



Foundation for Ichthyosis & Related Skin Types

Foundation for Ichthyosis & Related Skin Types, Inc.®

## "What is the relationship between eczema and ichthyosis?"

The epidermis, the top part of the skin, forms the barrier us and the environment that keeps the outside out and the inside in. We will limit eczema to "atopic eczema," where there is an inherited predisposition to poor barrier function of the skin that leads to itchy, red, scaling skin.<sup>1</sup>

People with both eczema and ichthyosis suffer from dry skin. Recently mutations in the gene for a protein in the epidermis have been found to underlie the most common form of ichthyosis, ichthyosis vulgaris. The gene involved codes for the precursor form of filaggrin, a protein involved in the final stages of formation of the barrier of the epidermis. Mutations in this gene "confer a substantial risk of atopic dermatitis."<sup>2</sup>

Eczema is often seen in another, much less common form of ichthyosis, Netherton syndrome. The mutation underlying Netherton syndrome is in the gene coding for a protein that inhibits the breakdown of the epidermis. In Netherton syndrome, breakdown of the barrier of the epidermis is unchecked.

In both cases, defects in the barrier function of the epidermis result in eczema.

1. S. G. Johansson, T. Bieber, R. Dahl, P. S. Friedmann, B. Q. Lanier, R. F. Lockey, C. Motala, J. A. Ortega Martell, T. A. Platts-Mills, J. Ring, F. Thien, P. Van Cauwenberge, and H. C. Williams. Revised nomenclature for allergy for global use: Report of the Nomenclature Review Committee of the World Allergy Organization, October 2003. *J.Allergy Clin.Immunol.* 113:832-836, 2004.
2. A. D. Irvine. Fleshing out filaggrin phenotypes. *J.Invest Dermatol.* 127:504-507, 2007.

*This information is provided as a service to patients and parents of patients who have ichthyosis. It is not intended to supplement appropriate medical care, but instead to complement that care with guidance in practical issues facing patients and parents. Neither FIRST, its Board of Directors, Medical & Scientific Advisory Board, Board of Medical Editors, nor Foundation staff and officials endorse any treatments or products reported here. All issues pertaining to the care of patients with ichthyosis should be discussed with a dermatologist experienced in the treatment of their skin disorder.*



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***Improve lives and seek cures for those affected by ichthyosis and related skin types.***

February 2021