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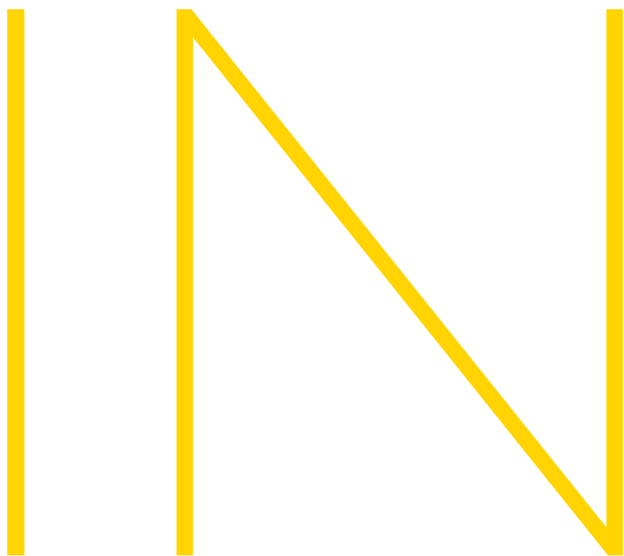
# THE RISE OF VAPING



AN EMERGING INDUSTRY  
BREATHES TO LIFE LEGAL  
CONCERNS, HEALTH WORRIES AND  
THOUSANDS OF NEW BUSINESSES.

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BY HEATHER SKYLER



## the beginning, there was E-Cig City.

This vape shop, cited by many as the first one in Orange County, opened its doors in February of 2011 in Laguna Beach. Now, a mere four years later, E-Cig City has 14 stores in California (two of those in Orange County), two stores in Houston, one in Virginia, one in Hawaii and one in Germany. And, it's no longer the only vape shop in town.

According to VAPEfinds, an educational and vaping advocacy website that tracks the number of stores in California and the U.S., there are now close to 1,000 vape shops in California and almost 400 in Orange County. That represents a 400 percent growth in four years in our county alone.

VAPEfinds estimates there are 5,000 to 6,000 vape shops in the U.S., and some industry experts put that number even higher. Gregory Conley, a research fellow in the areas of tobacco and nicotine policy and regulation for the national nonprofit Heartland Institute, says 10,000 U.S. vape shops is a better estimate.

This new industry is on fire, but market saturation has already tamped it down from its height, and an upcoming FDA ruling, combined with various city ordinances, has the potential to dampen these new entrepreneurs even more. Can vape shops continue to thrive?

### WHAT IS VAPING?

If you are wondering what a vape shop or vaping is, you're not alone. This industry is so new that many haven't yet registered its presence. In fact, the words "vaping" and



CUSTOMERS CHRISTINE PHAN (LEFT) AND ALBERT CORTES BLOW OUT WATER VAPORS AFTER TAKING A SMOKE ON AN ATOMIZER, OR E-CIG, AT H2O VAPORS IN WESTMINSTER.

“vape” haven’t yet made it into the Merriam Webster dictionary.

Vaping is the act of inhaling an e-liquid through an electronic cigarette or battery-powered personal vaporizer. Most of us are familiar with electronic cigarettes, now commonly sold in gas stations and produced by big tobacco companies, but vaporizers are the latest incarnation of “electronic smoking.”

If you’ve seen a hipster with a handlebar mustache sucking on a device that looks like a fancy pen, or even a small telescope, and blowing out white clouds of vapor akin to the clouds you exhale when it’s very cold outside, then you’ve seen vaping in action.

Vaporizers range in size and consist of an outside metal housing, a battery that can be recharged with a

special USB port, a cartridge housing the e-liquid, and an atomizer that heats up the e-liquid and creates the vapor when inhaled and exhaled by the vaper.

### E-LIQUID INGREDIENTS

E-liquids come in hundreds of flavors and are typically a mixture of propylene glycol, vegetable glycerin, nicotine, and flavorings – though they also come nicotine-free. Propylene glycol is an organic compound that is a clear viscous liquid with a faintly sweet taste; vegetable glycerin is a nontoxic viscous liquid widely used in the pharmaceutical industry; and nicotine is a stimulant derived from the leaves of tobacco.

