

# CLEARING THE Air

What you need to know  
about the vaping industry





# Understanding the Cloud

What you need to know about the vaping industry

**Y**ou first noticed it last year. Maybe you were at a bar or a party. There was all this “smoke” in the air, but you didn’t seem to mind. You started seeing friends carrying around these metal pens and talking about “atomizers” and “e-juice.”

Little did you know you were in the middle of the year of the vape. In fact, Oxford Dictionaries chose “vape” as its 2014 Word of the Year. Today, you are 30 times more likely to encounter the word “vape” (which can be a verb or a noun, by the way) than you were just two years ago. No doubt that’s due to the fact that thousands of people have started “vaping” — using electronic cigarettes, vape pens and other devices to inhale a vaporized liquid.

Why is vaping catching on? If you ask some vapers, many of whom have been addicted to smoking for years, they will tell you it has given them an alternative to harmful traditional cigarettes. For the first time, they are able to control their nicotine consumption and still enjoy an experience that mimics traditional smoking.

But as with anything exciting and new, vaping has its detractors.

Campaigns like Still Blowing Smoke — developed by the California Department of Public Health — aim to deter anyone from using vaping products. There also has been

a lot of misinformation spread about vaping being more harmful than cigarettes. But the facts about vaping, as told by the industry itself, aren’t as easy to come by.

Julie Woessener is the executive director of Consumer Advocates for Smoke-free Alternatives Association (CASAA), a nonprofit that raises awareness and protects people’s access to vaping products. Woessener smoked cigarettes for six years before switching to vaping. Now, she’s one of the industry’s biggest advocates.

One misconception about the vaping industry, according to Woessener, is that it is linked to tobacco corporations or “Big Tobacco.” Woessener says that couldn’t be further from the truth.

“It’s common for people to talk about the vaping industry as a homogeneous group, but that’s not true,” Woessener says. “Tobacco companies entered into the [vapor] market later, but the industry is mostly driven by small- and medium-sized businesses who have the ability to customize their products for consumers.”

The diverse marketplace is one of the things that Woessener says really attracts consumers to vaping — they can purchase a variety of flavored liquids and vaporizers. Vapers on average tend to be age 30 and older, although surveys are finding younger adults are also making the switch to vapes. Woessener stresses that the industry does not market to minors.

“By and large, the vast majority of people who are vaping are people who have replaced smoking or reduced smoking habits,” Woessener says. “They are doing it because it works. This is a product that is customizable and works for a veteran smoker who has tried everything.”

While Woessener does not discount the possibility that continued research could identify health problems associated with vaping, the early studies are promising.

“What we’re finding is the science tells us it’s a much better alternative,” Woessener says. “Of course, the best alternative is to quit smoking altogether, but quitting is not easy. As a consumer organization, we are allowed to tell the truth. The truth is, these are less hazardous than smoking cigarettes.”

Because vaping is not an FDA-approved nicotine replacement therapy, Woessener laments that the industry is not allowed to market itself based on health claims. Currently, the vaping industry is not regulated by the federal government, but Woessener says the industry is mature enough to regulate itself.

“We recognize that there are things that can be done that will benefit consumers, but federal regulation can destroy the industry by making it tougher for small-business owners to navigate the regulation,” she says. “Consumers are better served by a diverse marketplace.”

PHOTO AND COVER PHOTOGRAPHY BY CHARLES GUNN

VAPING  
EDUCATION  
COUNCIL

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This publication is brought to you by the Vaping Education Council, a group of small-business owners who want to share information about vaping products with the general public, fortify advocacy throughout the industry, and share stories directly from consumers.

The vaping industry is made of small-business owners — not Big Tobacco. These include e-liquid producers and vaping device manufacturers, as well as vape shop owners. Vape shops are specialty stores focused on alternatives to smoking that offer quality products and expert advice. Vape shops educate their customers on how to properly use vaping products as an alternative to traditional cigarettes. Many people who vape are veteran smokers who have sought alternatives because of the detrimental effects cigarettes have had on their health.

