



Food Allergies Common among Children and Linked to Environmental Allergies and Asthma Later in Life, Suggests Largest-Ever National Allergy Study

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Quest Diagnostics Health Trends(TM) Report also finds economically disadvantaged children tested for allergies at later ages

MADISON, N.J., May 17, 2011 /PRNewswire via COMTEX/ -- Early results from the largest cross-sectional national allergy study ever conducted, to be released later this month, demonstrate that food allergies commonly occur in infants and toddlers, while environmental allergies, such as to dust, ragweed and mold, are more common in older children and adults. The study, based on laboratory testing from more than 2 million patient visits in the United States, is the largest to reveal a pattern of allergen sensitivity consistent with the "allergy march," a medical condition by which allergies to foods in early childhood heighten the risk for the development of additional and more severe allergy-related conditions, including asthma, later in life.

The Quest Diagnostics Health Trends Report, *Allergies Across America(TM)*, from Quest Diagnostics (NYSE: DGX), the world's leading diagnostic testing company, also found that patients with asthma who were tested for allergies were 20% more likely to have an allergy, particularly to indoor allergens like mold and house dust mites, compared to patients tested without asthma, based on an analysis of test results showing immunoglobulin E (IgE) sensitivity to certain allergens. The findings support medical guidelines recommending that clinicians and patients with asthma identify and minimize potential allergens in the home and workplace that could aggravate the disease.

"Allergy and asthma often go hand in hand, and the development of asthma is often linked to allergies in childhood via the allergy march," said study investigator Harvey W. Kaufman, M.D., senior medical director, Quest Diagnostics. "Given the growing incidence of asthma in the U.S., our study underscores the need for clinicians to evaluate and treat patients, particularly young children, suspected of having food allergies in order to minimize the prospect that more severe allergic conditions and asthma will develop with age. It also demonstrates that patients with asthma should minimize their exposure to allergens that could trigger a severe asthma response."

Allergies are one of the most common health conditions, affecting one in five Americans. A report out this month from the U.S. Centers for Disease Control and Prevention shows the prevalence of asthma is increasing, and now affects one in 12 adults and nearly one in ten children. Allergy-induced asthma is the most common type of asthma in the U.S.

Childhood Food Allergies

The Quest Diagnostics study found that children through the age of eight who were tested were most likely to experience high food allergy rates. Specifically, the study's childhood food allergy analysis found:

- **Egg White and Milk.** Thirty-seven percent of infants and toddlers tested were sensitive to egg white and 36% of three year olds were sensitive to milk.
- **Peanuts.** Peanuts were the most common source of food allergy in children six to 18 years of age, affecting approximately one in four (26 %) school-aged children tested. Yet, peanut allergies were even more prevalent in children five years of age and younger, affecting about 30% of children tested in this age group.
- **Wheat.** Nearly one in four (23%) children tested through the age of ten exhibited wheat allergen sensitization, although the rate declined after that age.

After the age of eight, rates of food allergies overall declined, while sensitivity to non-food allergens increased, consistent with the allergy march. Sensitivity to environmental allergens, including house dust mites, cats, dogs, and common ragweed, remained at high levels through the age of 40.

Disadvantaged Children

The investigators also compared testing rates for children with private health insurance and government-administered Medicaid plans. Children five years of age and younger enrolled in Medicaid were 18% less likely to be tested than children of the same age group covered by private health insurance, suggesting that economically disadvantaged children may be less likely to be tested at early ages. Other research demonstrates that early intervention can minimize the likelihood of progression to more severe allergic diseases, including asthma.

"Quest Diagnostics' findings provide compelling evidence that economically disadvantaged children are less likely to receive the level of health care that can promote favorable outcomes," said Gary Puckrein, Ph.D., executive director, Alliance of Minority Medical Associations, and a report advisor. "This research should prompt policy makers, physicians, and, of course, parents to consider how different types of health plans may impact the quality of the health services our children receive."

Methodology of the Quest Diagnostics Health Trends Report *Allergies Across America*

The *Allergies Across America* study is broadly representative of the overall population of patients seeking medical care for allergy-like symptoms from healthcare professionals in the U.S. It includes de-identified test results of patients from infancy to 70 years of age living in every U.S. state and the district of Columbia. The study did not track individual patients longitudinally, so age-related patterns do not necessarily imply that specific individuals developed other allergy conditions or asthma over time. However, the pattern of allergen sensitivity observed in this study is consistent with other, but smaller cross-sectional studies.

The study was based on de-identified results of testing in Quest Diagnostics clinical laboratories using the ImmunoCAP® specific immunoglobulin E (IgE) blood test, the "gold standard" of allergy blood tests. IgE is an antibody in blood produced by the body's immune system when an allergen is present. Each test result identified sensitization to one or more of 11 common allergens: five foods (egg white, milk, peanut, soybean, and wheat), common ragweed, mold, two types of house dust mites, and cats and dogs. While high IgE sensitization level is suggestive of an allergy, clinical

diagnosis also requires medical examination and other considerations, and therefore the study did not definitively conclude patients with high sensitization were allergic to a tested allergen. A patient visit refers to any instance where an individual patient was tested at least once for one or more of the 11 allergens by Quest Diagnostics over the four-year period examined for the study.

The full *Allergies Across America* report to be released this month will assess the health impact of the 11 allergens on patients nationally and regionally as well as on the 30 most populous cities in the United States.

About Quest Diagnostics Health Trends Reports

Quest Diagnostics Health Trends Reports identify and track disease and wellness benchmarks. Based on analyses of de-identified test results from the Quest Diagnostics national database - consisting of more than 1.5 billion patient encounters since January 2000 - past reports have focused on chronic kidney disease, diabetes, heart disease, H1N1 (2009) Influenza A, and rotavirus. Visit QuestDiagnostics.com/HealthTrends.

About Quest Diagnostics

Quest Diagnostics is the world's leading provider of diagnostic testing, information and services that patients and doctors need to make better healthcare decisions. The company offers the broadest access to diagnostic testing services through its network of laboratories and patient service centers, and provides interpretive consultation through its extensive medical and scientific staff. Quest Diagnostics is a pioneer in developing innovative new diagnostic tests and advanced healthcare information technology solutions that help improve patient care. Additional company information is available at QuestDiagnostics.com.

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