E-liquids do not contain the estimated 30 to 70 carcinogens found in cigarettes. Nor do they contain 597 of the 599 listed additives

## CALIFORNIA IS MIXED ON E-CIGARETTES

THE LAWS VARY FROM CITY TO CITY, AND MANY ARE STILL IN FLUX. WHERE CAN A VAPER VAPE IN ORANGE COUNTY?

While there are currently no state or federal laws in place regulating the use of e-cigarettes, more than 140 California cities have addressed their use in some form. Typically, this takes the shape of adding electronic cigarettes to the definition of tobacco products in the municipal code, subjecting them to the same regulations as traditional cigarettes, despite the fact that e-cigarettes have been proven to be far less harmful than traditional cigarettes. Adding e-cigarettes to local tobacco regulations also impacts how tobacco retailers’ licenses are granted.

Vaping regulations are an ongoing concern in Orange County, and several O.C. cities are working toward decisions right now. Norm Bour, founder of VapeMentorS, says, “Just a few days ago, **Westminster** issued a new ordinance, and **Mission Viejo** is still fighting it internally.”

Earlier this year, **Aliso Viejo**’s city council discussed a zoning code change that would ban smoking lounges near “sensitive land uses,” such as schools, churches, parks and childcare centers.

The **Buena Park** City Council last March voted to ban smoking, including e-cigarettes, in recreational areas. **San Clemente** is evaluating similar measures.

**Laguna Beach** rejected e-cigarette regulations last year, so for now, you can blow clouds in that lovely city.

This June, **Laguna Niguel** passed a healthy-parks ordinance, which bans the use of e-cigarettes in public parks. The city attorney is still working on an e-cigarette ordinance and will come back to the council for a vote on further e-cigarette regulations by year’s end, or possibly as soon as this September or October.

Last March, **Mission Viejo** shot down a proposal to temporarily stop vape shops from opening. However, the city council was divided, so further regulation may be forthcoming.

**Seal Beach** adopted comprehensive ordinances regulating e-cigarettes in February and March.

As in **L.A.**, e-cigarette use is prohibited where state law bans smoking. In addition, new smoke shops, including places that sell electronic cigarettes, are now only able to operate in commercial zones.

Debate continues from city to city and across the country, so by the time you read this, there may be even more recent regulations in place.

So, if you’re a vaper, be careful where you vape!

found in cigarettes (*propylene glycol and nicotine are the additives in e-liquids*).

You can purchase e-liquids with a range of nicotine levels, from 0 on up, though most vape shops go no higher than 18 or 24 milligrams per milliliter of liquid.

Bryan Gateb, co-founder of CaliVapers, an online hub for vapers to connect and discuss vaping issues, explains, “When vaping first started gaining popularity around 2011 and 2012, most shops would carry up to 24 milligrams, but as devices have improved and the hobby side of re-buildable atomizers progressed, it has trended down, so most will carry up to 18 milligrams.”

Gateb says the most popular nicotine levels are 0 milligrams, 3 milligrams or 6 milligrams for most

In 2013, the e-cigarette market was worth approximately **\$2 billion worldwide**, with about 25 percent of that accounting for U.S. sales. Some analysts predict e-cigarettes will outsell “analog” cigarettes in the next 10 years.

vapers, and this matches up with the O.C. vape shops interviewed for this story. At The Vapor Loft in Orange, the most popular nicotine level sold is typically between 3 and 6 milligrams.

At Legend Vapes in Santa Ana, manager Tyler Kyte smokes a 3-milligram e-liquid, and he says customers, “buy 0-milligram e-juice all the time.”

Specialty or online juice vendors will go up to 36, or sometimes more (made to order), but this level is not typically sold in brick-and-mortar stores.

## NICOTINE

As a comparison, a typical cigarette made in the United States contains about 9 milligrams of nicotine, so a pack of 20 cigarettes contains a total of 180 milligrams. A cartridge of e-liquid will generally last about the same amount of puffs it would take to smoke one pack of cigarettes.

