

- Ultraviolet rays / Radiation

TIPS FOR TIPS

Nail-care methods including gel, dip and UV lamp carry potential risks. Here's how to put your finger on the problem

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Gel manicures are popular because they last a long time and don't easily chip or peel. But they've come under scrutiny in recent weeks following a new study that found the ultraviolet lamps used for these nail treatments damage cells in ways that could potentially increase the risk for cancer.

The findings add to a small but growing body of research suggesting that regular use of UV nail lamps could accelerate ageing and increase cancer risk. Health experts agree that UV light causes damage to skin cells, but there's still not enough data to determine just how dangerous the occasional gel manicure might be, said Dr Chris Adigun, a dermatologist in Chapel Hill, North Carolina, who was not involved in the study.

"We can't quantify the risk," she said. Still, Adigun and other dermatologists said that taking certain precautions can help make gel manicures safer. Dip powder manicures are another option, though they may not be entirely riskfree, either.

UV RADIATION IN NAIL LAMPS

UV lamps are essential for gel manicures because the light makes the nail polish harden and become more durable. (Some salons use LED lights for gel manicures, but these release plenty of UV light, too, Adigun said.)

In the new study, published in the peer-reviewed journal Nature Communications last month, researchers exposed human and mouse cells to radiation from a nail lamp used in many US nail salons.

When the cells were exposed to UV light from the lamp for 20 minutes, around 30% of the cells died. Some of the cells that survived suffered damage to their DNA. The damage patterns that researchers observed were similar to those seen in people with melanoma, a potentially deadly type of skin cancer, said Maria Zhivagui, a co-author of the study and a postdoctoral scholar of cancer genomics and public health at the University of California, San Diego.

Although the cell damage is worrying, Zhivagui said, the study does not prove that UV lamps can cause cancer. Cells in a lab are more vulnerable to damage than cells on a person's hand, which has a thick outer layer of skin made of dead cells that helps protect against environmental damage, Adigun said.

No major studies have yet evaluated whether people who get gel manicures are more likely to develop skin cancer than people who don't. There have been case studies involving people who were diagnosed with skin cancer on their hands after getting gel manicures regularly, but it's unclear whether their nail treatments were the culprit. Still, "the data is mounting that UV radiation emitted by nail lamps could be potentially dangerous", Adigun said.

THE POWDER ALTERNATIVE

One alternative is the dip powder manicure, which is also long-lasting and involves dunking nails into acrylic powder after applying an adhesive. A dip manicure typically does not require a UV lamp, but some stylists might add an extra gel coating at the end so that the manicure lasts longer — in which case a UV lamp would be used, said Dr Lyndsay Shipp, a dermatologist based in Oxford, Mississippi.

There's one concern with dip manicures, though: stylists often use the same jar of acrylic powder for multiple customers, which increases the possibility that the powder could harbour germs that cause nail infections, Adigun said.

But Adigun, who has specialised in nail disorders for over 16 years, said that she had never heard of anyone getting a nail infection from a dip manicure. And the acetone that stylists often use to remove nail polish at the beginning of a manicure acts as a disinfectant, Shipp said, cleaning the nail and reducing the chances of contamination.

The risk of getting an infection from a dip manicure is “incredibly rare”, Shipp said.

SAFETY TIPS FOR YOUR NEXT MANICURE

Thankfully, there are steps you can take to minimise health risks the next time you visit the salon.

If you're getting a gel manicure, consider wearing fingerless UV protective gloves, Adigun said. (She did not recommend using sunscreen, as sunscreens have been shown to protect against UV exposure only from the sun, not from UV lamps, she said.)

To reduce your risk of infection, Adigun suggested asking your stylist not to push back or remove your cuticles, which provide an important barrier against germs. Many people blame post-salon infections on contaminated equipment, she said, when it's more likely that their own germs infected the nails after their cuticles were removed.

“Tell them, ‘Please trim my nails, file my nails, do not touch my cuticles,’” Adigun said. It's also a good idea to request that your stylist only lightly buff and file your nails before adding polish, Shipp said, because heavy buffing and filing can make them thinner and more brittle. Thick coats of polish can also weaken nails, she said, so it's best if stylists apply thinner layers. Also, skip the gel topcoat if you're getting a dip manicure so you don't have to use a UV lamp.

And it may seem obvious, but pick a salon that takes safety seriously, Shipp said. Ask if the staff members reuse equipment and, if so, how they sanitise it between customers. (Autoclaves or dry-heat sterilisers are ideal.) You could also purchase your own drill bits, files and buffers and bring them with you, she added.

Although gel and dip manicures can pose risks, they don't have to be a source of anxiety, Adigun said, adding: “It's all about having the information you need to be able to go in there and get a great manicure or pedicure safely.”