

Vapes and Cannabinoids – Risks for Young People

Levels of vaping have increased significantly in the UK.

This resource focusses on risks to young people who vape, especially those interested in vaping cannabis-derived products such as THC or CBD.

It highlights the risk of **accidental or intentional use of synthetic cannabinoids** (*“Spice, Mamba”*).

It is intended for non-specialist workers including educators and school welfare staff who may encounter young people vaping.

There are risks with all vapes especially unregulated, high dose, high capacity vapes, and refills that are not compliant with UK standards and regulations.

The Products

Most people are aware of herbal cannabis (*weed, grass, bud*). Other products now on the market include:

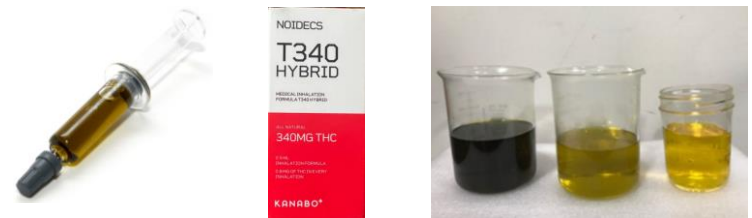
Pre-packaged vaping liquids: these may be packaged and have “legitimate” looking stickers and warnings. They may be liquid refill bottles or pre-loaded disposable vapes. A growing number of websites offer these products, and they are also widely sold via discrete social media channels.

Non-commercial oils and medicinal products: these are viscous oils, often produced by solvent extraction from whole cannabis. In the UK these are more likely to be smaller scale “DIY” producers, some making oils for medicinal use. There are also privately prescribed medicinal cannabis oils.

Solid extracts (dab, shatter, amber, rosin)

These are made via heat/pressure or solvent extraction from cannabis. The end product is a hard or crumbly solid substance.

Edibles: the days of old-style “hash-cakes” are long ago. You are now more likely to see edibles in packaging which may resemble legitimate confectionery products. They edibles may be sold as containing THC or CBD but may also contain other substances including Spice.



Cannabis (e.g. herbal cannabis) contains several chemicals.
Key amongst these are:

THC: a psychoactive class B chemical. It is responsible for the pleasurable aspects of cannabis use but also probably for some of the negative symptoms such as panic and anxiety.

CBD: a chemical which is not currently covered by the Misuse of Drugs Act in the UK (unless it's in plant form.)

Extracted CBD can be legally sold. It must contain virtually no THC. It doesn't have the same euphoric effects as THC but may have some medical benefits including relieving pain, anxiety and helping with sleep.

In traditional cannabis products THC and CBD were present in a range of ratios.

Strong herbal cannabis has a lot of THC and little CBD.
Older resins had higher levels of CBD.

Semi-synthetics

There are some other drugs to be aware of:

HHC (hexahydrocannabinol) and similar compounds are made from CBD but are more like THC in effect. It is unclear if they are covered by the MoDA but will be covered by the Psychoactive Substances Act

Synthetic Cannabinoid Receptor Agonists (SCRAs): Drugs in this family are commonly referred to as **Spice** or sometimes **Mamba**. They started life as unregulated legal highs. Most are now controlled drugs.

For adult users:

20-60mg = common dose

60-100mg = high dose

for young people, especially inexperienced ones, doses would typically be lower.



Resin 5%:3.5% THC/CBD (2008 ave)
1gm = 50mg THC: 35mg CBD



"Gelato" Weed 20% THC: <0.1% CBD
1gm = 200mg THC



Synthetics can be many 100x the potency of THC
The SCRA market changes frequently so different products may contain different SCRAs mixed at different doses making them wholly unpredictable and making "safe" dosing impossible.

Synthetic Cannabinoid Receptor Agonists (SCRAs) are a family of lab-made chemicals originally intended to mimic some of the effects of THC.

They are commonly referred to as “**spice**” or “**mamba**.”

They started off in legitimate research settings but were copied and sold as “legal highs.” Since they first emerged around 2007 there have been many different SCRAs manufactured. They are mostly produced in Asia and every couple of years we see new chemicals emerge which makes the potency and effects difficult to predict.

They are mostly Class B Controlled Drugs. Any newer versions not covered by the MoDA are automatically covered by the Psychoactive Substances Act, making supply an offence.

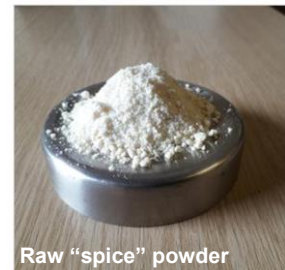
SCRAs start life as a white powder. This is dissolved and can be sprayed on to plant material, paper, put in to a vape or (rarely) end up in other drugs.

SCRAs should not just be thought of as “synthetic” or “fake” weed. They are far more dangerous.

SCRAs can:

- trigger short or prolonged episodes of psychosis even after first or infrequent use;
- can cause fatalities through heart failure, suppressed breathing, convulsions or self-harm when intoxicated
- are physically addictive leading to tolerance and
- cause unpleasant withdrawal symptoms akin to heroin withdrawal.