However, the amount of milligrams does not tell the whole story, because the amount of nicotine absorbed by the smoker is much lower than the amount in both the cigarette and the e-liquid.

Only about 1 milligram of nicotine is actually absorbed by a smoker per cigarette. And a recent study conducted by Nature.com’s Scientific Reports, a primary research publication from the publishers of Nature magazine, revealed that nicotine absorption from e-cigarettes or vaporizers was significantly lower compared with tobacco cigarettes.

Nicotine, however, is not the most dangerous substance in a cigarette – it’s the 70 carcinogens. (See page 37 for more information about the health effects of smoking and vaping.)

## THE VAPERS

The majority of vapers are people who

used to be smokers. Vape shops are typically frequented by former smokers, and many store owners and industry experts are former smokers as well.

Bryan Gateb and Jan Halil of CaliVapers.com are both ex-smokers who quit after discovering e-cigarettes. Their site currently has 16,000 members and, according to Gateb, has grown exponentially in the last year.

The pair started the website in December 2012 and are hoping to make a push toward monetizing it in the near future, though that was never their primary goal.

Gateb says, “Southern California was kind of the center of vaping. There were lots of different devices and juices coming out of SoCal, and with so many shops opening at the time, we wanted a central hub to trade and discuss things. Many out-of-state vendors are picking up the devices and juices made in Southern California, and that gives some weight to the influence this region has on the industry.”

Gateb, a systems analyst and programmer for California State University, San Bernardino, has previous experience creating online communities and set up CaliVapers.com to provide a window into the vaping community.

Pulling recent data from the site, he was able to determine that their average vaper is 29½ years old. Forty-seven percent of the site’s visitors have been vaping for more than a year. Forty-six percent have spent \$1,000 to \$2,000 on vaping-related products since they started vaping, and 50 percent spend between \$10 and \$30 a week on vape-related purchases.

Jeff Huyen and Josh Oshiro, the founders of VAPEfinds, are also former

smokers who kicked the habit after discovering electronic cigarettes and vaporizers.

Huyen explains that because sites such as Facebook, Twitter and Google won’t allow vape advertising, VAPEfinds also attracts advertisers. “There’s a big-otry against vaping,” Huyen says. “We try to bring awareness to the general public and are affiliated with organizations that fight for the right to vape.”

Aaron Oberndorf, manager of E-Cig City’s Laguna Beach location, says he’s noticed that the customers are getting younger. “When we first started, ages ranged from 30 to 50, but now it’s more like 25 to 40. I think that’s mainly because it’s a trend.”

Most likely due to its location in the touristy area of Laguna Beach, E-Cig City also gets a lot of people under 18 trying to get inside and try out the products.

“Usually, they’re tourists, kids trying to sneak in who think they can get away with it, but we ID anyone who looks under 25.”

Paul Davey, owner of The Vapor Loft in Orange, has maintained an over-18 policy ever since the store opened, even though that restriction wasn’t in place when he started his business. He also tries to sell his vaping products only to ex-smokers.

“We’re not looking to get people hooked on nicotine, so we’ve maintained the policy that if you’re looking to quit smoking, we’ll encourage you to move to a better alternative.”

Davey says he still does business with a lot of the shop’s original customers, and despite a slowdown since the peak in 2013, he still sees new customers come in every single day.



NOLAND PHAXAYASENG BUILDS A "COIL" (A HEATING ELEMENT) FOR AN ATOMIZER, AT H2O VAPORS IN WESTMINSTER.



## VAPRENEURS

In 2013, the e-cigarette market was worth approximately \$2 billion worldwide, with about \$500 million of that accounting from U.S. sales. That still pales in comparison with the U.S. tobacco market, which is worth \$80 billion, but some analysts predict that e-cigarettes will outsell tobacco in the next 10 years.

With those numbers, it's no wonder there are hundreds of vaping entrepreneurs – "vapreneurs" – vying for a piece of the e-cig pie.

