

ABC o EC

ABC ABOUT E-CIGARETTES

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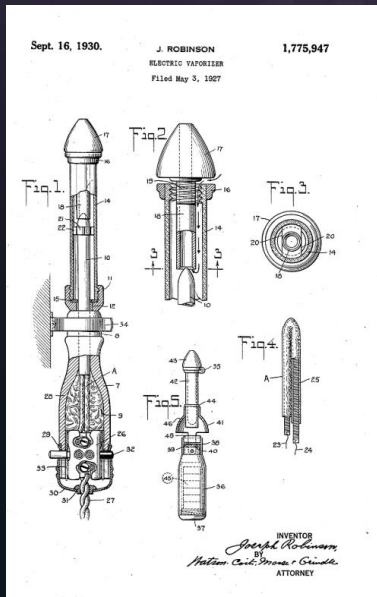
RITCHY[®]
freedom in your hand

LIQUA
PREMIUM VAPING



HISTORIC MILESTONES OF VAPING

1930: The first documented reference to an electronic cigarette is a patent granted to Joseph Robinson in 1930 (filed in 1927).



USA
1930



China
2003

2003: The first commercially successful electronic cigarette is created in Beijing, China by Hon Lik, a 52 year old pharmacist, inventor and smoker.

Europe
2006

2006: Electronic cigarettes introduced to Europe.

HON LIK'S PROTOTYPE E-CIGARETTE

VAPING

Using an e-cigarette is known as "vaping" and the user is referred to as a "vaper".

Vaping is an alternative to smoking. It is an act of inhaling and exhaling aerosol (commonly called vapor) produced by an electronic cigarette.

Vaping works by heating a substance called e-liquid using a battery and a coil, which in turn produces an inhalable vapor.



E-CIGARETTE

E-Cigarette

An electronic cigarette, also known as e-cigarette or electronic nicotine delivery devices (ENDD) is a battery powered device that uses patented technology to produce vapor out of e-liquid that is then inhaled by the vaper.

- **Tank / Clearomizer**

E-liquid chamber

The part where e-liquid is filled in to

Coil / Atomizer

The heating element which evaporates e-liquid

- **Battery**

Power button

Switch on / off device

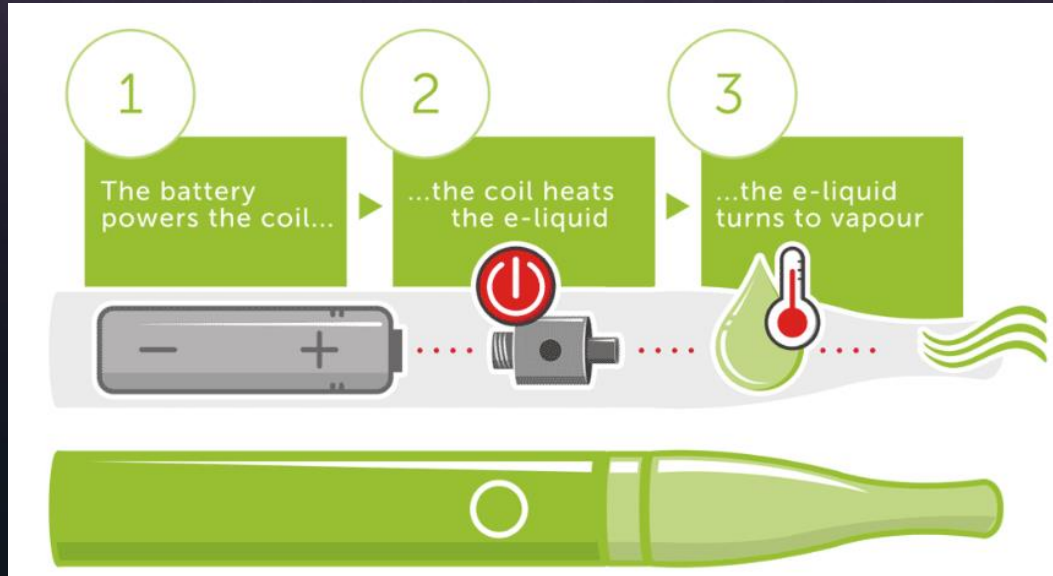
Battery unit

Hold the charge that powers the device



E-CIGARETTE

Functioning Principle of E-cigarette



TYPES OF E-CIGARETTE

Disposable E-cig

- One piece structure (tank, atomizer and battery) with prefilled e-liquid
- Ready to vape and will be thrown away once it runs out of charge or e-liquid
- Convenient to carry, easy to use
- For ex-smokers mostly



