Discover the connection

Walnut, cashew, brazil nut, and hazelnut allergen component testing

Specific IgE allergen components, in conjunction with whole allergen test results help you better diagnose allergy, allowing you to prepare a more comprehensive management plan.

Optimize management to help:

Make a substantiated decision
A better differentiation helps you distinguish between primary and cross-reactive sensitization

Make a precise assessment
Specific IgE allergen component test results can help you assess your patient’s risk for systemic reactions

Make a difference
Better differentiation gives relevant information that helps you determine optimal treatment

Hazelnut

Hazelnut allergen component test results can help determine which specific proteins your patient is sensitized to

A specific IgE blood test that detects sensitization to hazelnut is only the first step in discovering the likelihood of a systemic reaction and the necessary precautions that may be prescribed.¹

Characteristics of individual proteins

<table>
<thead>
<tr>
<th>Hazelnut</th>
<th>© 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cor a 1</td>
<td>© 428</td>
</tr>
<tr>
<td>© 428</td>
<td></td>
</tr>
<tr>
<td>Cor a 8</td>
<td>© 425</td>
</tr>
<tr>
<td>Cor a 9 &amp; 14</td>
<td>© 440, © 439</td>
</tr>
<tr>
<td>© 17</td>
<td></td>
</tr>
</tbody>
</table>

- High levels of hazelnut IgE can predict the likelihood of hazelnut sensitivity, but may not be solely predictive of reactions or allergic response¹
- Lower risk of systemic reaction, primarily associated with local reactions²
- Heat and digestion labile³
- Cross-reactive with pollens (e.g., birch)⁴
- Variable risk associated with local and systematic reactions including anaphylaxis⁵,⁶
- Heat and digestion stable⁷
- Indicates cross reactivity often from a primary peach sensitization⁸
- Higher risk of systemic reaction including anaphylaxis⁵,⁶,⁷
- Heat and digestion stable⁹
- Sensitization to these can appear early in life and indicates a primary hazelnut allergy¹

Hazelnut is among the top five causes of serious food allergic reactions.¹²
Walnut

Did you know?

- Walnut is one of the most common causes of allergic reactions to tree nuts.\(^\text{10,12}\)
- The estimated prevalence of walnut allergy in the general population is up to 0.7%.\(^\text{12}\)
- Walnut allergy is potentially life-threatening, increasing in prevalence and rarely outgrown.\(^\text{12,13}\)

Suggested test profile

<table>
<thead>
<tr>
<th>Whole allergen</th>
<th>Walnut (f355)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergen components</td>
<td></td>
</tr>
</tbody>
</table>
| Jug r 1 (f435) | Positive f25 with negative Jug r 1 and Jug r 3 results may be explained by sensitization to\(^{16}\)
|                  | • Other walnut storage proteins
|                  | • Pollen proteins like profilin or PR-10 proteins
|                  | • CCD (cross-reacting carbohydrate determinants) |
| Jug r 3 (f435) | Positive f202 with negative 0 results may be explained by sensitization to\(^{16}\)
|                  | • Other walnut storage proteins or lipid transfer protein (LTP)
|                  | • Pollen proteins like profilin or PR-10 proteins
|                  | • CCD (cross-reacting carbohydrate determinants) |

Cashew

Did you know?

- Cashew nut sensitized patients have a risk of experiencing severe allergic reactions; the risk has been reported to be even higher than for peanut allergic patients (74% vs. 30%).\(^\text{14}\)
- Cashew nut allergy is increasing as consumption increases – snacking on cashew nuts has become more popular, and their use as a common ingredient in Asian foods, baked goods, nut butters and pestos is growing.\(^\text{15,16}\)
- Cashew nut allergy is potentially life-threatening, can start early in life and is rarely outgrown.\(^\text{12,16}\)

Suggested test profile

<table>
<thead>
<tr>
<th>Whole allergen</th>
<th>Cashew nut (f202)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergen component</td>
<td></td>
</tr>
</tbody>
</table>
| Area o 5 (f443) | Positive f202 with negative Area o 5 results may be explained by sensitization to\(^{16}\)
|                  | • Other cashew nut storage proteins or lipid transfer protein (LTP)
|                  | • Pollen proteins like profilin or PR-10 proteins
|                  | • CCD (cross-reacting carbohydrate determinants) |

Brazil nut

Suggested test profile

<table>
<thead>
<tr>
<th>Whole allergen</th>
<th>Brazil nut (f10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergen component</td>
<td></td>
</tr>
</tbody>
</table>
| Bar e 1 (f356) | Positive f15 with negative Bar e 1 results may be explained by sensitization to\(^{16}\)
|                  | • Other brazil nut storage proteins or lipid transfer protein (LTP)
|                  | • Pollen proteins like profilin or PR-10 proteins
|                  | • CCD (cross-reacting carbohydrate determinants) |

References