

Lifestyle & Culture

Toasted skin syndrome



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Have you ever spent hours on your sofa, typing away on your laptop with it on your lap? Or have you ever spent an afternoon flying through documents and research near your heater on a chilly winter day? Some of us have all been there once or more, especially during the cold months. But have you ever thought about how the radiating heat may impact your skin?

What is toasted skin syndrome?

Toasted skin syndrome is medically known as the dermatological condition, erythema ab igne, which means "redness by fire" in Latin. It is typically observed in individuals that have been exposed to a source of heat (43 – 47 °C) for long hours. This condition manifests as an acquired asymmetric hyperpigmented dermatosis, meaning that after repeated and prolonged exposure to moderate heat or infrared radiation, the area of exposed skin to the heat becomes abnormally hyperpigmented.

In the early stages of the disease, although some itching or burning may be involved, most individuals tend to be asymptomatic and may not be aware of what is happening to their skin, especially if heat is exposed to an area of the body that is normally overlooked. Initially, the skin develops lacy or net-like (reticulated) pink or red patches which vary in size and shape depending on the heat source. If gone unnoticed or ignored, with repeated continued exposure, the area will eventually become dusky and hyperpigmented obtaining a purplish colour.

The hyperpigmentation is a result of superficial blood vessel injury leading to hemosiderin deposition together with the degeneration of elastic fibres and basal cells causing the release of melanin. Both melanin and hemosiderin contribute to skin hyperpigmentation, leading to the disease's characteristic reticular rash in a vascular pattern.

Although this disease was historically recorded in bakers and industrial workers, it has recently resurfaced and gained more attention due to the current increase in the use of novel heat sources like laptops, heated car seats, hot water bottles, heated blankets, heaters and so on. This disease is more prominent in women than men and in patients suffering from chronic diseases. While, erythema ab igne tends to resolve on its own over weeks to months provided that the heat source is removed,