Pen Style Kit

- A three-piece mid-size device consisting of a battery, a tank to hold e-liquid and removable atomizer
- With 2 different types of vaping: MTL (mouth to lung if atomizer resistance >1 ohm), DTL (direct to lung if <1 ohm)
- For vape beginners



Mod Kit

- High power device, large battery, low coil resistance (<1 ohm)
- Produce more vapor, richer flavour and stronger throat hit
- For advanced or hobby vapers



Pod Kit

- Often comes with disposable Pod which houses both the atomizer and e-liquid. For replacement, simply snap a new Pod into place with a magnet (Now there is refillable Pod available also).
- By using Nicotine Salt type e-liquid instead of Freebase nicotine e-liquid provides a blood absorption rate closer to an actual cigarette.
- Convenient to carry, easy to use
- Relatively new to the market and became increasingly popular for smokers who want to quit smoking



E-LIQUID

E-Liquid

The liquid that is heated to make vapor in e-cigarette device, It commonly contains 4 ingredients. It is also known as e-juice or vape juice.



VG /vegetable glycerin
PG /propylene glycol
FLAVORING
NICOTINE (optional)

VG is a safe food additive used in most foods and also naturally exists in most of the organic food. It is sweet in taste and helps to produce more vapor.

VG is derived by extraction from plants as raw material.

PG, similar component to VG, it's used as a safe food additive and while less sweet, it makes more balanced taste.

PG can be derived from VG, but normally as most of the organic chemicals, it's derived initially from fossil fuel (oil/gas).

PG/VG ratio varies depending on the device. It can be 70/30, 50/50 or 30/70 etc.

Food grade flavors

Nicotine comes as an extract from tobacco leaves. The level of purity differs and influences vaping experience.

E-liquid nicotine level varies from 0 - 20mg/ml in Europe (can be 60 mg/ml out of Europe).

TYPES OF E-LIQUID

Freebase nicotine e-liquid

Freebase nicotine was invented by tobacco companies in the 1960's. Freebase means that the nicotine is in the purest form compared to the other nicotine derivatives.

This form of nicotine is used in cigarettes and many common nicotine replacement therapies (NRT's).

The form of nicotine ordinarily used in standard e-liquid is freebase nicotine.

Difference: 1.The Harshness

Freebase Nicotine has a higher pH level which in turn affects the alkalinity. It causes a harsher throat-hit. Nicotine salt has lower alkalinity due to the acid which gives you smoother vaping experience.

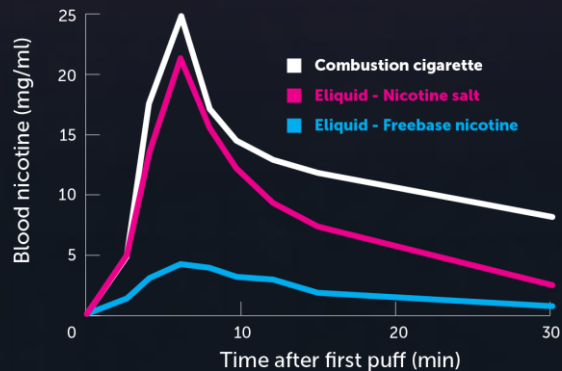
2. The nicotine absorption rate into the blood

Nicotine Salt e-liquid has faster absorption rate.

Nicotine Salt e-liquid

Nicotine Salt = Freebase Nicotine + Acid
In chemical terms, a salt results when an acid reacts with a base.

