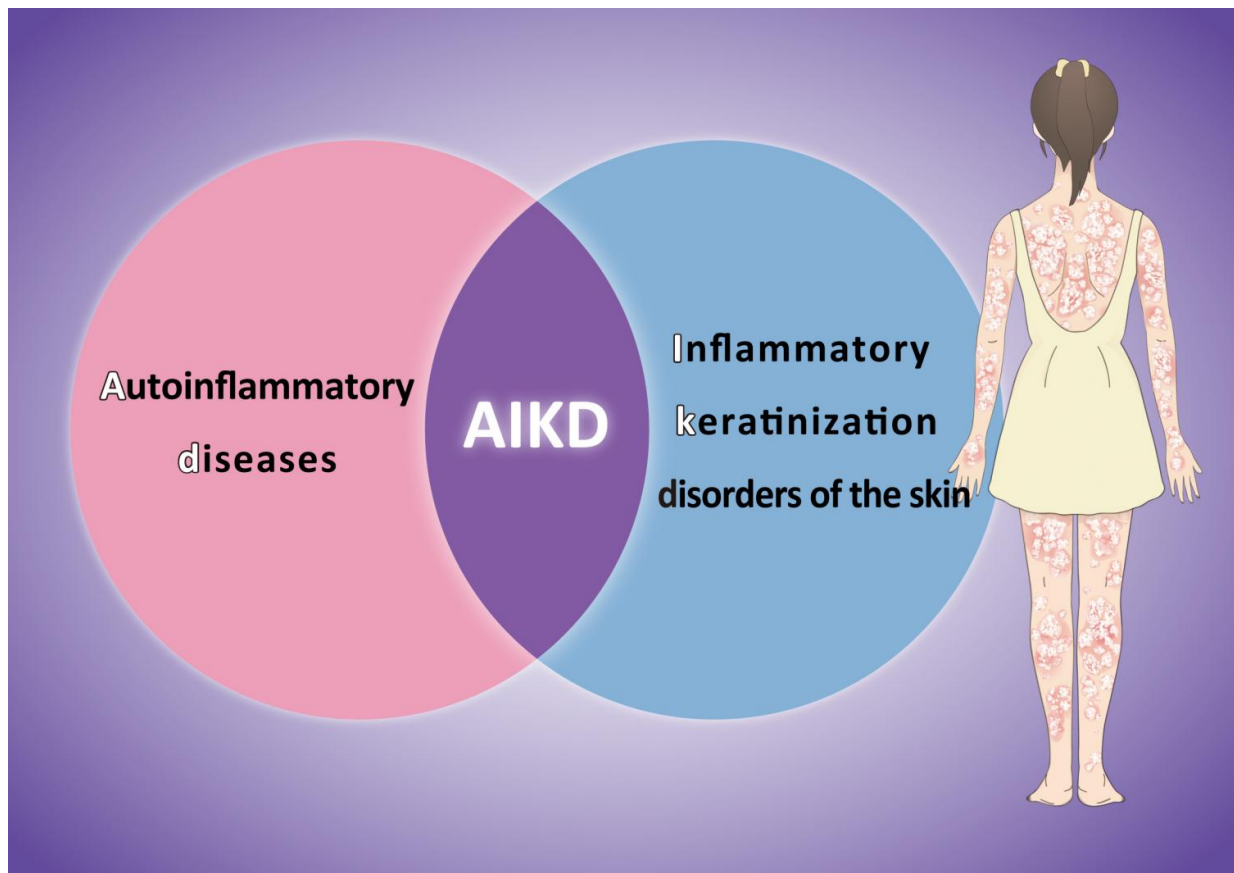


# Medical researchers propose new disease category of skin disorders

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Autoinflammatory keratinization diseases (AIKD), a new class of skin disorders, with a genetic cause rooted in the body's innate immune system. Credit: Nagoya University

Dry scaly skin, blistering, rashes. Many people will experience some

kind of skin problem at some time in their life, if only briefly. However, some individuals are severely affected by chronic skin problems throughout their lives. Most sufferers of any kind of skin problem will agree that the timing and triggers of skin flare-ups are somewhat mysterious. Medical science has only recently begun to separate the environmental and genetic factors behind these conditions.

Now, an international collaboration lead by Nagoya University researchers has drawn on their experience helping patients with serious skin [conditions](#) to define a whole new category of genetic skin diseases.

"Many skin disorders are put into the very broad group of inflammatory keratinization diseases. This term is not very helpful because it covers so many kinds of skin [problems](#) and doesn't consider if the root cause is inflammatory or genetic, or a combination of both," says group leader and lead author Masashi Akiyama.

Keratinization is the process that forms the outer layer of our skin, based on tough and water-resistant proteins, including keratin and lipids, such as ceramides. However, any number of problems can stop keratinization from working properly, leading to familiar skin problems. For example, immune or allergic reactions and many types of eczema involve an inflammatory response, where the body's own immune system attacks itself, overreacting to an irritant.

In their recent perspective article, published in the Journal of Allergy and Clinical Immunology, the Nagoya group argues that some [skin conditions](#) are actually an "autoinflammatory" response with a genetic basis. These conditions reflect a more uncontrolled primitive response of the body's deeper immune system, which does not necessarily depend on exposure to an irritant.

"We have been finding more and more of these autoinflammatory

related skin diseases and it's time we recognize this as a new category of inflammatory keratinization disease," says co-author Kazumitsu Sugiura. "A better understanding of the root causes of [skin](#) problems is the only way for physicians to help patients manage their conditions and develop more effective treatments."

**More information:** Masashi Akiyama et al, Autoinflammatory keratinization diseases, *Journal of Allergy and Clinical Immunology* (2017). [DOI: 10.1016/j.jaci.2017.05.019](https://doi.org/10.1016/j.jaci.2017.05.019)

Provided by Nagoya University

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