 Flavor Selection with 19 Flavors!



What's Your Taste?



Cytotoxic Flavors

Cinnamon flavors may contain:
Cinnamaldehyde, 2-Methoxycinnamaldehyde

Cherry flavors may contain: Benzaldehyde



Who is going to replace the old smokers?



The Usual Suspects











Then and Now



Strength of a Pack

NOTE: ALL SALT-BASED E-JUICE/LIQUID CONTAINS **NICOTINE!**

	<i>Amount</i>	<i>Equivalent</i>
1 pack cigarettes 	20 cigarettes <i>(contains 8mg per cigarette, but only inhale 1mg)</i>	
1 JUULpod 	0.7 mL pod <i>"5% nicotine by volume"</i>	
1 PHIX pod 	1.5 mL pod <i>"5% nicotine by volume"</i>	
1 Suorin pod 	2 mL cartridge <i>"5.4% nicotine by volume "</i>	

Georgia Vaping Regulations

Georgia law prohibits the use of vaping technology and e-cigs on all state university and college campuses. There are limited exceptions involving the conducting of research studies. Minors under the age of 18 are prohibited from buying portable vaporizers. And the counties of Chatham, Pooler, and Savannah include vaping in their smoking bans too. Dekalb county bans vaping in the workplace but does not discriminate against the use of e-cigs in bars and restaurants.

<https://www.vapes.com/pages/vaping-regulations-state-by-state>

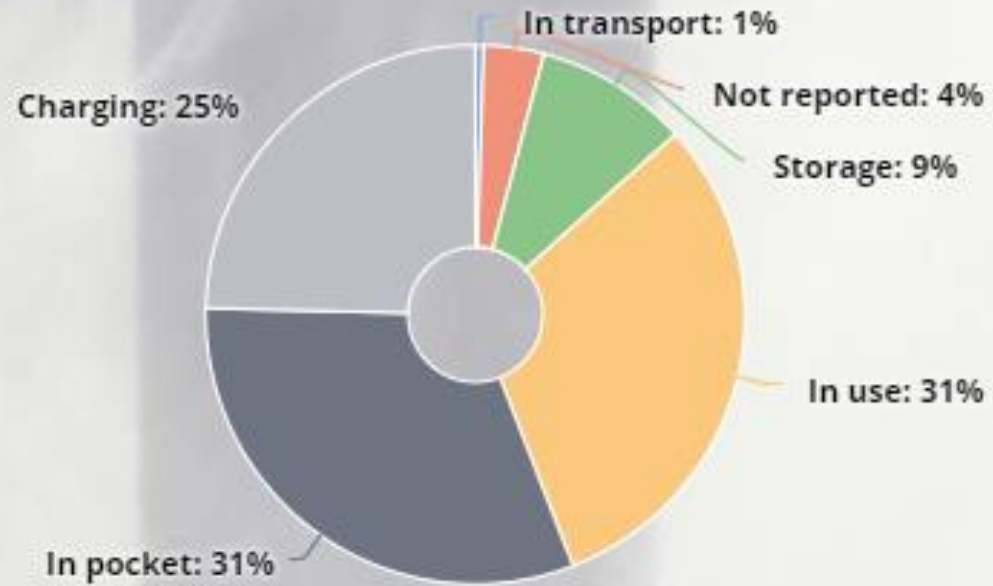
Dangers of Vaping

- Explosions- vape pens are a risk to overheat and explode, in many cases due to the lithium-ion-polymer batteries
- Burns- there have been cases in which vape pens have caught fire causing burns to individuals, some were 3rd degree burns
- Drug laced- vape users may be unaware of potential harmful materials in what they are inhaling
- These risks prompted the DEA recently to issue a warning in regards to teenagers' vaping