The e-liquid made with nicotine salt is often used in Pod device.



VAPING IS 95% SAFER THAN SMOKING



Public Health
England

How Safe is Vaping?

Public Health England (PHE) estimates that vaping is around 95% safer than smoking and have the potential to help smokers quit smoking.*



Impact of Smoking VS Vaping?

Vaping contains no tobacco and do not involve combustion, users may avoid several harmful constituents usually found in tobacco smoke, such as [ash](#), [tar](#), and [carbon monoxide](#).



Leading smoking researcher Dr Lion Shahab and Dr Rosemary Leonard carry out a demonstration to visually illustrate **the impact of smoking vs vaping over a month**

**Public Health England is an executive agency of the Department of Health and Social Care in the United Kingdom.
Report: [E-cigarettes: an evidence update](#) A report commissioned by Public Health England*

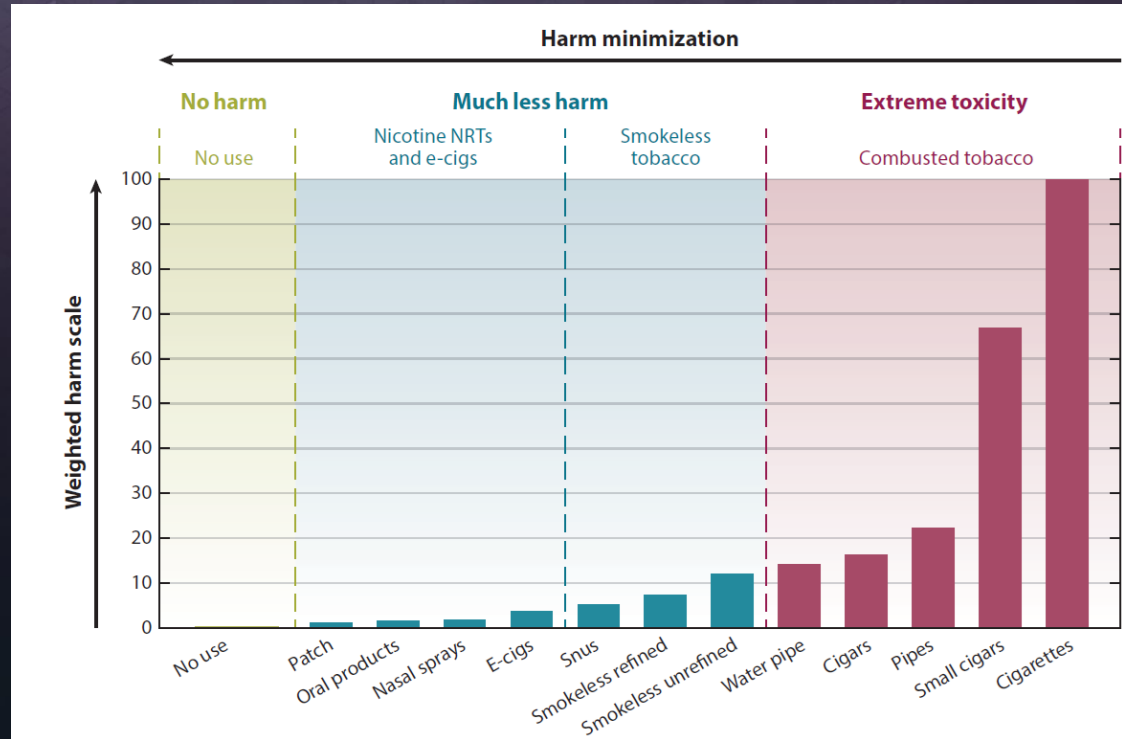
VAPING IS 95% SAFER THAN SMOKING (Public Health England)

The harm minimization continuum posits that all nicotine-containing products are not equally harmful and, instead, range from

exceptionally low harm (e.g., NRT)

to

exceptionally high harm (e.g., combusted tobacco such as cigarettes, cigars, hookah, pipe).