Jason Shaeffer, who recently died while traveling in China, was the first vapreneur in Orange County. After 38 years of smoking, he tried an e-cigarette and said he never touched another tobacco cigarette again. Soon after, he opened E-Cig City in Laguna Beach, and his stores have spread like a California wildfire ever since.

Paul Davey opened The Vapor Loft in Orange in 2012 and was voted 2013's Best Vape Shop in Orange County by the OC Weekly. A smoker for 27 years, Davey was able to quit within a week after discovering e-cigarettes.

After a year of driving to E-Cig City in Laguna Beach for his vape supplies, Davey decided it was high time there was a shop in his vicinity. He recalls, "E-Cig City was pretty much it for a couple of years, then another store popped up in Cerritos, but nobody was in central O.C. So when I opened up, it was just me and another one in Costa

## RULING LOOMS OVER THE INDUSTRY

COULD THE FDA DECISION CLOSE O.C. VAPE SHOPS?

The FDA is currently mulling over how to regulate the vaping industry.

Earlier this year, the agency proposed federal rules that would prohibit sales of vaping devices and products to anyone under age 18 and require manufacturers to submit their products for FDA approval. Manufacturers would also be required to disclose ingredients and warn consumers that nicotine is addictive.

Public comments closed on Aug. 8, and now vape shops and vapers are awaiting a decision. The FDA will make its final ruling based, in part, on those comments and on the testimony of experts.

Gregory Conley, research fellow in the areas of tobacco and nicotine policy and regulation for the national nonprofit Heartland Institute, is one of these experts.

After testifying before the FDA several times on this very issue, he says he's feeling "cautiously pessimistic."

Formerly the volunteer legislative director for the Consumer Advocates for Smoke-free Alternatives Association (CASAA) – the largest consumer group representing the interests of users of smoke-free tobacco and nicotine products – and a former smoker who quit with e-cigarettes, Conley is worried that if the ruling goes through as proposed, there will be very few vape shops still

open in Orange County, or the country, for that matter, in three or four years.

Conley explains that if the proposed ruling passes, "Every single e-cigarette product will have to be approved by the FDA. One consultant said it will likely cost a business \$1.5 million per application – that's per flavor, per bottle size, etc. It will work in favor of Big Tobacco, because they're the only ones who will be able to afford it."

Will the vape industry die?

"It will continue on," Conley says, "but much will be in the 'grey market,' where people get nicotine from foreign sources under the counter.

The only saving grace is that the FDA has not been clear about the devices, so store owners could potentially sell [vaporizers] and market them as 'not for use with nicotine.'"

When asked if it would be similar to head shops, where people are free to buy bongs and pipes, but not the marijuana that goes in them, Conley says no, because, "Head shops aren't taking money out of Big Tobacco's pockets."

Despite his worry about the FDA ruling, he asserts, "The good news is that this is a global market, so consumers can always get what they want on the black market, but that isn't going to benefit public health. Also, if smokers can't easily get the products, they'll just continue smoking."

Mesa, and one in Anaheim.”

Then the wave of vapreneurs hit.

“All of a sudden, everybody and their mother decided to open a shop,” Davey says. “I’d say the peak was probably June of 2013.”

Despite a drop-off since the peak, Davey’s business has been successful throughout. He says, “We were making a profit within two months, and we peaked out at \$160,000 in sales in one month. Now we’re running more in the \$50,000 [monthly sales] range.”

He also owns a distribution company for all e-cigarette-related products, called E-Cig Distributors, which does \$200,000 in sales monthly.

Davey speculates that his store has survived because it has a story to tell.

“I believed in the product, it worked for me, and that was the primary reason I opened the shop. Everyone who works for me is in it for the same reason. We’re educated about how to help smokers quit, unlike a lot of shops that I call opportunists. They’re giving the industry a bad name. I’ve seen shops where the owner is standing outside the shop smoking a cigarette! That defeats the purpose.”

Norm Bour, founder of VapeMentorS, is an anomaly in the industry because he has never smoked or vaped. An entrepreneur for 40 years, Bour walked by a vape store in 2013, “and literally did a double take. I said, ‘What the hell is a vape store?’”

