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Experts Report Progress in Food Allergy Prevention and Diet Restrictions

DALLAS – Progress has been made in food allergy prevention and management according to investigators presenting the latest research at the annual meeting of the American College of Allergy, Asthma and Immunology (ACAAI) in Dallas. Experts discussed food allergy prevention and important research findings that may impact diet restrictions of food allergic patients.

According to Robert A. Wood, M.D., professor of pediatrics and international health director, pediatric allergy and immunology at Johns Hopkins University School of Medicine, research has determined a possible role for allergy prevention strategies. These approaches include maternal food avoidance in pregnancy, breast feeding, maternal food avoidance while breast feeding, use of hypoallergenic formulas, delayed introduction of allergenic foods and probiotics.

“A review of 18 studies demonstrates a significant protective effect of exclusive breastfeeding for at least three months for children with high risk for atopy (genetic tendency to develop allergic diseases) against the development of atopic dermatitis and early childhood asthma-like symptoms,” he said.

In addition, Dr. Wood has the following recommendations for children at high risk of allergic diseases:

- Avoidance of peanut and tree nuts in pregnancy and while breast feeding
- Supplement breast feeding with a hypoallergenic formula (extensively or partially hydrolyzed)
- Delay solid foods until age six months
- Delay introduction of milk and egg until age 1 and peanut and tree nuts until age 3
- Early intervention when signs of food allergy appear (secondary prevention).

An estimated 6 percent to 8 percent of young children and 4 percent of adults have food allergy. The most common food allergens in infants and young children are cow’s milk, hen’s egg, peanut (a legume), tree nuts (walnut, hazelnut, Brazil nut, and pecan), soybeans and wheat. Although sensitivity to most allergens is lost in late childhood, allergy to peanut, tree nut and seafood is likely to continue throughout the patient’s life. Only approximately 20 percent of children with peanut allergy lose their sensitivity. The most common foods causing allergy in adults are peanuts, tree nuts, fish, crustaceans, mollusks, fruits and vegetables.

Food Allergy Management

Currently, there is no treatment for food allergies, so allergic individuals must strictly avoid the offending food and its products, and be aware of possible cross-reactivity.

“Allergists-immunologists recognize the need to balance the nutritional impact, cost and likely benefits of diet restrictions,” said Dr. Wood. “The most ideal primary prevention tactic may be too difficult for the patient to implement.”

In his presentation titled “You Can have Allergy to Food & Eat It Too,” Sami Bahna, M.D., Dr.PH., professor of pediatrics and medicine, and chief of allergy and immunology, Louisiana State University, Shreveport, La., discussed the impact research studies have on dietary restrictions.

“You may have allergy to a member of a food family, but not to all members of that family,” he said. For example, a study on nine common fish found cross-reactivity and allergenicity were highest among cod, salmon, pollack; and lowest among halibut, flounder, tuna and mackerel. Another study on edible nuts indicates cross-reactivity is strong between walnut, pecan and hazelnut; moderate between cashew, pistachio, Brazil nut and almond; and essentially none between peanut and tree nuts.

“You may be allergic to a particular part of a food, but not to another part,” Dr. Bahna said. He discussed a study on five fish species showed that fish dark muscle seems to be less allergenic than white muscle. In a study on raw crustacean, in one patient the urticaria occurred on contact with the shell, but not with the meat. In a study of 60 peanut-allergic subjects, none reacted to refined peanut oil, and 10 percent reacted to crude peanut oil.

Some people may have allergy to a food processed in a certain way, but not in another, he said. Manufacturing methods used to reduce allergenicity of proteins include heat treatment, enzymatic hydrolysis, ultra-filtration, high intensity ultrasound, gamma irradiation and combinations of these methods.

“In China, where peanut is commonly fried or boiled, peanut allergy is much less prevalent than in the U.S., where peanut is commonly roasted,” he said.

According to Dr. Bahna, reactions may not be to the food, but to something else in the food. In addition to additives, food may contain seafood-associated toxins, parasites or contaminants. Patients with respiratory allergy to mite may get a systemic anaphylaxis after ingestion of mite-contaminated flour.

Gastrointestinal Disorders

“It’s important for physicians to think about food allergy as the potential cause of a patient’s gastrointestinal or dermatological symptoms,” said Amal Assa’ad, M.D., professor of pediatrics at the University of Cincinnati and director of Food Allergy & Eosinophilic Disorders Clinic at Cincinnati Children’s Medical Center, Cincinnati, Ohio.

“The eosinophilic gastrointestinal disorders (EGID) which may affect the esophagus, stomach, colon and rectum are mostly chronic and recurrent disorders that adversely impact quality of life for patients and families. Patients with EGID have a high rate of sensitization to food and environmental allergens, and many of them have a high rate of clinical symptoms with various

food ingestions. A subset of patients respond to removal of major food allergens from their diet,” Dr. Assa’ad said.

“EGID management often requires multiple specialists including the primary physician, allergy and immunology, gastroenterology, nutrition and psychology,” she said.

Food allergy is the single leading cause of anaphylaxis. Anaphylaxis is the most severe form of allergic reactions, affecting multiple organ systems. Symptoms can include chest tightness, wheezing, nausea, vomiting, cramping, hives and swelling of the lips and joints. The most dangerous symptoms are breathing difficulties, throat swelling, chest wheezing, dizziness, low blood pressure, shock and loss of consciousness, all of which can be fatal. Patients with severe reactions should have continued access to self-administered epinephrine injections.

Patient information on allergic diseases including food allergy is available by calling the ACAAI toll free number at (800) 842-7777 or visiting its Web site at www.acaai.org. For food allergy patient information or support, call the Food Allergy and Anaphylaxis Network (FAAN) at (800) 929-4040 or visit online at www.foodallergy.org.

About the American College of Allergy, Asthma and Immunology

The ACAAI is a professional medical organization headquartered in Arlington Heights, Ill., that promotes excellence in the practice of the subspecialty of allergy and immunology. The College, comprising more than 5,000 allergists-immunologists and related health care professionals, fosters a culture of collaboration and congeniality in which its members work together and with others toward the common goals of patient care, education, advocacy and research.

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