VAPING IS BETTER ALTERNATIVE



National Health Service England(NHS) suggests **E-cigarette is twice as effective than nicotine patches, gum or sprays for quitting.***

Researchers carried out a trial with 886 smokers who sought help through NHS stop smoking services. People were randomly assigned to either nicotine replacement therapy (NRT) products (products such as patches or gums that can deliver a dose of nicotine) or e-cigarettes, plus one-to-one support for at least 4 weeks.

After a year,

- 18% of e-cigarette users had stopped smoking tobacco, compared to 9.9% of NRT users.
- Of those e-cigarette users who had stopped smoking after 1 year, 80% were still vaping regularly.



**The National Health Service (NHS) is the publicly funded national healthcare system for England. NHS England provides healthcare to all legal English residents.*

Report: [A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy](#)

EUROPEAN SAFETY STANDARD

Two main safety standards regulating the vaping industry in Europe:

- ## Tobacco Products Directive

Came into force: 20 May 2016

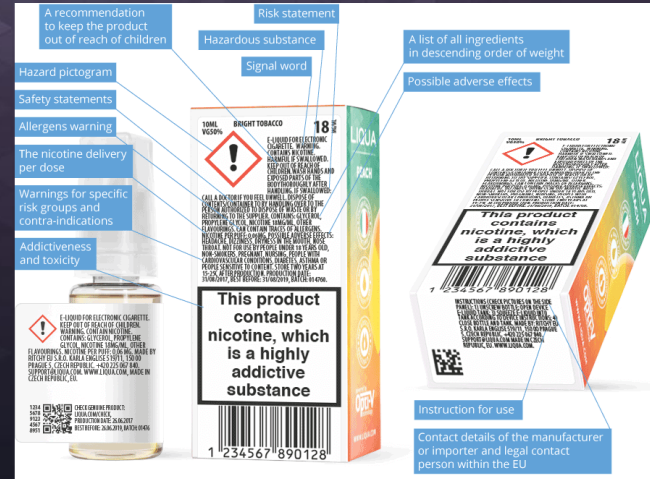
The TPD(2014/40/EU) aims to improve the functioning of the internal market for tobacco and related products, while ensuring a high level of health protection for European citizens.

- ## Classification, Labelling and Packaging Regulation

Came into force: 20 January 2009

The CLP Regulation aligns the European Union system of classification, labelling and packaging of chemical substances and mixtures to the Globally Harmonised System.

Both regulations set standards for composition of e-cigarette and e-liquid, the packaging and how it is presented on the market.



*For More info [Http://www.ritchy.com/tpd-clp-vape-compliance](http://www.ritchy.com/tpd-clp-vape-compliance)
[Tobacco Products Directive\(TPD2\)](#)
[Classification, Labelling and Packaging Regulation\(CLP\)](#)

Nedávné případy poškození plic a úmrtí v USA spojené s vapingem

Aktuální stav na: www.cdc.gov/tobacco

Vyjádření a doporučení Public Health England (PHE) k epidemii poškození plic v USA s odkazy na data Centers for Disease Control:

<https://publichealthmatters.blog.gov.uk/2019/10/29/vaping-and-lung-disease-in-the-us-phes-advice/>

Doporučení Public Health England (PHE) ohledně elektronických cigaret zůstávají stejné:

- PHE nezměnilo rady ohledně e-cigaret obsahujících nikotin: Kuřáci by měli zvážit úplné přepnutí na vapování a přestat kouřit.
- Jsme si stejně jako vždy jistí, že e-cigarety jsou mnohem méně škodlivé než kouření, které každý den v Anglii zabíjí téměř 220 lidí.
- Důkazy stále ukazují, že vaping představuje malou část rizika kouření. Používání e-cigarety obsahující nikotin způsobuje mnohem větší pravděpodobnost, že někdo skončí s kouřením úspěšně, než spoléhat pouze na vůli. Je však důležité používat regulované e-liquidy a nikdy neriskovat vapování domácích nebo nezákonných e-liquidů nebo přidávání látek.

