

Study provides new insights for medication to treat atopic dermatitis

August 24 2023



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Patients with atopic dermatitis, the most common inflammatory skin disease in the general population, often have vascular changes that lead to a loss of proteins in their skin and symptoms like oozing, bleeding,

infection and redness. In a recent study, researchers at National Jewish Health tested a medication known as dupilumab in patients suffering from this condition. The study found that the drug also helped treat eczema by decreasing the proteins leaking from patients' blood vessels into their inflamed skin.

"Treatment of eczema is imperative, because patients with this disease have a leaky skin barrier, which allows allergens to come in through the skin," said Donald Leung, MD, Ph.D., head of Pediatric Allergy & Clinical Immunology at National Jewish Health and first author of the paper published in *The Journal of Allergy and Clinical Immunology: In Practice*.

"Allergens coming through the skin barrier can lead to a condition we refer to as the atopic march. The atopic march describes a progression of allergic diseases that often begins with very young children having atopic dermatitis (eczema), and then developing food allergies, asthma, and [hay fever](#) later in childhood and as adults," Dr. Leung added.

The study indicated that eczema made the [blood vessels](#) in the skin more permeable, measured by [water loss](#) and blood proteins appearing in the skin. After 16 weeks, the dupilumab helped significantly reduce many blood proteins that could be detected in diseased skin, indicating that it helps strengthen blood vessels throughout the body. Strengthening the blood vessels helps reduce water loss in eczema patients as well as lowering the risk of Staphylococcus aureus (staph) infections.

"These findings demonstrate for the first time a new action of dupilumab: improved barrier function of blood vessels in [atopic dermatitis](#)," said Dr. Leung.

More information: Donald Leung et al, Dupilumab inhibits vascular leakage of blood proteins into atopic dermatitis skin, *Journal of Allergy*

and Clinical Immunology (2023). [DOI: 10.1016/j.jaci.2022.12.460](https://doi.org/10.1016/j.jaci.2022.12.460)

Provided by National Jewish Health

Citation: Study provides new insights for medication to treat atopic dermatitis (2023, August 24) retrieved 11 May 2024 from <https://medicalxpress.com/news/2023-08-insights-medication-atopic-dermatitis.html>

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