Once he found out what vaping was, he was sold on the idea of a product that could help people quit smoking cigarettes. And his entrepreneurial eye saw a dearth of knowledge in the market.

Bour says, “It was mostly millennials who were starting shops because of a passion for the product, but they had no entrepreneurial background, so I saw a huge need for education, and a pending crisis. So far, the market had been forgiving of naiveté, but this is pretty much ground zero and the market was getting crowded. They needed to have strategies in place.”

Enter VapeMentorS, an industry advisor for the vape market and a consultant for retail shop owners in the vape space.

Bour – who has been hired by several dozen people since the first of the year and receives an average of 100 emails and direct questions monthly, as well as another 100 or so via social media – contributes regularly to Vape News magazine, hosts a popular weekly podcast called “Vape News Radio” and has written a free e-book titled, “The Top 7 Questions to

Ask Before Opening a Vape Shop.”

When interviewed for an OC Register article on vaping in 2013, Bour predicted that half of the new crop of vape shops would close within the next 24 months because of inexperienced owners and tough competition, but he admits he miscalculated and that he sees the industry continuing to grow. “I’d say for every four stores that open, only one closes.”

## THE CULTURE

Stepping into The Vapor Loft on a muggy Monday afternoon, I was pleasantly surprised by the mellow ambiance and polished, artsy interior.

From the outside, the shop looks like a nondescript store in a 1970s strip mall, but inside I find custom woodwork, low-slung leather couches, succulents in tube-shaped silver planters and industrial chic lights hanging from an open warehouse ceiling.

Seven or eight customers are gathered at the long bar being helped by pleasant workers as they ask to try e-liquids that sound more like nail polish colors than flavors: Forbidden, Green Parrot, Snowy Owl, Bed of Nails, Group Hug.

There’s an old-timey sign that says “Doc Bailey’s Elixir-Premium E-liquids,” a flatscreen TV, a bank of iPads set into a metal-and-wooden table, and a row of four clocks telling the time in other countries. It’s old meets new, vintage and modern combined, and the feel is of a wine-tasting room, a true gathering place that’s more than just a shop.

Every vape shop doesn’t have this same vibe – there’s a reason The Vapor Loft was voted best in O.C., after all. But being a vaper seems to have a different feel to it than being a smoker. The community comes closer to cigar smokers. These people are hobbyists, aficionados. They want to swap ideas about how to get the best “throat hit” and have contests to see who can create the biggest cloud.

Of course, I have to try it. The e-liquid is just plain old tobacco flavor, but the taste is slightly sweet. It burns my throat a bit, but nothing like the way a cigarette does. (*I’m not a smoker, but who hasn’t tried one?*) There’s the pleasant buzz of nicotine, but none of the smelly smoke.

It feels illicit, but maybe that’s just because I know there are rules floating in, and soon I may no longer be able to actually vape in a vape shop. Or maybe it’s having a taste of the power of a growing industry that is starting to chip away at the once-impenetrable wall of Big Tobacco.





# SAFE TO VAPE?

## E-CIGS ARE HELPING SMOKERS QUIT, BUT ARE THEY SAFE FOR THE MASSES?

### Kicking the habit

"Since I've stopped smoking, my taste buds have come back," says Jeff Huyen, co-founder of VAPEfinds. He smoked a pack and a half a day for more than 10 years, then quickly quit after discovering e-cigarettes.

Josh Oshiro, also of VAPEfinds, quit smoking by using e-cigarettes after smoking 10 cigarettes daily for 12 years. "I wake up and I'm not groggy or winded, and there's no more phlegm," he says. "I can jog now and walk across the street without getting winded."

Gregory Conley, a research fellow at the Heartland Institute, smoked for eight years. He tried to quit with nicotine gum, patches and lozenges, but they all failed. He says it's because those other methods didn't mirror smoking's behavioral characteristics that vaping does.

"Once I had the nicotine and still had the hand-to-mouth motion and saw something blowing out, it allowed me to quit overnight."