Doporučení PHE o kouření a elektronických cigaretách

- Pro kuřáky: Měli byste přestat kouřit úplně. Získání odborné podpory v kombinaci s používáním elektronické cigarety zdvojnásobuje vaše šance na úspěšné ukončení. Pro nejlepší způsob, jak přestat je aplikovat [naše doporučení](#)
- Pro lidi, kteří potřebují nikotin: pokud stále kouříte , měli byste přestat a úplně přepnout na vaping. Poté, když jste přesvědčeni, že se nevrátíte ke kouření, nikotin z vapování eliminujte.
- Pokud jste nikdy nekouřili : Nevapujte
- Pro lidi, kteří vapují CBD: i když je CBD méně přísně regulováno, pokud se u vás objeví příznaky měli byste se ukončit vapování
- Pro lidi, kteří vapují THC: pokud vapujete THC (nebo neznámou tekutinu, která by mohla THC obsahovat), může to být nebezpečné. Jedná se o produkty, které se nejvíce podílejí na propuknutí choroby v USA. Pokud se necítíte dobře nebo máte potíže s dýcháním po vapování THC, vyhledejte odbornou lékařskou pomoc a sdělte přesně, jaký produkt jste používali.

Reakce Ritchy na nedávné případy poškození plic a úmrtí v USA spojené s vapingem (1/2)

Ritchy Group, přední výrobce náplní do elektronických cigaret, zveřejňuje utajovaná data

Společnost RITCHY se rozhodla zveřejnit všechny chemické přísady používané při výrobě náplní do elektronických cigaret pod značkami LIQUA a Aramax. Zároveň vyzývá všechny profesionální výrobce v oboru, aby se připojili a veřejně sdíleli interní údaje se spotřebiteli, médií a odborníky.

Ritchy Group, přední evropský výrobce náplní do elektronických cigaret LIQUA a Aramax, dnes zveřejnil obsáhlý seznam chemických přísad používaných v těchto náplních na www.ritchy.com/public. Společnost se rozhodla poskytnout podrobné informace zákazníkům a veřejnosti po nedávných událostech spojených s plicním onemocněním v USA. Ritchy Group také zveřejnila své standardy kvality výroby a kontrolní postupy dostupné na www.ritchy.com/about-us

"Již 10 let věříme v transparentnost a jsme si jisti, že naše produkty patří mezi ty nejlépe ověřené na světě," řekl Max Kosenko, generální ředitel společnosti Ritchy Group Ltd. "Rozhodli jsme se udělat první krok a zveřejnit chemické přísady v našich produktech. Vyzýváme ostatní odpovědné výrobce, aby následovali náš krok a také sdíleli svá data. Společně můžeme zlepšit diskusi s veřejností a regulačními orgány o budoucnosti odvětví, které významně pomáhá snižovat dopady kouření, jako nejškodlivějšího zlovyku dneška."

Reakce Ritchy na nedávné případy poškození plic a úmrtí v USA spojené s vapingem (2/2)

Společnost Ritchy Group bude v blízké budoucnosti i nadále sdílet další podrobnosti o svých produktech. Nastal čas, aby se toto odvětví stalo otevřenějším a vyzýváme ostatní výrobce, aby podepsali otevřený dopis dostupný na webových stránkách společnosti Ritchy Group a potvrdili tak svůj závazek ke kontrole kvality a naprosté transparentnosti.

[Zobrazit seznam přísad](#)

14. října **Otevřený dopis**

Společnost Ritchy Group zveřejňuje svůj Otevřený dopis, podepsaný generálním ředitelem Maxem Kosenkem, kde uvádí své závazky sdílet důležitá data o bezpečnosti produktů a vyzývá další výrobce v oboru vapingu, aby se připojili k větší transparentnosti svých produktů pro zvýšení kvality a bezpečnosti.

[Link na otevřený dopis](#) nebo na www.ritchy.com/public/

Zveřejněno např. na: https://www.ceskenoviny.cz/pr/index_view.php?id=1810352 <https://www.kurzy.cz/tema/5657978.html>

<https://www.metro.cz/> <http://www.rssmonitor.cz/>

<http://www.protext.cz/zprava.php?id=32258>

Reakce Ritchy na nedávné případy poškození plic a úmrtí v USA spojené s vapingem - otevřený dopis



Open Policy Letter - Ritchy Group Ltd.

