



Smoking and Vaping – understanding the
habit and supporting young people to
change.

Liz Cooper
Part 1

welcome

- Aims of the sessions
 - To understand how the brain works in the development of a habit
 - To understand the steps needed in order to change a habit
 - To be able to link this knowledge to the adverse childhood experiences and others which young people may have had
 - To be able to devise a cessation plan with the young person and professionals



working together...

confidentiality

respect

diversity of opinion can be enriching

look for the benefits of an alternative opinion

positive challenge

naïve questions are valuable

ask for support if you want it

take responsibility for your own learning

enjoy ourselves



What young people say :

I know it is not good for me , but I can't stop.


Why should I?

I can stop any time I want!

It's nothing to do with you!

You don't understand- I need it , it stops me thinking.....

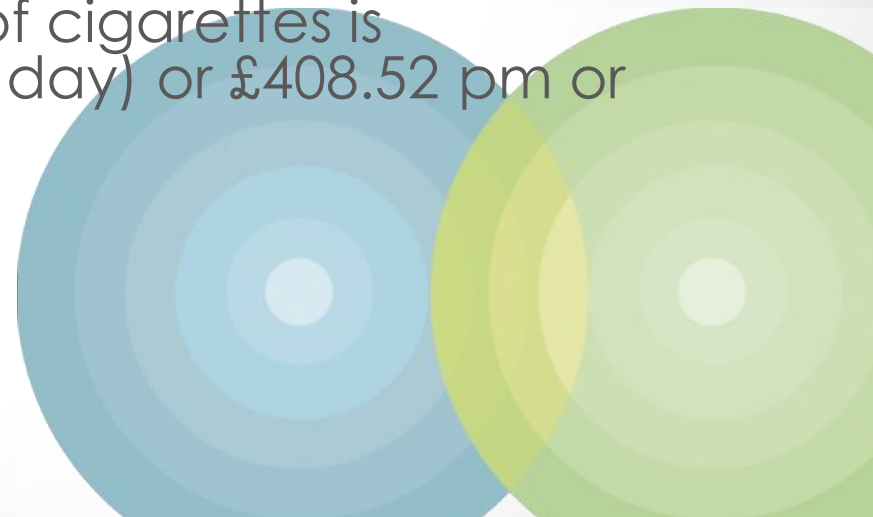
****Stopping is not as easy as it sounds.....**



“Most adult smokers first tried smoking when they were under 18. A smoker who started young is even more likely than a smoker who started at an older age to become ill or die from it. Ash 2024”