These are the facts. Keep reading to find out more about the vaping industry and how vaping is giving smokers a choice.

Lorena Locken smoked more than a pack of cigarettes a day since she was 16 years old — only quitting when she was pregnant. Thanks to vaping products, she was able to completely quit smoking cigarettes for good.  
PHOTO BY BRAD GARRISON



# Leaving Cigarettes Behind

Mother of three quits smoking by using vaping products

Lorena Locken began smoking cigarettes when she was 16 years old. At first, she only smoked off and on. By the time she turned 19, she was smoking more than a pack of cigarettes a day. Although she was able to quit smoking when she was pregnant, she always started up again. Locken says she also had health problems that were being exacerbated by her smoking.

“I had a heart murmur that was really bad,” Locken says. “I was having a hard time breathing. I coughed all the time. It was really bad.”

Following a colonoscopy in 2010, Locken was diagnosed with transverse colon cancer. For 10 years, she had been complaining to doctors that something was wrong with her stomach. She had been losing weight and throwing up. Doctors discovered a stage four tumor in her upper stomach and advised her they needed to remove it immediately. She had surgery in June 2010.

“[My doctors] all told me to quit smoking because after the surgery, my body wasn’t healing fast enough,” Locken says. “My oxygen levels were down. Smoking was making everything worse.”

Locken’s doctors discovered another tumor on her kidney and another on her lymph node

near her spine and a main artery. She had surgery to remove the tumor on her kidney, but doctors were unable to remove all of the second tumor because of where it was located. During chemotherapy, Locken continued to smoke.

“My husband and I were smoking over two packs of cigarettes a day,” Locken says. “We were basically killing ourselves and spending all of our money to do it.”

In 2014, Locken’s husband happened to drive by Nor Cal Vape — a vaping store located in Redding — and bought a starter kit for both himself and Locken. Locken says she was skeptical of vaping at first — she



**My husband and I were smoking over two packs of cigarettes a day. We were basically killing ourselves and spending all of our money to do it.**



LORENA LOCKEN

thought it was “just another thing to try.” But as soon as she started vaping, she immediately found it to be a better alternative to smoking cigarettes.

“I don’t know exactly what it is about vaping, but I was able to quit smoking cigarettes altogether,” Locken says. “I haven’t had a craving in a long time. After I did some research on vapor products, I felt even better about it.”

Locken says she and her husband now have more energy to do things with their three children, like go to parks or ride bikes around the neighborhood. The couple go for a walk every morning.

“It’s been a big difference for both of us,” Locken says. “We’ve actually had 30 people we know quit smoking cigarettes after we introduced them to vaping. When my husband sees someone smoking, he goes up to them to tell them about vaping. We want everyone to quit smoking cigarettes.”

*Testimonials are based on individual experiences, which vary. Testimonials are not intended to make claims that vaping products can treat, mitigate or prevent any disease. Vaping is not an FDA-approved nicotine replacement therapy.*

There are many reasons why people choose to vape. Here are some of the most common reasons consumers choose vaping as a harm-reducing alternative to smoking:

- You don’t smell like cigarette smoke.
- You can socialize without the vapor bothering your friends.
- Your teeth do not turn yellow.
- Vaping products are more customizable.
- Vaping devices are portable and convenient.
- Vaping e-liquids come in a variety of flavors.
- Vaping allows you to cut back on your nicotine intake.
- It’s less costly.

# How Does Vaping Work

## Using an electronic vaporizer

While the vapor from a vaping device may look similar to the smoke of a cigarette, the two clouds are very different. When you vape, there is no fire, no burning and no smoke. Considering smoke is both the most toxic element of traditional cigarettes and the most irritating to remove from clothing, couches and carpets, this has been a welcome relief for vapers everywhere.

### INHALATION

When using a vape pen, you activate the device by pressing on a small button or sucking on the mouthpiece. This triggers the small coil inside the vape's cartridge to heat up and vaporize the surrounding e-liquid. When you inhale, you breathe in a vapor cloud of nicotine and flavoring.