We believe vaping is a better alternative to cigarette smoking, so does the Public Health England, an executive agency of the Department of Health and Social Care in the United Kingdom and many other professionals in the world.

We are aware that recent media coverage about vaping products and their health-related risks has not been always truthful and fact-based. Many emotions and assumptions were publicly shared that sometimes led to misleading messages for the general public and regulators.

Since 2009 Ritchy is obsessed with the safety and quality standards and we are confident that our products are among the most verified on the market.

We have committed ourselves to the following:

- Disclosing the list of ingredients used in our products under the EU TPD regulation
- Continuing extensive studying and verification of our product safety
- Sharing the details about our manufacturing quality standards, safety and compliance

We are calling for all responsible vaping manufacturers to join our Open Policy movement and share publicly their own quality and safety information so that consumers and industry professionals can verify the actual data vs. the information in the media and make an informed decision about their vaping choices.

Max Kosenko
CEO Ritchy Group Ltd.
Oct 14th 2019

USA LUNG INJURY OUTBREAK

RITCHY SAFETY AND QUALITY STANDARD

Quality & Safety First

- In-house state of the art R&D lab

Ritchy possesses unique knowledge developed since 2009 to be able to effectively and precisely control e-liquid product safety.

- Rigorous components and final product testing

With more than a thousand components used for liquid development, Ritchy uses the in-house lab to test 100% of incoming batches for safety and standards.

- Zero Cross-Contamination protocol

- Automatic Gravimetric Compounding

Ritchy developed own unique compounding system that uses a 0.01% precision "state-of-the-art" gravimetric system that automatically drives peristaltic pumps to deliver components in the mix by weight.

- Vacuum sealing verification

- Unique security code on each product with online verification

- Full batch sample retention control

With the complete raw material tracing database Ritchy can quickly react and identify batches of products that could have been potentially affected. While nothing dangerous was ever found in products - the ability to quickly react and ensure that product is within specification is a unique advantage of Ritchy.



A BILLION LIVES

A Billion Lives / Boj o miliardu životů

2016 • History/Documentary

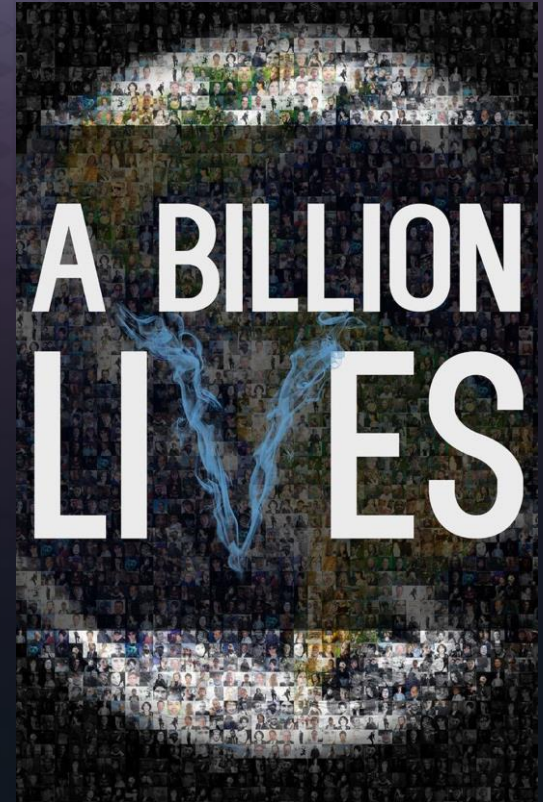
[Download link](#)

The United Nations' World Health Organization projects that a billion people will die prematurely from smoking this century. In the next 20 years, there will be nearly 1.6 billion smokers around the world.

This documentary takes a critical look at the history of smoking, and the corruption that's led to the current situation where safer, healthier alternatives are banned or heavily restricted in most countries.