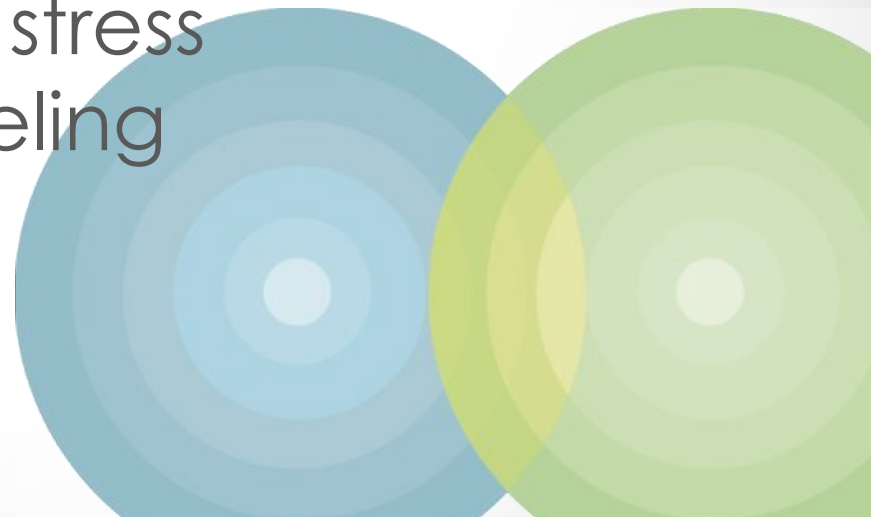
Stats

- Smoking remains the number 1 preventable cause of death
- Approx 80,000 deaths per annum
- About 400,000 11- to 15-year-olds in England have tried smoking at some point and about 100,000 smoke now. More than three 15-year-olds out of one hundred smokes more than once a week.
- Young people who truant from school or who had been excluded from school in the previous 12 months were almost twice as likely to smoke regularly compared to those who had never been truant or excluded
- The average price of a pack of cigarettes is £14.59=£102.13 p/w (1 pack a day) or £408.52 pm or £4,902.24 pa
- Vaping-around £300 pa



Why might you start?

- Parents, siblings and peer group
- Care givers smoke
- Socio-economic status
- ACEs
- Exposure to marketing
- Children think it's because:
- You look cool
- It helps you cope with stress
- It gives you a good feeling
- It helps you relax



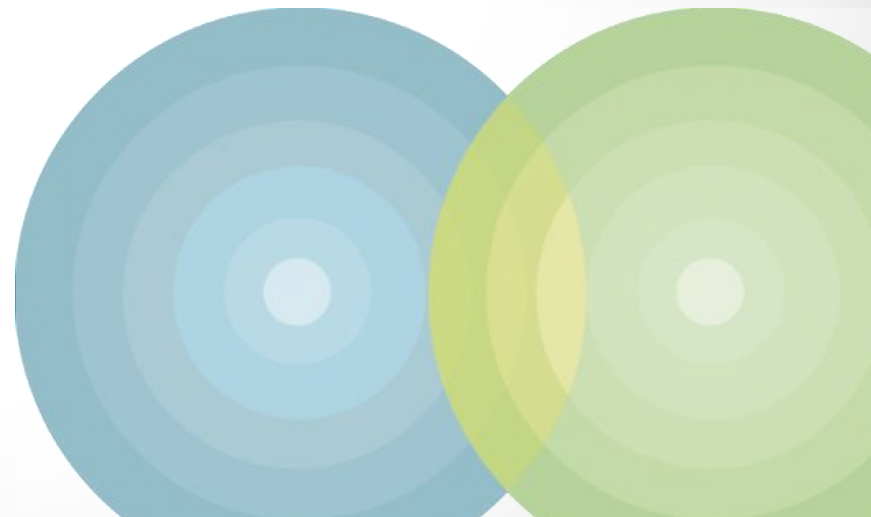
Physical effects on children

- 2-6 times more likely to have coughs, phlegm and sob
- Impaired lung growth
- Increased risk of earlier onset Chronic Obstructive Airways Disease
- Increased risk of lung cancer and heart disease
- Second hand smoking increases SIDS, pneumonia and asthma



Decreasing numbers

- Government strategy 21st century:
- Increased cost
- Decreased advertising
- Regulatory measures (limited to 18+ and fines for retailers)
- Attitudes
- Vapes



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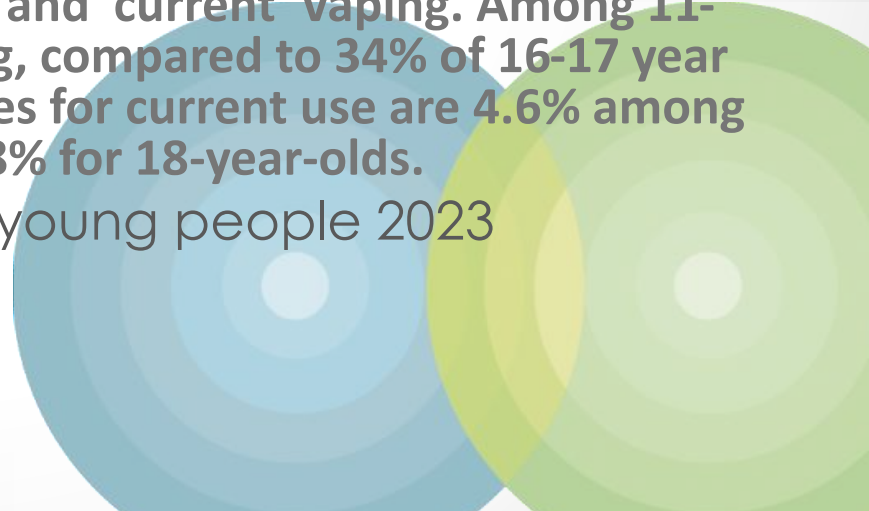
Vaping

