

# Examining the adverse effects of hand sanitizers

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Washing hands and using hand sanitizer have been some of the most important methods to combat spread of infection during the COVID-19 pandemic. Reports of increased hand irritation and dryness prompted a

study led by researchers from National Jewish Health and published August 13, 2021, in the *Annals of Allergy, Asthma & Immunology*.

"You hear of people talking about their hands being irritated from the increased hand hygiene, both with health care workers and non-health care workers. I wanted to study the effects of it on the [skin](#) objectively," said Dr. Jessica Hui, pediatric allergist at National Jewish Health, and the lead author of the study. Study participants enrolled between December 2020 and February 2021 included health care workers and non-health care workers, with and without eczema.

The effects of [hand sanitizer](#) and hand washing with soap and water were studied in one visit. To help measure the effects of repeated washings, a "skin tape strip" was used, which is a small, non-painful sticker placed on the skin. Another device that measures the amount of water loss from the skin showed the changes to the [skin surface](#) before and after hand sanitizer use and hand washing.

Ultimately, it was found that at baseline, health care workers with eczema have a more damaged skin barrier than the other groups. The health care workers in particular were more affected after hand sanitizer use. The eczema group was more affected after [hand washing](#) with soap and water. Even those without eczema and non-[health care workers](#) had some damage to their skin after more rigorous hand hygiene.

"We obviously promote hand hygiene to prevent the spread of viruses and bacteria, and this recommendation will not go away, but it's important to emphasize that it does cause damage to the skin barrier—so we need to remember to care for our skin with moisturization after treating our skin with hand sanitizer," said Hui.

**More information:** Jessica Hui-Beckman et al, Hand hygiene impact on the skin barrier in health care workers and individuals with atopic

dermatitis, *Annals of Allergy, Asthma & Immunology* (2021). DOI: [10.1016/j.anai.2021.08.007](https://doi.org/10.1016/j.anai.2021.08.007)

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