Most young people are not looking for Spice (though some are). They are accidentally accessing it when buying cheap vape liquids, edibles and in a small number of cases contaminated herbal cannabis.



Raw “spice” powder



Spice-impregnated plant material

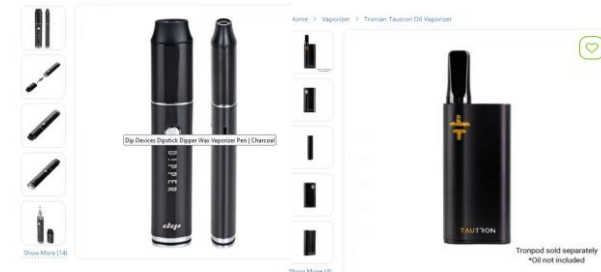
Dry herb:

- Used to vape whole herbal cannabis products.
- Popular with non-smokers and medical users.
- Tobacco free.
- Less risk of contamination as there is less contamination of herbal cannabis and the product can be examined before use.



Oil vape/Dab Vape:

- For people using viscous THC or CBD oil (e.g home-made oils).
- Some can be used with extracts like Dab, others with E- Liquid.
- Lower risk of buying extracts and full-spectrum oils that are contaminated so a lower-risk alternative unless being used with e-liquid refills.



Disposable single use vapes:

- THC vapes in the UK will be illegal;
- CBD vapes are a grey area but not covered under the MoDA
- Low entry point makes them more appealing to young people
- Despite packaging may be fake. Although visually may appear to be an American import may be faked packaging.
- Some risk of counterfeit products or contamination.



Refillable: Bottles of e-liquid labelled as containing THC or CBD.

- Cheap to manufacture and sell.
- Genuine bottles may have been refilled.
- Very high risk that will contain anything but stated product.

May contain:

- SCRA (spice), Nicotine, nothing active, other adulterants.



“Spice” in vapes

“Spice” in vapes is a very significant issue.

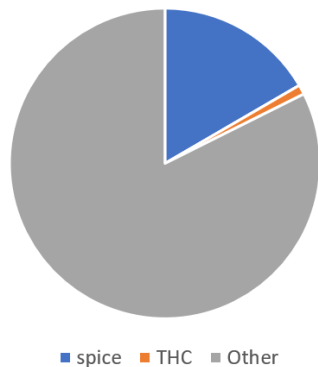
As vaping amongst young people has grown more widespread so has experimenting with a wider range of vaping mixtures. This has included a range of flavours, varying nicotine levels and cannabinoids such as THC and CBD.

The snag is THC and CBD are relatively expensive. Spice is very cheap.

In an unregulated market the easiest thing to do is make up bottles of vape liquid and sell it as THC or CBD. Sometimes there’s nothing in it. Sometimes just nicotine. There may be THC or CBD in it. Or maybe Spice.

In 2020-2021 the Welsh drug-testing service WEDINOS reported “*46 per cent of all samples submitted to WEDINOS 2020-21* as vape liquids contained SCRAAs.*” (*WEDINOS doesn’t do random testing – only products sent in so is more likely to be sent things where people have had an unpleasant experience.*)

Researchers at Bath University tested 596 Vapes confiscated in schools (*i.e. a random selection of those in possession of young people.*)



Over 16% of the sample contained Spice. Only 1% contained THC.

(We don’t know the “purchase intent” of these young people – i.e. how many wanted to buy THC, nicotine or flavoured vape but ended up with Spice.)

Between WEDINOS results and the University of Bath Research it suggests that between 16% and 46% of vape liquid may contain synthetic cannabinoids.

In a small number of cases vapes have been found to contain other highly dangerous drugs such as potent opioids or sedative drugs.

*WEDINOS: <https://www.wedinos.org/>

Suspected substances including vapes can be sent to WEDINOS for testing. Browse result with young people to highlight levels of contamination.

Key talking points with young people

Don't rely on appearance or labelling:

- fake vapes can be filled with spice
- empty vapes could be refilled with spice
- vape bottles can be filled and labelled with anything
- labels and bottles are cheap; THC isn't cheap

You can't tell by colour/appearance if it's the "real thing" or not.

Some legitimate oils will be very dark or thick and some will be lighter and more liquid. But if it's been dyed a funny colour, it's had artificial scents added to it, or it's very watery then there's probably something wrong.

If it's too cheap it's probably fake (but just because it's expensive it doesn't mean it's legit).

If it's being sold as THC it's illegal. The website or vendor may be trying to scam you and you have absolutely no comeback.

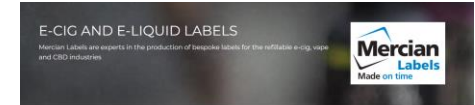
If it's being sold as CBD from a shop and they are willing to sell young people... there's a good chance that they are taking risks with the quality of the product they are selling too. They may not know what's in the vapes that they are selling.... or not care.

