muffin had 88% negative predictive value and a skin prick test size of ≥11 mm to ovomucoid had a positive predictive value of 100%.

CONCLUSIONS. The results of this study found that skin prick tests to ovomucoid and to baked egg muffin homogenized with normal saline could be helpful in deciding if egg-allergic patients are ready for OFC to baked egg. A skin prick test result of <2 mm to muffin had an 88% negative predictive value and an ovomucoid skin prick test result ≥11 mm had a positive predictive value of 100%.

REVIEWER COMMENTS. Although it is known that 60% to 70% of egg-allergic children can tolerate “baked egg” in their diet, it is often difficult to identify this subpopulation. Recently, ovomucoid-specific IgE levels have been shown to be useful in helping predict the outcome of OFCs to baked egg, but only when the levels are >10 kUA/L (97% positive predictive value). This study uses 2 new skin testing reagents (ovomucoid and muffin suspension) in an attempt to identify who might be able to eat baked egg. Using this approach, a 100% positive predictive value and an 88% negative predictive value have been determined. Although the majority of egg-allergic children will fall outside of these parameters, this approach could reduce the need for OFCs. Importantly, the skin response did not predict the severity of the reaction.

Sensitization to Cor a 9 and Cor a 14 Is Highly Specific for a Hazelnut Allergy With Objective Symptoms in Dutch Children and Adults

PURPOSE OF THE STUDY. The goal of this study was to determine if component-resolved testing will aid in determining patients at risk for allergic reactions to hazelnut.

STUDY POPULATION. A total of 161 adults and children with sensitization (≥0.35 kUA/L) to hazelnut were retrospectively recruited between 2010 and 2012 at the University Medical Center Utrecht (Utrecht, the Netherlands).

METHODS. Forty children and 15 adults with objective symptoms on double-blind, placebo-controlled food challenges (DBPCFCs) and 24 adults with a convincing history of reaction were compared with 41 children and 41 adults with no symptoms on DBPCFCs. Specific IgE levels to hazelnut extract and single components were analyzed with ImmunoCAP and compared between the study groups. The diagnostic value of IgE levels for discrimination between hazelnut allergy with objective symptoms and no or subjective symptoms was determined by calculating the area under the curve of the receiver-operating characteristic.

RESULTS. Asthma was more common among adults with hazelnut allergy with objective symptoms than those with no or subjective symptoms (P = .03). Asthma was more common in children than adults with no or subjective symptoms of hazelnut allergy (P = .04). All children and most adults (97%) with subjective hazelnut allergy were sensitized to birch pollen. Sensitization to nCor a 9, rCor a 14, or both was strongly associated with hazelnut allergy with objective symptoms. IgE levels to either nCor a 9 of ≥1 kUA/L or rCor a 14 of ≥5 kUA/L in children had a sensitivity of 83% and a specificity of 93%. In adults, the combination of IgE to either nCor a 9 or rCor a 14 of ≥1 kUA/L had a specificity of 98%.

CONCLUSIONS. Sensitization to Cor a 9 and Cor a 14 is specific for patients with objective symptoms in DBPCFCs to hazelnut.

REVIEWER COMMENTS. IgE-specific food allergy testing has been plagued by poor specificity, resulting in many patients being incorrectly labeled food allergic. Component testing as demonstrated in this study may improve specificity for certain foods. As the authors note, food challenges are still needed to confirm tolerance, but component testing may allow additional patients to proceed to food challenge. Patient’s sensitivities to specific components have been shown to vary regionally. When treating diverse patient populations, we must consider these possible regional variations.

Factors Associated With Reported Food Allergy Tolerance Among US Children

PURPOSE OF THE STUDY. The goal of this study was to investigate factors associated with development of tolerance to 9 common food allergens.

STUDY POPULATION. The study population included 40 000 households with children in the United States.

METHODS. A randomized, cross-sectional survey was completed by eligible adult caregivers regarding a child in the home. Allergies to the 9 most frequently reported current and outgrown food allergens (milk, peanut, shellfish, tree nut, egg, fish, wheat, soy, and sesame) were analyzed. Data regarding the age of first reaction, age at which the allergy was outgrown, and severity of the reaction (mild, moderate, or severe) were obtained.
Sensitization to Cor a 9 and Cor a 14 Is Highly Specific for a Hazelnut Allergy With Objective Symptoms in Dutch Children and Adults

Timothy Andrews and James R. Banks

Pediatrics 2014;134;S152
DOI: 10.1542/peds.2014-1817HH

Updated Information & Services
including high resolution figures, can be found at:
/content/134/Supplement_3/S152.1.full.html

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
/site/misc/Permissions.xhtml

Reprints
Information about ordering reprints can be found online:
/site/misc/reprints.xhtml
Sensitization to Cor a 9 and Cor a 14 Is Highly Specific for a Hazelnut Allergy With Objective Symptoms in Dutch Children and Adults
Timothy Andrews and James R. Banks
Pediatrics 2014;134;S152
DOI: 10.1542/peds.2014-1817HH

The online version of this article, along with updated information and services, is located on the World Wide Web at:
/content/134/Supplement_3/S152.1.full.html