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Smoking effects on skin: from ageing to illness

Smoking is bad for you but its effects on your skin's health may not be the first thing you think of. We explore how this deadly habit can damage the largest organ of the body – the skin.

"Smoking damages nearly every organ in the body," explains Dr Anjali Mahto, consultant dermatologist and [British Skin Foundation](#) spokesperson. "Unlike damage to your heart or lungs, the effects on skin are often outwardly visible. Not only is smoking related to the development of certain skin disorders, it is a major culprit in premature ageing of the skin."

Premature ageing

Smoking deprives the skin of oxygen and nutrients. While some smokers appear pale, others develop an uneven colour. The habit also stains the smoker's fingers and teeth, and makes them more susceptible to age spots or patches of darker skin, especially if they spend a lot of time in the sun.

There are more than 4,000 chemicals in tobacco smoke, several of which can trigger the destruction of collagen and elastin, which gives skin its strength and elasticity. Smoking damages the building blocks of skin causing it to sag, not only on the face but also the arms and breasts.

Smokers also develop earlier and deeper wrinkles in addition to a smoker's pucker, caused by using certain muscles around their mouth that non-smokers do not.

"The link between smoking and wrinkles has been known for many years. Smoking is an independent risk factor for developing wrinkles. Women seem to be more susceptible to this than their male counterparts.

Commonly, this shows itself as fine lines around the eyes – sometimes called crow's feet – and mouth at an earlier age than non-smokers," says Mahto.

"Aside from early wrinkling, other facial features have been described in smokers. These include thinning of the skin, facial redness, and prominence of the underlying bony contours of the face," she adds.

Skin cancer

Spending too much time in the sun is a major risk for developing [skin cancer](#), but smoking also increases your chances. Smokers are at greater risk of developing squamous cell carcinoma (SSC), the second most common type of skin cancer, caused by the uncontrolled growth of abnormal squamous cells in the outermost layer of the skin.

Mahto says: "Even people who only smoke a few cigarettes a day remain at risk of this. It is thought that tobacco found in smoke suppresses the immune system, allowing cancer cells to evade recognition.

Whilst SCC is easier to treat if found early, it does have the potential to spread to other parts of the body and can potentially be life-threatening."

Smokers have a higher risk of developing wart-related cancers, including cancer of the vulva, anus and penis, adds Mahto, as well as genital warts caused by the human papillomavirus (HPV). This could be related to the immunosuppressive effects of nicotine.

Poor wound healing

Many studies have shown that smoking can interrupt the wound healing process, causing higher rates of wound infection, decreased wound strength, skin graft failure, tissue death, and blood clot formation.

Nicotine is thought to cause blood vessels to narrow and decrease blood flow, reducing the amount of oxygen and other nutrients reaching wound tissues. It can also cause tiny blood clots to form, which can block small blood vessels.

Tobacco also prevents the formation of [collagen](#). Reduced collagen production causes changes in the normal inflammatory processes that occur during wound healing. Furthermore, smoking delays the formation of new blood vessels within a wound.

Other skin disorders

Psoriasis

Smoking can aggravate other skin conditions such as [psoriasis](#), a relatively common disorder of the skin that causes red, scaly patches of skin.

"Smokers have a higher risk of developing this condition compared to non-smokers. They are also more likely to have severe and more extensive disease that is less likely to respond successfully to treatment," explains Mahto.

"Nicotine is thought to directly affect the immune system, potentially triggering psoriasis in those people who may already have an underlying tendency towards developing this condition. It binds to skin cells known as keratinocytes, promoting their cell division and turnover."

Discoid lupus erythematosus

Smoking can also aggravate discoid lupus erythematosus, says Mahto. This is an autoimmune skin condition where scaly, red patches often appear in sun-exposed sites.

"The areas can often clear but leave behind scarring. This occurs at least ten times more commonly in smokers compared to non-smokers," she adds. "Treatment of this condition with antimalarial and other drugs has also been shown to be less effective in smokers."

Hidradenitis suppurativa

Also common among smokers is [hidradenitis suppurativa](#), a long-term condition that results in painful boil-like swellings and abscesses under the skin – particularly in the groin and armpits – that can often discharge and leave scarring.

"Hidradenitis is found more frequently in smokers," explains Mahto. "Whilst the reasons for this are not entirely clear, there is a suggestion that nicotine acts on the immune system and skin cells, leading to blockage and rupture of hair follicles."

One more reason to quit

Smoking is bad for your skin, but quitting can cause its appearance to improve. Blood flow recovers, meaning the skin receives the oxygen and nutrients it requires, leading to a healthier looking complexion. The stains found on fingers and nails may also disappear and teeth may look whiter.

Of course, quitting smoking also improves general health. Within a year, the risk of developing heart disease is half that of a smoker. And within ten years, an ex-smoker is no more likely to die of lung cancer than someone who has never smoked.

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