**195 Incidents
of lithium ion
batteries
catching fire.**

**133 were
acute
injuries
and 38
were
severe**

Status of e-cigarette when the incident occurred

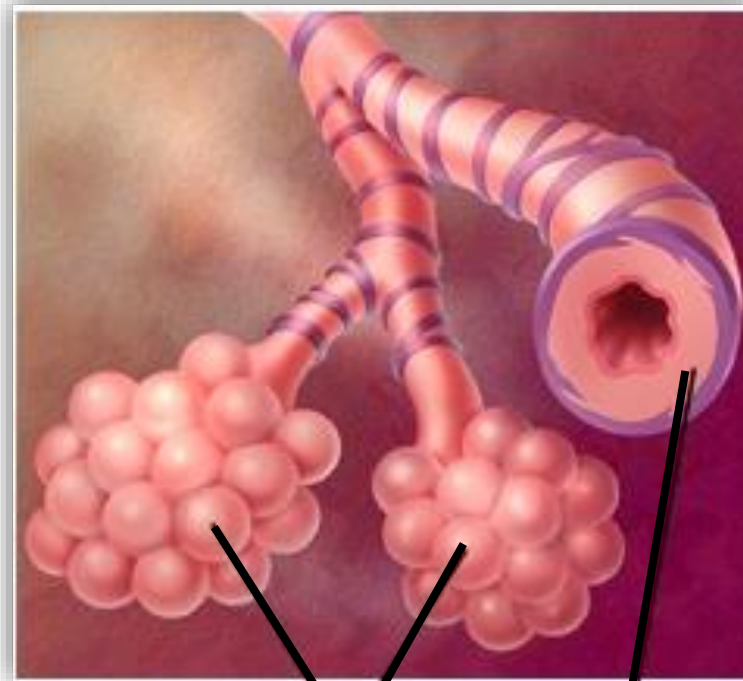
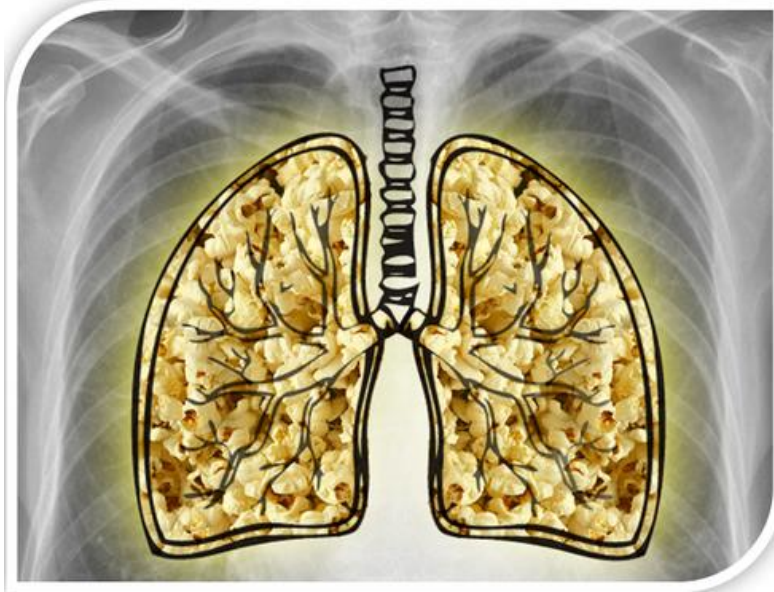


195 incidents

SIDE EFFECTS OF VAPING

- Inhaled vapor leads to inflammation in the mouth eventually leading to gum disease.
- Can destroy mitochondria which helps cells repair wounds.
- Metal coils that heat up the fluid can cause chemicals to become toxic.
- Inhaled particles can lead to persistent coughing or a “smoker’s cough.”
- Can lead to popcorn lung which is a disease that results in the obstruction of airways of the lungs due to inflammation. Symptoms include dry cough, shortness of breath, wheezing, and feeling tired.

Popcorn Lung



Alveoli & Bronchioles
Experience scarring

Diacetyl