A new study by British researchers suggests that e-cigarettes can help people quit smoking. Its findings reveal that people who wanted to quit smoking were about 60 percent more likely to succeed if they used e-cigarettes, compared with smokers who tried an anti-smoking nicotine patch or gum.

A New Zealand study backs this up, revealing that 7.3 percent of e-cig smokers quit regular cigarettes after six months, compared with 5.8 percent using the patch.

Despite this good news, the overall quitting rates reported were still low. In the British study, only one-fifth of those who tried e-cigarettes as a stop-smoking aid succeeded in quitting over the long term.

Anecdotally, everyone interviewed for this article was able to quit smoking and stay off cigarettes by vaping instead.

### Cigarettes vs. e-cigs

It's not a big surprise that e-cigarettes and vaporizers are safer than cigarettes (or "analog cigarettes," as

they are now sometimes called), and a recent paper published in the online journal *Addiction* confirms it. The study presented findings from 115 references showing evidence supporting "the beneficial profile of e-cigarettes compared to tobacco cigarettes."

The study concludes, "E-liquids and aerosols tested so far contain some toxicants in concentrations much lower than in tobacco smoke, and negligible concentrations of carcinogens. Passive exposure [to vapor] can expose nonusers to nicotine, but at concentrations unlikely to have any pharmacological significance."

The study goes on to assert that there is no evidence that e-cigs are a gateway to smoking or result in greater cigarette consumption.

The numbers alone tell the story: There are approximately 600 ingredients in cigarettes. When burned, they create more than 7,000 chemicals. At least 69 of these are known to cause cancer, and many are poisonous. The key ingredient people are seeking when they light up is nicotine, an addictive stimulant.

E-cigarettes and e-liquids, on the other hand, typically contain three ingredients (that's right, only three): nicotine, flavoring and a diluting agent such as propylene glycol and/or vegetable glycerin.

Propylene glycol is found in food, cosmetics and pharmaceutical products, and is largely believed to be benign. The question is, does it have a negative health effect when it's inhaled as a vapor? The science is still out on this, since widespread use of e-cigarettes is relatively new.

Nicotine is an addictive drug, but its effects and addictive tendencies have been compared to caffeine. They are both stimulants that lead to an increased heart rate and temporary feelings of enhanced energy. Nicotine has a higher toxicity rate than caffeine, meaning that you would have to ingest much more caffeine for the substance to harm you than you would nicotine. However, you can't overdose on nicotine from vaping or smoking, only from eating

numerous cigarettes or swallowing bottles of e-liquid containing high doses of nicotine.

### Safety regulations

Of course, with any unregulated product, there are always potential risks. The American E-Liquid Manufacturing Standards Association (AEMSA) is an all-volunteer organization, formed by American manufacturers of e-liquids, to promote safety and responsibility through self-regulation. The group has been busy testifying in front of the FDA in support of "reasonable, realistic and sustainable regulation," says AEMSA President Lou Ritter (who serves as an unpaid volunteer and consumer advocate with no financial interest in the industry).

Ritter, who smoked for 33 years, quit four years ago with the help of e-cigarettes. "I saw the almost immediate improvements to my health and quality of life. I realized the efficacy potential of the products." These changes propelled him to advocate for vapers and to co-found AEMSA (with Linc Williams) in order to establish consumer-oriented protections and good product stewardship, and set an example for the industry.

On Aug. 8, the FDA completed its public comments period and is currently determining how exactly it wants to regulate e-cigarettes. Ritter, who testified before the FDA several times, is concerned that the public is being misinformed by mainstream media about e-cigarettes and related products. "I'm not saying [e-cigarettes] are the miracle of 2014 - while we already have a manifold of confirming independent and peer-reviewed/published medical/science research, ongoing research is certainly justified - but these products offer verifiable harm reduction [for smokers] and efforts are being made to squash this information."

The many smokers who have found help through the use of e-cigarettes, and the numerous entrepreneurs who sell the products, are waiting with bated breath to see what type of regulations the FDA will impose.