- Introduced to help adults stop smoking tobacco, reducing the dangers of tobacco
- A vapour (water with nicotine or other additives and flavour) inhaled into the lungs



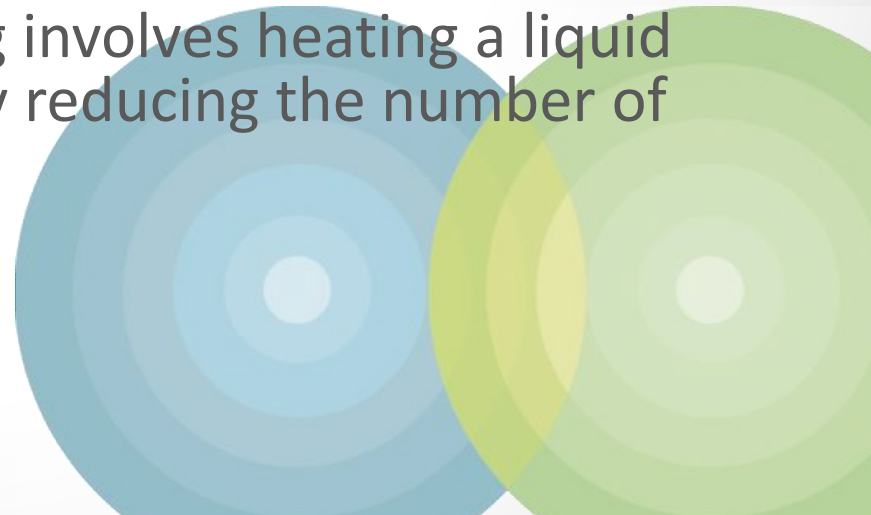
Prevalence of vaping

- In 2023 20.5% of children had tried vaping, up from 15.8% in 2022 and 13.9% in 2020 before the first COVID lockdown. The majority had only vaped once or twice (11.6%), while 7.6% were currently vaping (3.9% less than once a week, 3.6% more than once a week) and the remainder (1.3% in 2023) saying they no longer vape.
- A 50% growth in experimentation (trying once or twice) from 7.7% in 2022 to 11.6% in 2023
- Since 2021 the proportion of current vaping has been greater than that of current smoking (7.6% compared to 3.6% in 2023).
- Most (62%) of those who have never smoked but have vaped have only tried once or twice, while most (70%) current vapers have also tried smoking.
- There is an age gradient both for 'ever' and 'current' vaping. Among 11-15 year olds 15% have ever tried vaping, compared to 34% of 16-17 year olds and 38% of 18 year olds. The figures for current use are 4.6% among those aged 11-15, 15% for 16-17 and 18% for 18-year-olds.
- ASH Use of e-cigarettes amongst young people 2023



The science...

- The amount of nicotine absorbed by the body from vaping for 5 minutes is one-third to one-fourth the amount absorbed from smoking a cigarette in the same timeframe.
- **By vaping a 20mg e-cigarette (20 mg per ml) that contains 2ml of e-liquid, a user absorbs about the same amount of nicotine as a pack of 20 cigarettes (approximately 20mg).**
- Nicotine side effects are less harmful when nicotine is absorbed from vaping rather than smoking.
- Traditional cigarettes produce over 5,000 harmful chemicals when burned, of which at least 70 are carcinogenic. In contrast, vaping involves heating a liquid containing nicotine, significantly reducing the number of harmful byproducts.