### E-LIQUID

Depending on the e-liquid you buy, your vapor can taste like traditional tobacco, a mixture of fruity flavors, or earthier blends of different herbs. Many of the best e-liquids fail to fit into one specific category, instead combining flavors from across the spectrum, perfected by small producers.

### NICOTINE

You can adjust the amount of nicotine in your e-liquid. Many e-liquids contain no nicotine at all, and the highest most vape shops carry is 24 mg of nicotine per mL. Most people tend to buy e-liquids with between 3-6 mg. Many people also begin with higher amounts of nicotine, then lower the dosage as they get used to vaping or begin to crave nicotine less.

### EXHALE

When you exhale the vapor, you will notice that, unlike traditional tobacco smoke, the white cloud quickly disappears into the surrounding air after a few seconds. People close by might notice a faint, sweet smell in the air while you are vaping, but the smell is usually pleasant and won't seep into surrounding furniture or onto your clothes.

## What are you inhaling?

### E-LIQUIDS:

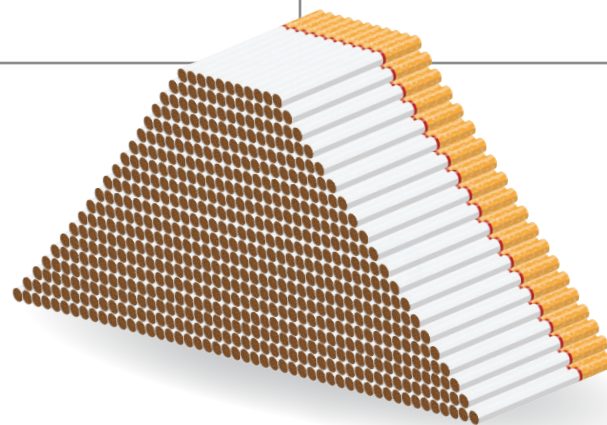
- **Nicotine:** An addictive stimulant found in plants, such as tobacco, and to a lesser extent, eggplant and potatoes. Different e-liquid brands have up to 24 mg of nicotine, while others contain none at all.
- **Flavoring:** Artificial and natural flavors, like mint or cherry, are added to give each e-liquid variety a unique flavor.
- **Vegetable glycerin (VG):** A compound, usually derived from plant oils, like coconut or palm, that is also used in makeup, toothpaste and baked goods. VG is used as a base to carry the nicotine and added flavors. In e-liquids it is known for creating a lot of thick, heavy vapor.
- **Propylene glycol (PG):** An organic compound used in medicines, asthma inhalers and food products. PG also is used as a base for the nicotine and added flavors.

### CIGARETTES:

- 7,000 chemicals** (there's not enough room to list them all here), including:
- **Benzene:** Also found in gasoline.
  - **Arsenic:** Used in pesticides.
  - **Tar:** Same material used to make roads.
  - **Lead:** Also found in old paint, ammunition and batteries.
  - **Styrene:** Also found in car tires, asphalt, and liquid printer and photocopier ink.
  - **Hydrogen cyanide:** Also found in insecticide, rat poison and chemical weapons.
  - **Ammonia:** Used in household cleaners.
  - **Carbon monoxide:** Also found in car exhaust.
  - **Beryllium:** Also found in X-ray machines and nuclear weapons.

*Source: U.S. Department of Health and Human Services, Environmental Protection Agency, American Lung Association*

## How Much Are You Smoking?



### TRADITIONAL CIGARETTES:

600 cigarettes/month (one pack a day)  
**COST:** \$180/month (at \$6 per pack)



### E-LIQUID CONSUMPTION:

4 15mL bottles/month  
**COST:** \$48/month (e-liquid only)



