

New discovery on the causes of contact allergy

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The fragrances used in many household and skincare products can cause contact allergy when exposed to oxygen in the air, reveals research from the University of Gothenburg's Faculty of Science in conjunction with the University of Gothenburg to be presented at the dermatologist conference in Gothenburg.

The researchers studied how these substances can be activated through contact with oxygen in the air, and how this, in turn, can affect the skin. One particular study looked at whether the activated fragrances caused contact allergy when tested on eczema patients at Sahlgrenska University Hospital's [Dermatology](#) Clinic and the Occupational and Environmental Dermatology Clinic in Malmo. It was found that a high percentage of the 3,400 eczema patients tested had an allergic reaction to the substances.

"In a bid to gain a deeper understanding of how contact allergy occurs, we are now using state-of-the-art microscopic equipment to follow what happens to an [allergen](#) once it gets into the skin," says Ann-Therese Karlberg, professor of dermatochemistry and skin allergy at the Faculty of Science's Department of Chemistry, and a researcher at the Sahlgrenska Academy.

When determining how allergenic a substance is, consideration must also be given to the skin's ability to activate a substance through the metabolism.

"We've developed a mixture that reflects the content of real skin

enzymes, and use it to investigate whether the chemical substances can be activated in the skin and become allergenic."

Their discovery will help the health service to diagnose allergic contact eczema correctly through the development of new diagnostic tools, and reduce the number of cases of allergic contact eczema in the long term. For patients, the right diagnosis means that they can avoid exposure to substances that trigger the problem, and so give their eczema a chance to heal.

"Future work will see us evaluating new diagnostic methods and carrying out in-depth studies of what goes on in the [skin](#). This will enable us to develop new medicines and replace the only treatment that is currently available for [eczema](#), namely cortisone cream," explains Karlberg, who believes that their research could improve preventive work through its impact on manufacturers, consumers and legislation.

Provided by University of Gothenburg

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