HAZELNUT
Molecular Allergology

Improved risk assessment in hazelnut allergy
– use components for better management of hazelnut allergic patients
Take the diagnosis and management of hazelnut allergic patients to a whole new level

Distinguish between allergy due to cross-reactivity and primary hazelnut allergy

Allergy to hazelnut (Corylus avellana) is often a consequence of cross-reactivity in tree pollen allergic patients or patients with fruit allergies, but may also be a primary allergy.

- Sensitization to Cor a 1 (PR-10) indicates a birch pollen related hazelnut allergy.1,2
- IgE antibodies to Cor a 8 (LTP) indicate cross-reactivity, often from a primary peach sensitization.3,4
- Sensitization to the hazelnut storage proteins Cor a 9 and Cor a 14 indicates a primary hazelnut allergy.5–8

Improve the risk assessment using allergen components

- Sensitization to Cor a 9 and/or Cor a 14 are associated with systemic reactions in hazelnut allergic patients.2,5,7
- The presence of IgE antibodies to Cor a 8 indicates that both local oral symptoms and systemic reactions may occur.2,9,10
- Mono-sensitization to Cor a 1 is typically associated with local reactions although systemic reactions to raw hazelnuts may in some cases occur, especially in adults.2

Improve management of hazelnut allergic patients

- Hazelnut allergic patients sensitized to Cor a 8, Cor a 9 and/or Cor a 14 should avoid raw as well as roasted/heated hazelnuts.11
- Hazelnut allergic patients sensitized to storage proteins should also be investigated for allergy to peanuts and other tree nuts, e.g. walnuts and Brazil nuts, as cross-reactivity may occur.1,5,12
- Patients mono-sensitized to Cor a 1 often tolerate roasted or heated hazelnuts.11
Did you know that?

Hazelnut allergy

- Hazelnut is among the top five most serious causes of food allergic reactions.¹³
- The prevalence of hazelnut allergy in children is estimated to 0.2 %, while up to 4.5 % of adults in regions with heavy exposure to pollen of birch or related tree species are reported to have hazelnut allergy.¹⁴–¹⁶
- Primary sensitization to hazelnut is more common in children than in adults and children more often develop severe and systemic reactions to hazelnut.²,⁷
- Hazelnut may be a hidden allergen in e.g. pastries and cookies.¹³

Hazelnut and its allergens

- Cor a 1 is the PR-10 protein with highest homology to the major birch allergen Bet v 1, why these two proteins display extensive cross-reactivity.
- Hazelnut allergy caused by Cor a 8 sensitization is often associated with symptoms to other LTP-containing food such as peach, lettuce, peanut, walnut and cherry.¹⁷
- Cor a 9 and Cor a 14 are hazelnut storage proteins, and sensitization to these can appear early in life.⁶,⁸
Make a precise assessment
ImmuNoCAP Allergen Components help you differentiate between primary allergy and allergy due to cross-reactivity

Make a substantiated decision
A better differentiation helps you give relevant advice and define the optimal treatment

Make a difference
More informed management helps you improve the patient’s well-being and quality of life

References:
8. Verweij MM et al. Young infants with atopic dermatitis can display sensitization to Cor a 9, an 11S legumin-like seed-storage protein from hazelnut (Corylus avellana). Pediatric Allergy and Immunology. 2011; 22(2):196–201.

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