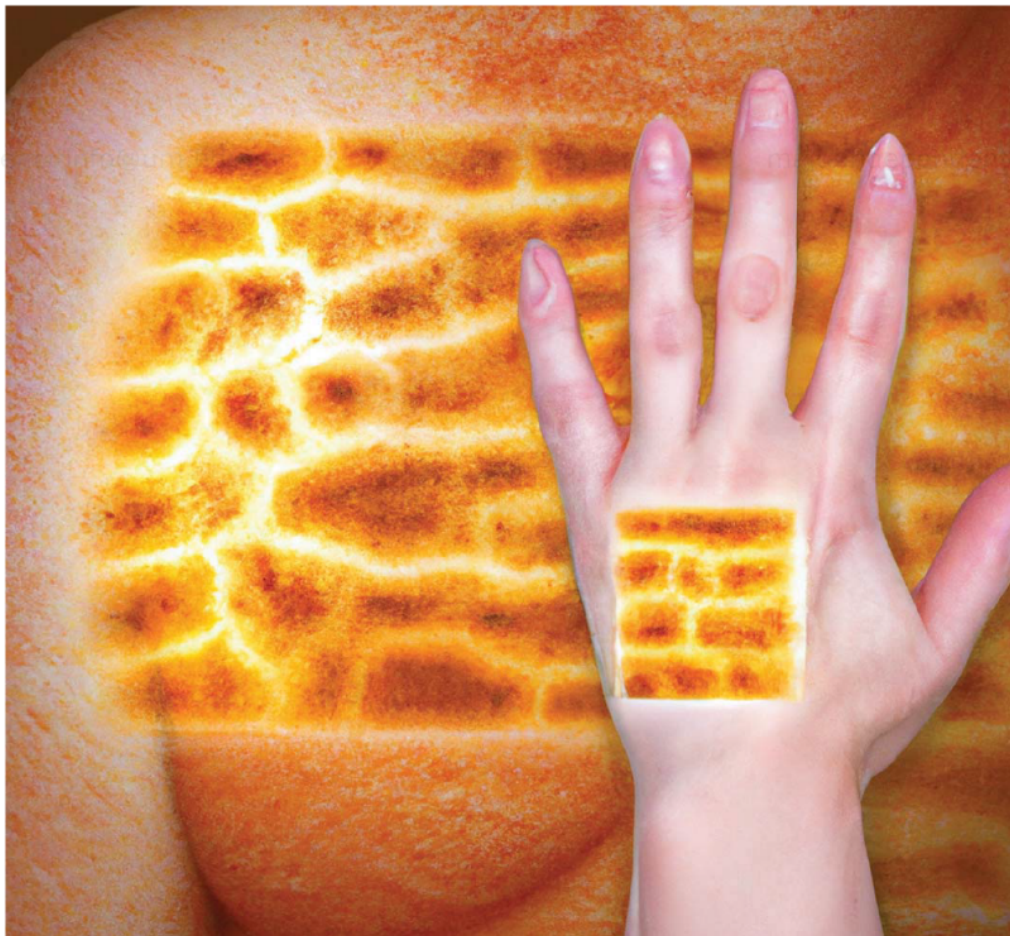


Photo: AI-generated images created by Prof. Blundell

the rash can become permanent.

Furthermore, despite toasted skin syndrome being a largely benign condition, there have been cases in which this led to the development of cutaneous malignancies like cutaneous lymphoma, squamous cell carcinoma or Merkel cell carcinoma. In some cases, it was also noted that this disease was a dermatological finding in patients with underlying malignancies like colorectal, pancreatic, gastric, renal, breast and/or hematologic malignancies. Thus, it is believed that the underlying malignancy may have served as the source of chronic pain that leads patients to use heating devices that inadvertently lead to the development of toasted skin syndrome.

Who is at risk of developing toasted skin syndrome?

Naturally, being exposed to a heat source for long and repeated periods puts one at risk. Certain occupations like being a baker, chef or a factory worker – particularly those that work in

metal and coal factories – increase their risk of developing the disease due to the continued heat exposure.

Furthermore, individuals undergoing medical treatment for conditions like malignancies, inflammatory bowel disease or musculoskeletal conditions requiring exposure to heat and radiation puts them at risk too.

And finally, apart from people spending hours with their laptops on their thighs or sitting near a fireplace/heater, children are at an even greater risk since their skin is far more sensitive than that of an adult.

Prevention and management

Presently there is no concrete treatment for toasted skin syndrome. Obviously, the initial step is to remove the heat source to prevent further injury to the skin and disease progression. Although, as mentioned previously in most cases the disease is reversible and the rash eventually disappears, in cases that are chronic or improve only minimally following heat source re-

moval, topical steroids or tretinoin and hydroquinone may reduce hyperpigmentation. In addition, 5-fluorouracil is known to aid in the destruction of the atypical cells making up the reticulated rash. Similarly, mesoglycan with topical flavonoids are believed to reduce discolouration too. However, should one have concerns regarding this disorder or any other condition, it is always advisable to seek medical advice from a healthcare professional.

Some pointers to correctly and safely use heating devices:

- Apply the lowest heat setting available.
- Avoid prolonged and repeated exposure. This can be done by setting timers on heaters and heating pads to have them automatically switched off after a certain time.
- Keep heaters at least a metre away from your skin and rotate their position to prevent continued intense exposure to one particular area of your skin.
- When using heating pads and/or blankets, ensure there

is a clothing barrier between the heat source and your skin to prevent direct damage to the skin.

A final word

In summary, as emphasised throughout this article toasted skin syndrome, as implied by its name, is heavily related to heat exposure. Thus, the next time you sit near your heater or work with your laptop on your lap, think again. Finally, if you are noticing any abnormal changes to your skin, specifically after applying a heat source, it is vital to seek medical attention to both manage the disease and rule out any other worrying conditions.

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