

Children, males and blacks are at increased risk for food allergies

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A new study estimates that 2.5 percent of the United States population, or about 7.6 million Americans, have food allergies. Food allergy rates were found to be higher for children, non-Hispanic blacks, and males, according to the researchers. The odds of male black children having food allergies were 4.4 times higher than others in the general population.

The research, which was funded by the National Institutes of Health and appears in the [Journal of Allergy and Clinical Immunology](#), is the first to use a nationally representative sample, as well as specific immunoglobulin E (IgE) or [antibody levels](#) to quantify allergic sensitization to common foods, including peanuts, milk, eggs, and shrimp. The hallmark of [food allergy](#) is production of IgE antibodies to a specific food protein. Once IgE antibody is made, further exposure to the food triggers an allergic response. IgE levels are often high in people with allergies.

"This study is very comprehensive in its scope. It is the first study to use specific blood serum levels and look at food allergies across the whole life spectrum, from young [children](#) aged 1 to 5, to adults 60 and older," said Darryl Zeldin, M.D., acting clinical director at the NIH's National Institute of Environmental Health Sciences (NIEHS) and senior author on the paper. "This research has helped us identify some high risk populations for food allergies." In addition to the identification of race, ethnicity, gender, and age as risk factors for food allergies, the researchers also found an association between food allergy and severe

asthma.

Food allergy rates were highest (4.2 percent) for children 1 to 5 years. The lowest rates (1.3 percent) were found in adults over the age of 60. The prevalence of peanut allergies in children aged 1 to 5 was 1.8 percent and in children aged 6 to 19, it was 2.7 percent. In adults, the rate was 0.3 percent.

The odds of patients with asthma and food allergies experiencing a severe [asthma attack](#) were 6.9 times higher than those without clinically defined food allergies.

"This study provides further credence that food allergies may be contributing to severe asthma episodes, and suggests that people with a food allergy and asthma should closely monitor both conditions and be aware that they might be related," said Andrew Liu, M.D., of National Jewish Health and the University of Colorado School of Medicine, Denver, and lead author on the paper.

The data used for the study comes from the National Health and Nutrition Examination Survey (NHANES) 2005-2006. NHANES is a large nationally representative survey conducted by the National Center for Health Statistics, a part of the Centers for Disease Control and Prevention.

Zeldin and Liu note more research is needed to understand why certain groups are at increased risk for food allergy. The authors comment in the paper that food allergies may be under-recognized in blacks, males, and children, because previous studies relied on self-reporting and not food-specific serum IgE levels.

"Having an accurate estimate of the prevalence of food allergies is helpful to public health policy makers, schools and day care facilities,

and other care providers as they plan and allocate resources to recognize and treat food allergies," said Linda Birnbaum, Ph.D., NIEHS director.

Provided by National Institutes of Health

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