[Trailer Link](#)

[Full Video Download Link](#) (available for 1 week)



RITCHY IN CZECH REPUBLIC



Ritchy Group Limited is a privately held global technology and innovation company in the electronic cigarettes and e-liquids industry. Since 2009 we offer the best in class premium quality e-liquids and e-cigarettes as alternative smoking solutions to adult smokers in more than 85 countries.

Time of Enter CZ: 2013
Market Share: 40%



Founded in 2009

Company heritage was established with the birth of vape industry



Own Production Facilities

Two automated ISO 9001 facilities in Europe and China



TPD/CLP Compliances

Precise vaping compliance of TPD/CLP in 28 countries



Safety

Special control for PAH, Phthalates, Diethylene Glycol, heavy metals and non nicotine alkaloids



Research and development

Flavours developed from high purity concentrated raw materials, not pre-mixed food flavours



Loved in 85+ countries

Ritchy sells its products(LIQUA, ARAMAX) in 85 countries through 4 distribution centres on 3 continents

LIQUA
PREMIUM VAPING





RITCHY[®]
freedom in your hand

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Backup slides

US Acute Lung Injury Case Study (1 of 5)

- **Source of information in the US:** <https://www.cdc.gov/lunginjury>
 - Examination of patients revealed Acute Exogenous Lipoid Pneumonia <https://www.cdc.gov/mmwr/volumes/68/wr/mm6836e1.htm> that is a result of oil (fat) inhalation
 - Most patients have reported usage of products containing THC
 - No specific product was identified
 - CDC (Centers for Disease Control and Prevention) recommendations:
 - “If you are an adult who used e-cigarettes containing nicotine to quit cigarette smoking, do not return to smoking cigarettes.”
 - “Anyone who uses an e-cigarette or vaping product should not buy these products (e.g., e-cigarette or vaping products with THC or CBD oils) off the street, and should not modify or add any substances to these products that are not intended by the manufacturer”
 - As of 26 September 2019
 - 805 cases of injury across many states in the US
 - 16% under the age of 18
 - 12 death cases

US Acute Lung Injury Case Study (2 of 5)

- **About Vaping safety**

- UK Position on e-cigarette safety: “In a nutshell, best estimates show e-cigarettes are 95% less harmful to your health than normal cigarettes, and when supported by a smoking cessation service, help most smokers to quit tobacco altogether.”
- CDC position on e-cigarettes safety: “E-cigarette aerosol generally contains fewer toxic chemicals than the deadly mix of 7,000 chemicals in smoke from regular cigarettes. However, e-cigarette aerosol is not harmless. It can contain harmful and potentially harmful substances, including nicotine, heavy metals like lead, volatile organic compounds, and cancer-causing agents.
- CDC reports “Worldwide, tobacco use causes more than 7 million deaths per year. Cigarette smoking is responsible for more than 480,000 deaths per year in the United States alone. On average, smokers die 10 years earlier than nonsmokers. In the fiscal year 2019, states will collect a record \$27.3 billion from tobacco taxes and settlements in court. 68% of adult cigarette smokers want to stop smoking.”
- The UK study showed that e-cigarettes have almost twice higher success rate of quitting smoking “The 1-year abstinence rate was 18.0% in the e-cigarette group, as compared with 9.9% in the nicotine-replacement group”. <https://www.nejm.org/doi/full/10.1056/NEJMoa1808779>
- A U.S. study has shown that “By the second and third years of data gathering, daily e-cigarette users reported a higher rate of prolonged abstinence from cigarette smoking (11%) than non-users (6%).”
- Expert reviews of e-cigarette headlines <https://www.sciencemediacentre.org/tag/e-cigarettes/>

US Acute Lung Injury Case Study (3 of 5)

