

**Do Now**

# What are the harms caused by vaping?



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Despite never smoking, Estelle and her friends all vape. It's getting expensive, but no one has suggested quitting – until recently.

Estelle started getting a weird pain in her chest, it felt a bit like there was some water stuck somewhere, which she just couldn't cough up. Her dad is very worried and has taken her to the doctor.

**Discuss: Why are Estelle and her friends vaping in the first place, do you think?**



Explain briefly why you think vapes were created in the first place.

*I think the reason vapes were created in the first place is...*

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# What are the harms caused by vaping?



## Learning outcomes:

Describe the different health problems caused by vaping and the link between addiction, nicotine and dopamine.

Explain why vaping is not a safe long-term activity and should be seen primarily as a smoking cessation aid, using new terminology.



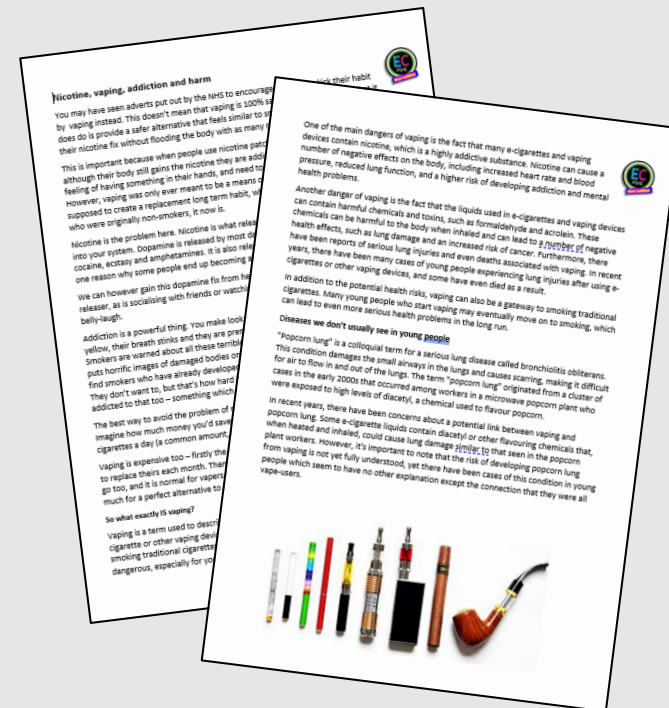
**Vaping** – breathing in a steam-like fume designed as a replacement for tobacco smoking, still containing nicotine in many cases.

# What are the harms caused by vaping?



## THORNDEN THREE – READING

We will now find out more about why vaping has taken off in the first place, why so many people vape and the real-life harms it can do which aren't widely publicised.



We will now find out more about the dangers of nicotine, vaping addiction and harm

## **THORNDEN THREE = GUIDED READING**



You may have seen adverts put out by the NHS to encourage smokers to kick their habit by vaping instead. This doesn't mean that vaping is 100% safe, by any means, but what it does do is provide a safer alternative that feels similar to smoking and still gives the smoker their nicotine fix without flooding the body with as many noxious chemicals.

This is important because when people use nicotine patches or gum to stop smoking, although their body still gains the nicotine they are addicted to, smokers often miss the feeling of having something in their hands, and need to keep their hands occupied. However, vaping was only ever meant to be a means of getting off smoking – it was never supposed to create a replacement long term habit, which for many people, and even people who were originally non-smokers, it now is.

Nicotine is the problem here. Nicotine is what releases the feel good chemical dopamine into your system. Dopamine is released by most dangerous and illegal drugs, for example, cocaine, ecstasy and amphetamines. It is also released when people drink alcohol, which one reason why some people end up becoming alcoholics.

We will now find out more about the dangers of nicotine, vaping addiction and harm

## **THORNDEN THREE = GUIDED READING**



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We can however gain this dopamine fix from healthy means too; exercise is a dopamine releaser, as is socialising with friends or watching a hilarious comedy and having a full-on belly-laugh.

Addiction is a powerful thing. You make look at smokers and wonder, when their teeth are yellow, their breath stinks and they are prematurely aging, why do they still do that? Smokers are warned about all these terrible consequences and far more; the government puts horrific images of damaged bodies on cigarettes packets to discourage buyers. Yet you find smokers who have already developed lung disease and cancers who still smoke too. They don't want to, but that's how hard it is to stop. Many have tried vaping, but then get addicted to that too – something which we just don't know all the long-term effects of.

The best way to avoid the problem of nicotine addiction is to never start smoking or vaping. Imagine how much money you'd save over the years. Look at someone who spends £9 on cigarettes a day (a common amount, as this is one packet),  $9 \times 365 = £3285$  a year!

Vaping is expensive too – firstly the actual e-cig will cost around £20 and many people need to replace theirs each month. Then there's the e-cig vapour juices. These are around £10 a go too, and it is normal for vapers to buy one a week – just add all that up.....£760 a year! So much for a perfect alternative to smoking. Vaping is a term used to describe the act of inhaling vapor produced by an electronic cigarette or other vaping devices.