Regulations surrounding vaping and smoking

- Both covered by Tobacco and Related Products Regulations 2016
- The maximum nicotine strength of liquids is 20mg/ml. Bottles can't hold over 10ml of liquid and must be childproof and tamper-evident
- Atomizers (also known as tanks) can't have the capacity of more than 2ml of e-liquid, and certain additives in vape liquids and flavourings are banned, e.g., caffeine, taurine, and colourings.
- Users of both must be 18 or over to buy and use e-cigarettes, e-liquids or cigarettes. The e cig laws apply whether you buy from a shop or online.
- Unlike e-products, cigarettes cannot be displayed
- The UK laws on smoking in enclosed public places and workplaces don't apply to vaping, but organizations can make their own rules



Current vaping concerns

- Lung disease-Vaping use associated lung injury (EVALI)
- Small number of cases of associated lung disease-pneumonias Vaping associated pulmonary injury (VAPI)
- Popcorn lung
- Nicotine toxicity
- Pen explosions
- Coil degradation leading to deposits in the lungs
- Carrier solutions have been found to be the cause of some lung inflammation
- Nicotine addiction effects on a developing brain
- Unknown effects of long-term use
- Massive increase in underage users
- Using vapes to inhale banned substances
- Unregulated disposable vapes-higher toxicity



Government initiatives

- Plan to:
- Introduce Tobacco and Vapes Bill:
- Increase legal age to be able to buy tobacco and vapes each year-as a result, those born in 2009 will never be legally able to buy products
- Increase fines against retailers
- Will still able to bring products in from abroad-although changes will apply to UK duty free shops
- Tighter restrictions on vape sales to under 14s
- Introducing this aims to prevent approx. 470,000 cases of heart disease, stroke, lung cancer, COPD etc per year

Look for the CE mark on vapes to ensure they're legal

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Reflection....

- We all have habits.....
 - Food
 - Exercise
 - Drinking
 - Smoking
 - Orders we do things
- In breakout rooms make a list of some of yours.
- Are there any commonalities?
- What does it do for you?
- Think about whether your habits reassure you or make you anxious.....



Nicotine and a habit- how?

- Habits and their formation are very complex .
- They are managed by deep centres in the brain (Basal Ganglia)
- When a habit is just starting to be learned these centres send impulses out throughout the “task” i.e. the steps in smoking/vaping
- When the habit has been learned they only trigger at the start and end of the habit- helping to make sure that you complete the whole cycle.

