Black Children Are More Likely to Experience Fish and Shellfish Allergies

Race may factor into why some food allergies affect Black children more than white children.

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Food allergies affect 8% of children in the United States. Now, new findings published in the Journal of Allergy and Clinical Immunology: In Practice reveal that Black kids have higher rates of shellfish and fish allergies than white kids, reports Rush University Medical Center.

For the study, researchers examined 664 children ranging in age from newborn to 12 years old. (The group was composed of 36% Black kids and 64% non-Hispanic white children.) Youngsters were diagnosed with a food allergy and seen in allergy and immunology clinics at four urban care centers across the United States.

Findings showed that Black kids were more likely than white children to be allergic to shellfish and finned fish as well as wheat.

Researchers theorized that shellfish allergies were a result of children inhaling tropomyosin, a protein found not only in dust mites and cockroaches, which are two common household allergens, but also in fish with fins. (Eighty percent of the amino acids contained in this protein are similarly sequenced in shellfish.)

Prior findings showed that exposure to cockroaches might trigger shellfish allergies in kids. In addition, higher levels of these allergens were found in lower socioeconomic and inner-city neighborhoods, where many Black children live.

Previous investigations also confirmed that the immune system might misidentify proteins in fish that are similar to those found in the muscles of cockroaches, which frequently trigger an allergic reaction.

The study also showed that Black children with food allergies exhibited higher rates of asthma, and those with shellfish allergies experienced more severe asthma.

Mahboobeh Mahdavinia, MD, PhD, chief of the Division of Allergy and Immunology at Rush

University Medical Center and the study's lead author, explained that asthma accompanies 70% of fatal food anaphylaxis incidents. Additionally, Black children were two to three times more likely to face these deadly allergic reactions than their white counterparts.

"We need to conduct further research to identify food allergies and food sensitivities among all races and ethnicities so we can develop culturally sensitive and effective educational programs to improve food allergy outcomes for all children," Mahdavinia said.

For related coverage, read "FDA Approves First Drug to Treat Peanut Allergies in Kids" and "Infants Treated With Certain Meds Face Greater Risk for Childhood Allergies."

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