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## Does vaping age or damage your skin?

The UK government is set to ban single use vapes in 2024. This follows concerns from health experts over the growing popularity of these e-cigarettes, particularly among young people.

The alarm has been raised on vaping and serious damage to lungs, blood vessels, and developing brains. Now, skin experts are uncovering a lesser discussed health problem – how vaping can damage and age our skin, making some of us look decades older.

### Does vaping age your skin?

Skin ageing is a natural part of life, but toxic chemicals can damage our skin cells and speed up the ageing process. Not only does this mean we end up appearing older than we are, but that our skin – the body's largest organ – is in poor health and less able to perform its protective duties. Sometimes, if irritation has occurred, this also leaves us in discomfort or pain.

Dr T N Rekha Singh, dermatologist at [Oliva Skin & Hair Clinic](#), explains: "As we age, our production of [collagen](#) – a protein that gives skin elasticity and strength – decreases, leading to wrinkles, fine lines, and sagging skin. We also have a lower cell turnover rate and production of [hyaluronic acid](#), which are both crucial for maintaining youthful-looking and hydrated skin.

"Vaping involves breathing in and breathing out aerosolized liquid, which contains a mixture of harsh chemicals including nicotine, propylene glycol, and vegetable glycerin. These chemicals can cause inflammation in the body and oxidative stress – meaning that unstable molecules called free radicals collide into and damage our skin cells."

## How vaping ages your skin

- **Wrinkles and fine lines** - nicotine tightens blood vessels, known as vasoconstriction, in the skin's outermost layers. This reduces blood flow carrying essential oxygen and nutrients to the skin, particularly around the eyes and mouth.
- **Dullness and discolouration** - nicotine also triggers vasoconstriction to many veins throughout the body, limiting the oxygen supply to the skin which leads to a dull and discoloured appearance.
- **Dryness and sagging** - nicotine disrupts the body's collagen production, the structural protein needed for skin elasticity and hydration.
- **Breakouts and blemishes** - various vape chemicals trigger skin inflammation and irritation, resulting in blemishes and breakouts.

## The toxic culprits in your vape

### Nicotine

**What is it:** [Nicotine](#) is the addictive substance in vapes. One of the major concerns for the rise in popularity of vapes [among young people](#) is that early exposure to nicotine primes the brain for addiction to other drugs<sup>1</sup>. But nicotine also damages another major organ - the skin.

**The skin damage:** "Nicotine constricts blood vessels and reduces blood flow to the skin," explains Dr Singh. "This means that essential nutrients and oxygen are not reaching the skin cells as efficiently, contributing to premature ageing. Nicotine also decreases collagen production, leading to decreased skin elasticity and more visible wrinkles."

### Propylene glycol

**What is it:** Propylene glycol is a food additive. While it carries flavours and colours that help vapes appear and feel harmless, this substance appears to be toxic when regularly inhaled as a vapour.

**The skin damage:** Propylene glycol is a humectant, meaning that it's great at absorbing water and moisture from its surroundings: "This causes dryness and irritation, which can damage the skin barrier and lead to premature ageing. Furthermore, it has been linked to an increase in skin irritation, sensitivity, and allergic reactions," says Dr Singh.

## Vegetable glycerin

**What is it:** Vegetable glycerin is also an additive that's used in food products. It's often used in e-liquids to create the vapour that's inhaled.

**The skin damage:** "While vegetable glycerin is considered safe for consumption in the food we eat, research has shown that it can disrupt the skin's natural barrier function," says the doctor. "Like propylene glycol, this leads to skin dryness and irritation. This disruption can also make the skin more susceptible to environmental damage, like harmful [UV rays](#) from the sun, accelerating the ageing process even more."

## Skin irritation and vaping

Skin irritation may sound like a short-term issue, but it's closely related to skin ageing because it makes the skin appear less healthy and youthful. For example, vaping may trigger or cause:

- **Skin allergies, called contact dermatitis<sup>2</sup>** - for example, to the nickel used in vape devices.
- **The most common type of eczema, called atopic dermatitis.**
- **Chemical or thermal burns<sup>4</sup>** - often from battery malfunctions and the heat in the vape devices themselves.

The interest in this area is still relatively new, and there's debate as to whether vaping also makes **acne** more severe.

## The long-term effects of vaping

There is still much we don't know about vaping's long-term effects on your skin. For example, how long you need to vape before these effects show up is unclear, although we do know this varies widely from person to person.

"While there is still much research to be done, early studies have shown truly concerning results for the speed at which skin ages," says Dr Singh. "Also of note, vaping appears to inhibit the body's wound healing and tissue repairing abilities. This suggests that vaping may also impact the skin's ability to heal itself and maintain its youthful appearance."

Many of us are worried about our skin's appearance. While this can affect our confidence, the truth of the matter is that premature skin ageing is a sign that our skin is becoming less able to protect us - from wound healing and moisture loss prevention to providing a barrier against injury and UV radiation. For our skin to look after us, we need to look after our skin.

## Further reading

1. [Centers for Disease Control and Prevention: Quick facts on the risks of e-cigarettes for kids, teens, and young adults.](#)
2. [Visconti and Ashack: Dermatologic manifestations associated with electronic cigarette use.](#)
3. [Smith et al: Association between electronic-cigarette use and atopic dermatitis among United States adults.](#)
4. [Jones et al: E-cigarette burn injuries: comprehensive review and management guidelines proposal.](#)

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