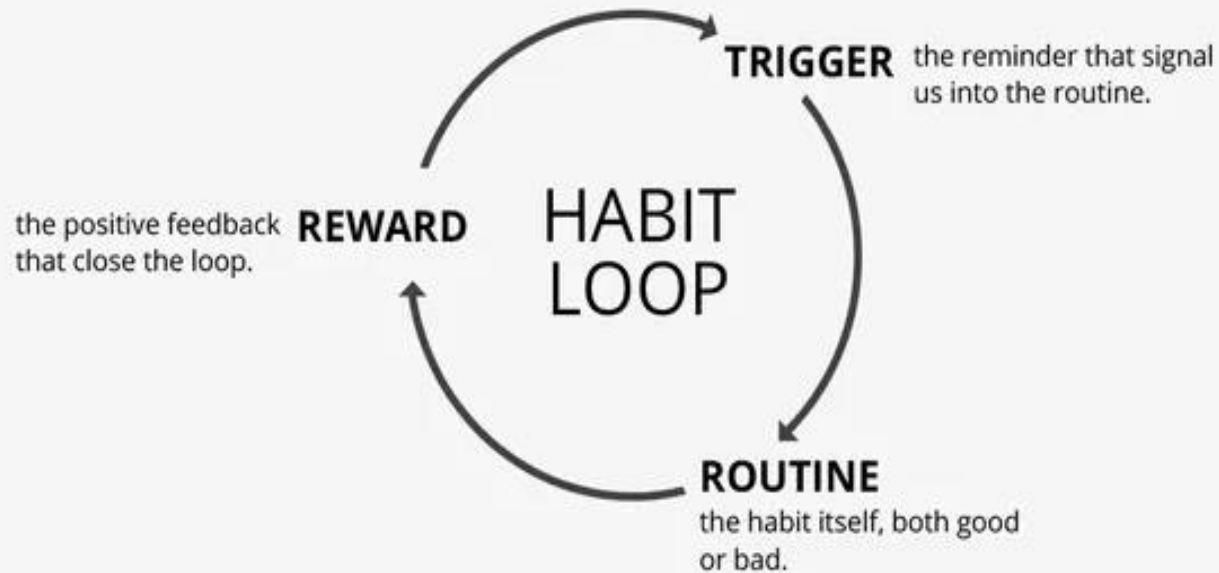


Nicotine and a habit- cont'd

- Habits can be harmful or healthy
- Why do we have habits?- they make us more efficient – no wasting time and energy making decisions
- Can be “hijacked” by the use of addictive substances, eating unhealthy food
- A new habit can take up to a little more than 2 months to form- 66 days (P. Lally, UCL) and as much as 254 days until fully formed.
- These timescales are shortened when addictive substances are involved. e.g. spice causes an almost immediate addictive response
- Habits form around a “habit loop”



The habit loop.....



Add an addictive substance



Addiction is defined as not having control over doing, taking or using something to the point where it could be harmful to you.

NHS UK



What happens in the brain when tobacco is used

- Tobacco contains nicotine- first classified as a “poison”
- Tobacco is smoked/ingested in some form
- Crosses into the bloodstream- lungs are very rich in blood vessels as is the mouth
- As other addictive substances it impacts the brain- with the production :
 - of dopamine – plays a key role in how we feel pleasure
 - of serotonin- contributes to well being and happiness
 - of adrenaline



What happens in the brain when nicotine is used....

- the “buzz”, pleasure and energy are short lived and are then replaced by edginess and irritability-withdrawal symptoms
- So..... You repeat the action to get the “buzz”
- One cigarette = 1-2mg nicotine
- Tolerance to nicotine levels sets in quickly, so smokers have to increase the number of cigarettes they have to get the same “buzz” until a level of equilibrium is reached.
- The problem is nicotine is addictive



What is an addiction?

- Addiction is marked by the repeated, compulsive seeking or use of a substance despite its harmful effects and unwanted consequences. Addiction is mental or emotional dependence on a substance. Nicotine is the known addictive substance in tobacco. Regular use of tobacco products leads to addiction in many users. Nicotine is a drug that occurs naturally in tobacco and it's thought to be as addictive as heroin or cocaine.

Addiction and children

- Children may show signs of addiction within four weeks of starting to smoke
- Studies have shown that: smoking just one cigarette in early childhood doubled the chance of a teenager becoming a regular smoker by the age of 17 and
- smoking a single cigarette is a risk indicator for children to become regular smokers up to three years later

