

Study finds babies born in fall at higher risk for allergic diseases

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AJ Grady will celebrate his 6th birthday in October. After having eczema as a baby, AJ later developed food allergies. They are part of a chain reaction of allergic diseases called the atopic march and a new study by National Jewish Health finds it's more common in babies born in the fall. Credit: National Jewish Health

Food allergies are on the rise, with more than five million children, about two kids in every school classroom, now suffering from allergy to at least one food. Researchers at National Jewish Health are working to discover what is responsible for this increase and have determined that many allergic conditions likely start with dry, cracked skin, which leads to a chain reaction of allergic diseases known as the atopic march. It begins in infancy with eczema and leads to food allergies, asthma and hay fever later in childhood. Now, their latest study reveals that the time of year a baby is born may be a risk factor for the atopic march.

"We looked at every child treated in our clinic, and those born in the fall were much more likely to experience all of the conditions associated with the atopic march," said Jessica Hui, MD, a pediatrician at National Jewish Health and lead author of the study. "Now we are learning more about why that is and we strongly believe it stems from the bacteria on the skin on how they affect the skin

barrier."

Children with eczema often have high levels of a harmful bacteria called staph aureus on their skin, which weakens the skin's ability to keep out allergens and pathogens.

"When [food particles](#) are able to penetrate the skin rather than being digested, the body sees them as foreign and creates antibodies against them, which causes the child to become allergic," Dr. Hui said.

Researchers are now conducting a clinical trial to look at a wide variety of factors that may contribute to this weakened skin barrier in babies. They're enrolling [pregnant women](#) and following their babies into early childhood to consider everything from environmental factors to genetics to medications taken and products used in the home. They hope that this will not only help explain why babies born in the fall are at greater risk, but will also help develop solutions to stop the atopic march in its tracks.

"We think if we can intervene at a very young age, even right after the baby's out of the womb, then potentially that's a way for us to try to stop the development of this atopic march," Dr. Hui said.



A new study by researchers at National Jewish Health found babies born in the fall are more likely to experience a lifetime of allergic conditions that start with eczema and lead to food allergies, asthma and hay fever. Credit: National Jewish Health

Other potential solutions to prevent the atopic march is sealing the [skin](#) barriers of babies with eczema using wet wraps and lotions and introducing allergenic food early in life for kids at risk.

The study is published in the *Journal of Allergy and Clinical Immunology: In Practice*.

Provided by National Jewish Health

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