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## **THORNDEN THREE = GUIDED READING**



While many people believe that vaping is safer than smoking traditional cigarettes, it is important to understand that vaping can also be dangerous, especially for young people. One of the main dangers of vaping is the fact that many e-cigarettes and vaping devices contain nicotine, which is a highly addictive substance. Nicotine can cause a number of negative effects on the body, including increased heart rate and blood pressure, reduced lung function, and a higher risk of developing addiction and mental health problems.

Another danger of vaping is the fact that the liquids used in e-cigarettes and vaping devices can contain harmful chemicals and toxins, such as formaldehyde and acrolein. These chemicals can be harmful to the body when inhaled and can lead to a number of negative health effects, such as lung damage and an increased risk of cancer. Furthermore, there have been reports of serious lung injuries and even deaths associated with vaping. In recent years, there have been many cases of young people experiencing lung injuries after using e-cigarettes or other vaping devices, and some have even died as a result. In addition to the potential health risks, vaping can also be a gateway to smoking traditional cigarettes. Many young people who start vaping may eventually move on to smoking, which can lead to even more serious health problems in the long run. Furthermore, there have been reports of serious lung injuries and even deaths associated with vaping. In recent years, there have been many cases of young people experiencing lung injuries after using e-cigarettes or other vaping devices,

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### **Diseases we don't usually see in young people**

"Popcorn lung" is a colloquial term for a serious lung disease called bronchiolitis obliterans. This condition damages the small airways in the lungs and causes scarring, making it difficult for air to flow in and out of the lungs. The term "popcorn lung" originated from a cluster of cases in the early 2000s that occurred among workers in a microwave popcorn plant who were exposed to high levels of diacetyl, a chemical used to flavour popcorn.

In recent years, there have been concerns about a potential link between vaping and popcorn lung. Some e-cigarette liquids contain diacetyl or other flavouring chemicals that, when heated and inhaled, could cause lung damage similar to that seen in the popcorn plant workers. However, it's important to note that the risk of developing popcorn lung from vaping is not yet fully understood, yet there have been cases of this condition in young people which seem to have no other explanation except the connection that they were all vape-users.

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## Vaping – why such a big issue?

<https://www.youtube.com/watch?v=laVaoja2Uk4>

(note: clip shows real life damage done by vaping to a cadaver's organs)

What were e-cigarettes originally designed to do?

What have hospitals noticed in the last few years?

What are the symptoms of hospital patients?

What are GI symptoms?

What is the addictive component which could cause GI issues?

What metal has been found in vape juices?

Why was the vitamin E acetate found in patients' lungs so harmful?



Watch the clips and complete your questions in your booklet. We will then go through the answers together so you can fill in any you've missed.

## Vaping – why such a big issue?

<https://www.youtube.com/watch?v=laVaoja2Uk4>

**What were e-cigarettes originally designed to do?**

**Mimic real life cigarettes in a safer way**

**What have hospitals noticed in the last few years?**

**An increase in lung damage – due to vaping**

**What are the symptoms of hospital patients?**

**Fever, coughing, chills, coughing up blood, racing heart**

**What are GI symptoms?**

**Abdominal pain – nausea, tummy aches**

**What is the addictive component which could cause GI issues?**

**Nicotine**

**What metal has been found in vape juices?**

**Arsenic (a deadly poison), tin, manganese, chromium**

**Why was the vitamin E acetate found in patients' lungs so harmful?**

**2807 people were hospitalised and 2.4% of those died. There is no cure, just therapy and breathing aids to eventually help recovery.**



# What are the harms caused by vaping?



## Useful helplines and charities

<https://www.nhs.uk/better-health/quit-smoking/vaping-to-quit-smoking/>

NHS site with up to date info on using vaping appropriately to quit smoking.

[Young Minds](#). Child and adolescent mental health charity. Call: 0808 802 5544 (parents' helpline)

[Teen Line | Teens Support hotline - Connect, talk, get help!](#) Teen Line's highly trained teen listeners provide support, resources and hope to any teen who is struggling.

<https://www.royalwolverhampton.nhs.uk/about-us/smoke-free-rwt/the-facts-on-vaping/>

Free vaping and health facts guide

# Need Support? You're Not Alone

If anything in today's lesson has affected you, or you want to talk to someone, there is help available.



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## **Mental Health & Low Mood**

YoungMinds – <https://www.youngminds.org.uk>

Kooth – <https://www.kooth.com>

Mind – <https://www.mind.org.uk>

## **Talk to Someone**

Your Tutor or Head of Year – We're here to help.

Wellbeing Team and School Nurse

Report a Concern on Satchel

Safeguarding Team with the Purple lanyards

## **Healthy Lifestyle**

NHS Every Mind Matters – <https://www.nhs.uk/every-mind-matters>

Change4Life – <https://www.nhs.uk/change4life>

## **Apps That Can Help**

Calm – For mindfulness and sleep.

Headspace – Meditation and stress relief.

Clear Fear – Manage anxiety (designed for young people).

MeeTwo – Anonymously talk to other teens, moderated by experts.

## **Eating Concerns**

Beat Eating Disorders –

<https://www.beateatingdisorders.org.uk>

NHS Live Well – Eating Disorders –

<https://www.nhs.uk/mental-health/conditions/eating-disorders/>