

Children Restricting Diets Based on Incomplete Allergy Information

Avoidance Poses Nutritional Risk; Oral Food Challenges Provide Definitive Answers

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DENVER — Many children, especially those with eczema, are unnecessarily avoiding foods based on incomplete information about potential [food allergies](#), according to researchers at National Jewish Health. The food avoidance poses a nutritional risk for these children, and is often based primarily on data from blood tests known as serum immunoassays.

Many factors, including patient and family history, physical examination, and blood and skin tests, should be used when evaluating potential food allergies. The [oral food challenge](#), in which patients consume the suspected allergenic food, is the gold standard test.

The researchers conducted a retrospective chart review of 125 children evaluated at National Jewish Health for suspected food allergies. Depending on the reason for food avoidance, 84 percent to 93 percent of foods being avoided were restored to their diets after an oral food challenge. The researchers published their study in April 2011 *Journal of Pediatrics*.

“People with known food allergies, especially those with a history of anaphylactic reactions, should by all means avoid those foods,” said David Fleischer, MD, lead author of the study and Assistant Professor of Pediatrics at National Jewish Health. “However, a growing number of patients referred to our practice are being placed on strict, unproven food-elimination diets that have led to poor weight gain and malnutrition. These overly restrictive diets have been chosen for a variety of reasons, but overreliance on immunoassay tests appears to be the most common cause.”

Immunoassays, also commonly called RAST tests, detect antibodies in the blood to specific foods, which can potentially cause allergic reactions. Interpretation of the results, however, can be tricky. The tests’ ability to predict true food allergy has been validated for only five foods – cow’s milk, hen egg, fish, peanut and tree nuts.

For all other foods, the numbers derived from lab testing are suggestive but not definitive. Low test values suggest that a child’s immune system is sensitized to the food, but not necessarily to the extent that it will cause an allergic reaction. Higher values suggest an increasingly likelihood of true food allergy. None of the tests are 100 percent accurate, however, in predicting clinical food allergy on their own.

National Jewish Health physicians use blood tests as one piece of evidence in their comprehensive evaluation of food allergy. They also carefully evaluate a patient’s history, including any previous reactions to food, the type of reaction, the patient’s age, and the result of skin testing for food allergy. They generally perform an oral food challenge when the evidence is mixed and they want a definitive answer to the food allergy question.

Children in the study were avoiding 177 different foods based primarily on previous blood test results. In many cases, especially those with high test results for egg, milk, shellfish, peanut and tree nut, National Jewish Health elected not to perform oral food challenges. They did perform oral food challenges for 71 foods or about 40 percent of the cases where the clinical allergy was equivocal and it was important to determine whether or not the patient had food allergy. In 86 percent of those cases, the child passed the food challenge and the food was restored to the child’s diet. Overall, 66 of the 177 foods avoided because of blood tests were restored to children’s diets. For the entire study, 325 foods were restored to the diets of 125 children.

“When you are able to restore foods such as dairy products, egg, peanut, wheat, and vegetables to a child’s diet, it improves their nutrition, reduces the need for expensive substitute foods and makes meal time easier for families,” said [Donald Leung](#), MD, PhD, senior author and Edelstein Chair of Pediatric Allergy and Clinical Immunology at National Jewish Health.

The problem can be especially acute among patients with eczema, also known as atopic dermatitis. Research suggests that specific foods can cause flare-ups in about one third of eczema patients. They commonly have high immunoassay tests to a variety of foods, many of which are not truly allergenic. As a result, many mistakenly avoid foods they believe are causing flare-ups, but neglect basic skin care that is vital to improving the eczema. One hundred and twenty of the 125 children in the study had eczema.

National Jewish Health is a world leader in food-allergy treatment and research. Patients interests in participating in food-allergy research at National Jewish Health can call 303-270-2222.

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