"Spiking" with vapes does happen: someone offering you a vape may intentionally give you Spice without you knowing – so be careful accepting vapes off people you don't know and trust.

You can also get spice accidentally via contaminated weed but this is less common

If you are using a vape or refill brand for the first time:

- start with a low dose, don't use other things including alcohol at the same time
- use with someone else to keep an eye on you, if you have any unpleasant symptoms STOP
- seek help if you feel unwell.



Often these are referred to as 'peel and reveal' type labels, where the top layer is creatively used to market the product, and layers underneath contain statutory or regulatory information (although single layer labels are also sometimes used). Because we print millions of these every month, using thousands of designs, and in a variety of materials and finishes, you can rest assured that Mercian Labels will service your requirements seamlessly. Special effects such as tactile warning triangles can also be used, with metallic effects and innovative varnishes becoming increasingly popular.



Spot the spice!



Would take 5g weed to make this...
but it's cheaper than weed...
Hmmm



Stop if unwell & get help

Don't mix

Low dose

Indicators for Spice Use

At low doses Spice can be hard to tell apart from excessive nicotine or THC use.

Markers could include:

- confusion 🤔
- excitement 😄
- giggly 😂
- dizzy 🌀
- nauseous 🤢
- headaches 🤕
- anxiety 😟
- rapid breathing 🤧
- vomiting 🤮
- shakes 🤫
- racing heart 🏃

Symptoms can wear off within 15-30 minutes but may persist for 1-2 hours or longer.

At higher doses markers for Spice use could include the above and more distinctive symptoms:

- very elevated heart rate 🔥
- uncontrollable limb movements 🤖
- unable to speak 🗣️
- panic and fear responses 😱
- vomiting 🤮
- increased body temperature/sweating 🥵
- rigid paralysis (limbs locked)
- floppy paralysis (unable to move but not rigid)
- suppressed breathing 🤧
- loss of bowel control 🚽
- hallucinations 👁️
- eyes rolling back 🤪
- convulsions 🤯

There have been fatalities due to Spice. Mechanisms of death have included convulsions, heart failure, suppressed breathing or traumatic injuries when intoxicated.

Risks of unpleasant or dangerous effects will increase if the person using spice is:

- also using serotonin-elevating medicines such as anti-depressants,
- using an opiate drug (e.g. Codeine in Lean),
- using a drug that could affect heart rate such as Methylphenidate (Ritalin),
- has any condition that causes fitting (e.g. Epilepsy),
- experiences panic, anxiety or other markers for poor mental health



Responses to Suspected Spice Episodes

Responses:

If you see symptoms that suggest a higher dose of Spice or are at all concerned call an ambulance

If the person is conscious and responsive:

- ensure that you are safe: are they panicking and possibly aggressive?
- keep them calm and reassure them
- reduce stressors – people around them, noises, bright lights
- if they can hold containers and swallow, offer a sugary drink (e.g. orange juice) to sip

Symptoms may wear off within 15-30 minutes. If they last longer or worsen seek medical help.

If any of these symptoms are present **CALL AN AMBULANCE**

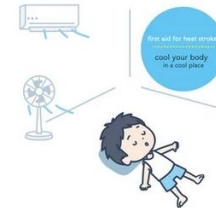
If they are convulsing:



- protect the head by placing a pillow or folded jacket below it
- remove objects from the vicinity that could cause injury
- do not attempt to restrain the person

If they are too hot:

- increase airflow across the person
- splash the person with luke-warm water
- remove outer garments if required



If they are highly agitated/can't communicate:



- continue to address them by name
- remember they may be able to hear even if they can't talk
- reassure them that they are being looked after

If they are unconscious:



- ensure airway is clear
- place in recovery position
- apply CPR if required or advised to by 999 call handler.

Synthetic Cannabinoids are physically addictive:

Unlike natural cannabis products, synthetic cannabinoids can cause significant withdrawal symptoms. For physical dependence to develop use will need to have been regular and frequent (more than a couple of times per week over several weeks at least.)

Indicators of physical dependence could include:

- evidence of tolerance (needing to use more to achieve the same effect),
- using more frequently
- using for longer periods
- negative symptoms when cutting down or stopping

Withdrawal symptoms:

(some of the symptoms of spice withdrawal can look like symptoms of intoxication)

- | | | |
|----------------------|----------------------|-----------------|
| - anxiety | - sleep problems | - sweats |
| - panic and paranoia | - restless movements | - jittery limbs |
| - stomach cramps | - nausea | - vomiting |

Screening: If you are working with young people who you know or suspect vape regularly and you are aware of such symptoms ask about spice use and see if this could be the cause.

Treatment: Spice dependency is treated using medicines to manage the symptoms of withdrawal. Where a young person may be dependent on Spice you should refer them to the local young person's drug service for assessment and support.

Further information:

To find your local service for young people contact FRANK on: 0300 1236 600

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