# A breakdown on vaping devices



## How much will it cost?

### VAPE PEN

Starts at around \$45

### REGULATED BOX MOD

Ranges from \$45-\$300

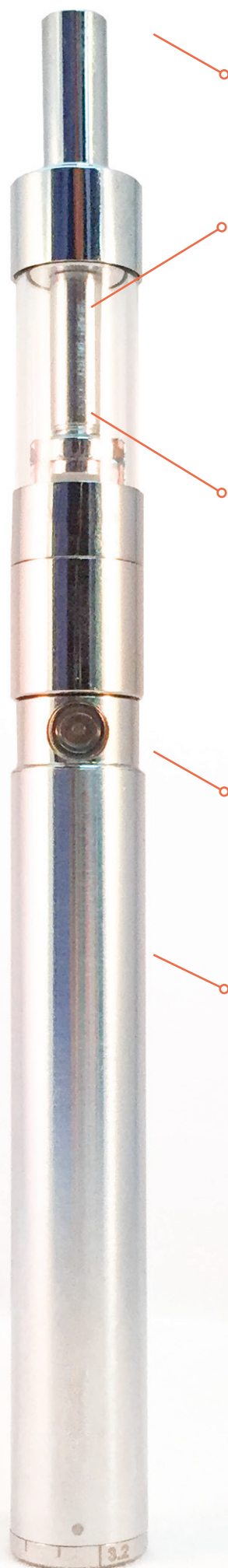
### E-LIQUIDS

Range from \$9 to \$30,  
depending on brand and  
size of bottle

## For advanced vapers ...

Although many vapers start with a pen-style device (like the vape pen shown at right), they often graduate to regulated box mods (seen here). Features of these devices include:

- Regulating wattage and voltage
- Safety features to control temperature of coils
- Longer battery life
- Rebuildable and customizable. Hobbyist vapers enjoy being able to rebuild their coils and customize their devices. Many local vape shops offer classes in rebuilding coils, or you can pay to get them changed.



This is called a **DRIP TIP** and is easily customizable with a wide variety of styles, materials and colors.

The refillable **TANK** holds your choice of e-liquid (whether it's guava or mint, 12 mg of nicotine or none at all). You can adjust the size of the inhalation. Another option is a **DRIPPING ATOMIZER**, which holds smaller amounts of e-liquid and needs to be refilled every few inhalations, but produces larger vapor clouds than a tank.

The **ATOMIZER** is where the coils heat up and vaporize the e-liquid.

Pushing this **BUTTON** activates the coils that heat the e-liquid.

This **BATTERY** can be charged by USB, although some devices require external batteries and chargers. Some models also have dials or buttons that control how much battery powers your coils, impacting the temperature and longevity of your coils.

**i** One of the many benefits of going to a specialty vape shop is the expertise and attention you receive. When you purchase a device, a knowledgeable vape shop representative will take the time to educate you on how to properly care for and use your specific device.

# Q&A

## What questions do you have for the vaping industry?



**Q** • “I want to know what’s going into your body and how harmful the chemicals are that you are [vaping].”

-Molly Tamashiro



**Q** • “My questions about vaping are: What is more advantageous about vaping than smoking cigarettes? And what are the costs involved with vaping versus smoking cigarettes?”

-Berk Kurtulus



**Q** • “My 7-year-old saw someone vaping and it smelled really good. He said, ‘Mommy, can I have one?’ Of course, I said no. But is the vaping industry trying to market to kids?”

-Kelsey Lawson



**Q** • “It seems like a negative and positive trend because it can stop you from smoking cigarettes, but it doesn’t really deal with the main problem, which is an addiction to nicotine.”

-Joe Ruggiero

**A** • The primary ingredients that you inhale with vaporized e-liquid are propylene glycol (PG), vegetable glycerin (VG), natural or artificial flavoring and optional nicotine. Once vaporized, only a tiny fraction of the nicotine remains in exhaled vapor. Current studies suggest vaping is up to 96 percent less harmful than smoking and of no apparent risk to bystanders.

**A** • What’s more advantageous about vaping is that it gives you choice — a choice in how much nicotine you consume, a choice in flavorings for e-liquid and a choice between vaping and harmful cigarettes.