- **Ritchy understanding of what has happened**

- There is no doubt that the outbreak is not related to vaping itself since it's the first outbreak after more than 10 years and ~100 million people have used e-cigarettes and none of the professionally developed e-liquids on the market use oil-based components.
- Most probable cause is wrongful usage of oils as a THC solvent for black market distribution across the US
- Percentage of cases that were reported without THC use is most probably explained by the fact that in those states THC consumption is a criminal act
- The case is similar to outbreaks of Methanol Poisoning
https://en.wikipedia.org/wiki/List_of_methanol_poisoning_incidents
- CDC estimates that each year 48 million people get sick from a foodborne illness, 128,000 are hospitalized, and 3,000 die in the US.
- Outbreaks are of different nature than illness alone: <https://wwwn.cdc.gov/norsdashboard/> reports more than 4000 illness outbreaks every year leading to more than 100`000 cases of injury and more than 150 deaths every year in the US.
- Special attention to the current outbreak is due to the fact that this is the first outbreak involving vaping products and also nationwide outbreaks which happen ~100 times less frequently in the US.
- It's highly possible that a lot of cases are now connected to the outbreak by mistake because the only symptoms necessary to report a case now are: "lung injury of unclear etiology and history of e-cigarette or vaping product use within the past 90 days"

US Acute Lung Injury Case Study (4 of 5)

- **Ritchy expectations on how that will impact the industry**
 - More states in the US might utilize the political opportunity to either support the tobacco lobby or show the voters that they are doing all they can to “protect the public”. Few cases are clearly going to work against the public interest.
 - Some EU states could use US actions to set precedent and do the same, but currently, it doesn’t look very probable
 - We expect a temporary delay of vaping products purchasing by some percentage of irregular consumers
 - E-cigarette associations worldwide are becoming more unionized now and are actively working on preparing science and logic based responses in different places including news media, social media, local and EU legislative bodies
 - As an end result we expect a potential decline of consumer purchasing for 2 quarters at the level within 10%, but as a result of fact-based response and overall consumer awareness - that will be majorly compensated by increased attention to the industry from consumers.
 - Being one of the largest professional “ready to use” e-liquid brands owner in the EU, which for many years has been known for product safety, Ritchy can expect better leverage to convert DIY consumers to its own portfolio of brands.
 - With the absolute majority of our competition being unprofessional we expect that this unfortunate outbreak is going to have unintended positive effects within the year 2020 on the industry overall and the category where Ritchy brand products (Liqua and Aramax) excel most.

US Acute Lung Injury Case Study (5 of 5)

- **Ritchy position and approach to this industry problem**
 - From the very beginning of the company, Ritchy has prided itself on developing the safest possible e-liquid
 - To the best of our knowledge, Ritchy is the only company that provides security code checking on every product and bottle made by the company. That allows ensuring the original product is in use and to find information about every component batch material that was used during production for dozens of millions of units sold worldwide.
 - Ritchy is using for many years high-grade narrowly specialized in-house R&D laboratory to control all components and final products for toxicity limits of flavor components (called VOC in CDC report) and absence of cancer-causing agents or heavy metals.
 - Ritchy controls more than 50 substances including diacetyl, acetoin propionyl, tobacco-specific nitrosamines, polycyclic aromatic hydrocarbons, aldehydes
 - Ritchy tests all of its products on a shelf-life toxicity change and validates that no toxicity increase will be observable after 2 years on the shelves.
 - Ritchy tests all incoming raw material batches and uses own zero cross-contamination production technology that ensures the purity of process
 - All compounded and mixed liquids go through 100% high precision QC and 2 years retention of every single batch of finished products.
 - All devices manufactured by Ritchy are tested for the amount of residual heavy metals emission to keep it significantly below exposure limits
 - All international databases on inhalation toxicity are used to control limits of exposure to flavor components while the absolute majority of tested competitive products were far above those limits
 - Ritchy is an active proponent that only “ready to use” products should be used by end consumers. That shows in statistics - while most of the market share nowadays are DIY type liquid, Ritchy has less than 10% of sales in that area with above 90% in ready to use sealed products
 - Due to the current fears among the consumer base, Ritchy plans to make extensive marketing, press releases and actively convert the majority of consumers to switch to “ready to use” professional products as the safest affordable option for people who want to decrease smoking health impact.