

# Children with food protein-induced enterocolitis more likely to have other allergies

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Researchers at Children's Hospital of Philadelphia (CHOP) have found that children with a rare food allergy known as food protein-induced enterocolitis syndrome, or FPIES, have a significantly higher chance of being diagnosed with other allergic conditions, including eczema, traditional food allergy and asthma. But the researchers also found that FPIES did not directly cause those other allergies.

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

"This work refines our view of the natural history of FPIES and expands our understanding of the relationship between this condition and other allergic diseases," said first author Melanie Ruffner, M.D., Ph.D., attending physician in the Division of Allergy and Immunology and the Center for Pediatric Eosinophilic Disorders at CHOP. "It's important for clinicians to keep in mind that

patients with FPIES have a higher frequency of allergic manifestations and therefore provide appropriate screening and care as needed."

FPIES causes repetitive vomiting, diarrhea, and lethargy several hours after eating a trigger food, frequently cow's milk, soy, and grains. The condition typically develops during infancy, though it can occasionally occur in older children and adults.

Although previous research has collectively shown patients with FPIES have increased rates of eczema, other food allergies and asthma—so-called atopic allergies—researchers have not investigated the association between FPIES and other allergies to look for a potential causal link.

To do so, Ruffner and her collaborators looked at a cohort of more than 150,000 [pediatric patients](#), of which 214 had FPIES. The investigators compared the rate of atopic allergies in FPIES patients to those without FPIES. They also followed the patients over time to see if there were differences in the timing of when FPIES patients developed atopic allergies compared to other patients.

The authors found that those with FPIES had substantially higher [allergy](#) rates than patients without the condition. FPIES patients were diagnosed with traditional food allergy at about six times the rate of those without FPIES and with [atopic dermatitis](#) at about twice the rate. There was a slightly smaller increase in the rate of asthma diagnoses, but those with FPIES were still diagnosed at a higher rate than those without the disease.

However, when the research team looked at the timing of the development of allergies, and whether a diagnosis of FPIES would lead to atopic allergies

later in life, they did not find a causal link between the two. Thus, unlike the so-called atopic march—the progression of atopic disorders from eczema in infants to hay fever, [food](#) allergy and asthma in older children—FPIES does not cause other allergic disorders but instead is associated with them.

"Although there is an increased rate of atopic allergies in patients with FPIES, our analyses demonstrate that a prior diagnosis of FPIES does not increase the rate of atopic allergies later in life," said corresponding author David Hill, M.D., Ph.D., attending physician in CHOP's Division of Allergy and Immunology. "This pattern of association supports a yet-unknown cause, such as a shared predisposition to both types of allergy."

**More information:** Melanie A. Ruffner et al, Elevated Atopic Comorbidity in Patients with Food Protein-Induced Enterocolitis, *The Journal of Allergy and Clinical Immunology: In Practice* (2019). [DOI: 10.1016/j.jaip.2019.10.047](https://doi.org/10.1016/j.jaip.2019.10.047)

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