Regarding cost, let’s say a smoker consumes 20 cigarettes (one pack) each day. That translates to 7,300 cigarettes a year — 365 packs. At \$6 a pack, this is an annual cost of **\$2,190 a year**.

Compare that to the price of buying a starter pack of a vape pen at \$45, complete with your first e-liquid. While some heavy users can go through e-liquid faster, a local expert estimated most users go through about one 15 mL bottle a week, averaging \$12 a bottle, which would total \$624 a year. So assuming you are on top of your vaping and change your \$2 coils once a week, your total annual cost of vaping would be **\$728 a year**. That’s close to \$1,500 you could save each year.

**A** • The vaping industry doesn’t want children to use its products. What the vaping industry DOES want is the parents (or grandparents) of those children, who have smoked for years and struggled to eliminate cigarettes and their addiction to nicotine. Vaping products can help them do both. The vaping industry overwhelmingly supports 18-and-over purchasing policies.

Another attack used to convince people that vaping products are aimed at children is the use of flavorings. Flavor is just one of the many exciting choices vapers have when using these products. Many have had their tastebuds deadened from years of smoking and enjoy being able to mix things up a bit with flavors such as honeydew, guava and chocolate. It’s not just kids who like these flavors. Adults eat candy, too, and everyone knows it. Vodka makers are infusing their alcohol with flavors from whipped cream to watermelon, but they are clearly adult-only products. Interestingly enough, nicotine replacement gums come in fruit and cinnamon flavors. Having flavored e-liquid is not about appealing to kids, it’s about appealing to adults who like variety and choice.

**A** • Vaping has emerged as an alternative to tobacco smoking — a way to deliver nicotine without the harmful chemicals combustible cigarettes contain. While it’s true that vaping products allow users to continue to consume nicotine, the nicotine itself isn’t the most harmful ingredient in combustible cigarettes. In fact, nicotine has medical uses and is commonly used in FDA-approved smoking cessation products such as patches and gums. These products have not been shown to increase the risk of death or cause cancer.

Nicotine is most harmful if it causes you to have a dependence on something that can hurt you — like traditional cigarettes. Vapor products help users control nicotine usage. Vapers are able to titrate, or continually adjust, the nicotine concentration in their e-liquid. Although not an FDA-approved nicotine replacement therapy, many vapers are able to reduce their nicotine use down to zero, while continuing to enjoy the act of vaping.

# Get THE FACTS

## What scientific research currently says about vaping

Are electronic cigarettes a better alternative to smoking or the same set of health concerns in different packaging? With vaping on the rise, many scientists have been researching electronic cigarettes — and the studies suggest vaping isn't as bad as some might think.

### Smoking



**1.3 billion**  
tobacco smokers  
in the world



**6 million**  
smoking-related  
deaths every year\*

No other cause of death is so  
**preventable**

\*World Health Organization

### A better alternative

“ Right now the overwhelming majority of people seeking nicotine are getting it from the deadliest and most toxic delivery system, and that's the conventional cigarette. ”

MITCH ZELLER, director of the  
U.S. Food and Drug Administration's  
Center for Tobacco Products

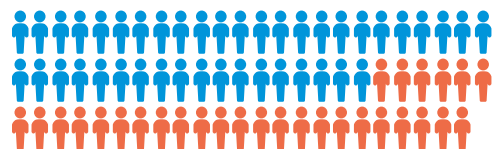
www.rwjf.org/en/culture-of-health/2013/11/regulating\_tobacco.html

“ Electronic cigarettes are by far a less harmful alternative to smoking and significant health benefits are expected in smokers who switch from tobacco to electronic cigarettes. ”

2014 University of Catania study:  
www.ncbi.nlm.nih.gov/pmc/articles/  
PMC4110871/

### Giving up tobacco products

According to one study of smokers who received professional advice from vape shops,



**41%** quit smoking within 12 months.  
In addition, 25% reduced their cigarette  
consumption.

www.mdpi.com/1660-4601/12/4/3428/htm

A study by State Budget Solutions estimated that e-cig adoption, and the resulting tobacco smoking cessation and harm reduction, could have saved

**\$48 billion**  
in Medicaid costs in 2012.

www.statebudgetsolutions.org/docLib/20150331\_SBSMedicaidECigarettes033115.pdf

### Understanding the ingredients



Cigarettes contain more than **7,000 known toxins**, while e-liquids contain substantially fewer.