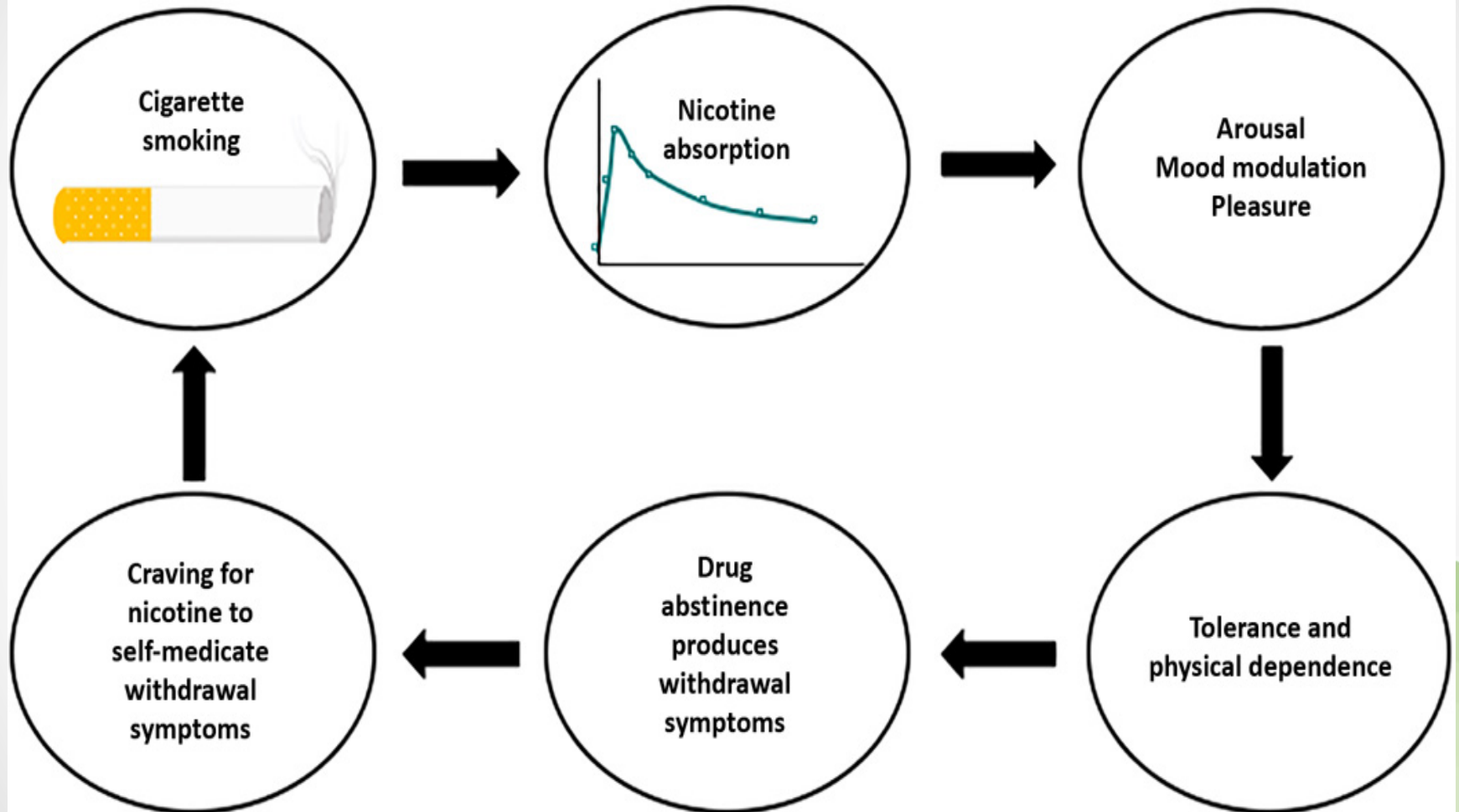


Syndrome model of addiction

- “One addiction with multiple with multiple expressions”
- Must give the person some pleasure and a feeling of betterment.
- Brain imaging shows we react similarly to different activities/substances from alcohol to sex
- Genetic research shows predisposition-but not to anything specific.
- In this model, addiction is seen as a relationship between the person and object/activity. The object/act becomes more important than previous/other things.
- Can anyone relate to this/give examples?
- How might this play out in daily life?



Nicotine addiction cycle



Why is a habit/addiction so hard to break?

- Usually habits are there so that things can happen without us thinking about it.
- Consciously seeking to change this (think New Year resolutions!!) does not come naturally- it needs consideration and effort
- So habits are your behaviour on auto pilot- good and bad habits bring feelings of reward.....thus very difficult to break.
- Predisposition and pleasure make it even harder....
- Most of the time our feelings that we “should” change are overridden by the “reward.”



Part 2

- We will look at :
 - Stopping – is it possible and how?
 - What may help/work?
 - Who may be involved
 - What can YOU do ?
 - Managing nicotine withdrawal
 - Case study-optional



Next time- moving stress to calm.....

What!? Me Stressed!?!