A 2013 study by Drexel University examined more than 9,000 clouds of vapor and found:

“ ... There was no evidence of potential exposures of e-cigarette users to contaminants that are associated with risk to health ... ”

http://publichealth.drexel.edu/~media/files/publichealth/ms08.pdf

Vapor  
dissipates in  
**11**  
SECONDS.

Smoke, however,  
lingers for  
**20**  
MINUTES.

### Not Big Tobacco



Vaping is a **consumer-created solution** to the tobacco problem. Big Tobacco only got into the vaping industry when it started to eat away at its profits.

### Not a gateway

A recent survey of Welsh teens (ages 13-18) asked respondents who had used both e-cigarettes and tobacco products which they had tried first.

**98%**

had tried tobacco products **FIRST**.

http://ashwales.org.uk/en/information-resources/topics/electronic-cigarettes

Visit [www.notblowingsmoke.org](http://www.notblowingsmoke.org) for more on the industry's response to misleading statements about vaping.

# Protecting Your Right to Vape

**As a smoker, you have a choice.** According to the Centers for Disease Control and Prevention, smoking tobacco products harms nearly every organ in the body. One in five deaths in the United States are smoking-related. Vapor products have allowed many to reduce or completely quit smoking conventional cigarettes. Learn more about how these organizations are protecting people's access to vapor products:

## SMOKE-FREE ALTERNATIVES TRADE ASSOCIATION

The Smoke-free Alternatives Trade Association (SFATA) is the largest trade association in the vapor and electronic cigarette industry. Members include distributors, manufacturers, retailers and consumers of vapor products. The organization is committed to protecting the industry's right to provide an alternative to combustible tobacco products for adult smokers.

For more information about SFATA, visit [www.sfata.org](http://www.sfata.org).



## CONSUMER ADVOCATES FOR SMOKE-FREE ALTERNATIVES ASSOCIATION

The Consumer Advocates for Smoke-free Alternatives Association (CASAA) is a nonprofit advocacy group that raises awareness and protects people's access to vaping products. The organization is currently collecting testimonials from smokers who used smoke-free alternatives to quit or reduce their smoking to display on its website.

For more information about CASAA, visit [www.casaa.org](http://www.casaa.org).



# WHY DO YOU LIKE VAPING



## Testimonials from seasoned vapors

"I was introduced to vaping by my son. He wanted me to quit smoking because he was concerned about the chemicals that they put into cigarettes. They are dangerous — and kind of nasty. I liked the different flavors that you could get and that the chemicals seem to be less harmful. I also liked the cost. It's much cheaper than smoking and cigarettes are only going to go up. A pack of cigarettes will eventually cost \$10 a pack. That's a rich man's sport!"

**KARLA DELAOSSA, 67, retired**



"I started dipping snuff over 18 years ago. I had tried to quit several times, never making it more than a week or so. I tried gums, pills, classes and cold turkey. About a year ago, a buddy talked me into getting a vape pen. I have no urge to dip snuff and have leveled down to 1 to 3 mg nicotine juices. I plan to go to 0 mg eventually, and never look back!"

**MICHAEL OWENS, 33, military**



"I smoked since I was 14 years old and switched to vaping about a year ago when my asthma was acting up. Since then, I have been able to reduce the level of nicotine in my e-cigarettes to almost nothing. People are more willing to be around me now. I think it's ridiculous that the state is trying to lump vapor users with tobacco smokers, because vapor is not the same as smoke. The whole reason I quit smoking is so I wouldn't have to be around it, or smell like it."

**KATARINA RIGGS-CURTWRIGHT, 21, preschool food coordinator**



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