Understanding and Managing Sesame Allergy

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I am the voice!

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Today’s Presenters

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Understanding and Managing Sesame Allergy

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• Sesame (Sesamum Indicum) is becoming increasingly popular in Western diet, and is a common ingredient in many ethnic foods.

• Sesame seeds are extremely potent allergens that can cause severe allergic reactions (anaphylaxis).

• Sesame is used extensively in the food industry and the seeds, pastes, and oils present a danger because of their versatility.

• They may also be present in non-sesame products, especially bread, as an ingredient or due to cross-contact.
Sesame Allergy: Prevalence

• The exact prevalence of sesame allergy is unknown

• Prevalence seems to be increasing although clear evidence to support this is lacking

• There may be significant regional differences (internationally)
## US prevalence of self-reported peanut, tree nut, and sesame allergy: 11-year follow-up

Scott H. Sicherer, MD, Anne Muñoz-Furlong, BA, James H. Godbold, PhD, and Hugh A. Sampson, MD

### Self-Reported Prevalence (2008)

<table>
<thead>
<tr>
<th>Allergy Type</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Nut</td>
<td>1.4%</td>
</tr>
<tr>
<td>Peanut Only</td>
<td>0.6%</td>
</tr>
<tr>
<td>Tree Nut</td>
<td>0.4%</td>
</tr>
<tr>
<td>Peanut and TN</td>
<td>0.2%</td>
</tr>
<tr>
<td>Sesame</td>
<td>0.1%</td>
</tr>
</tbody>
</table>
A population-based study on peanut, tree nut, fish, shellfish, and sesame allergy prevalence in Canada

Moshe Ben-Shoshan, MD, a Daniel W. Harrington, MA, e Lianne Soller, BSc, b Joseph Fragapane, BSc, b Lawrence Joseph, PhD, b, d Yvan St Pierre, MA, b Samuel B. Godefroy, PhD, f Susan J. Elliot, PhD, e and Ann E. Clarke, MD, MSc b, c Montreal, Quebec, and Hamilton and Ottawa, Ontario, Canada

<table>
<thead>
<tr>
<th>Prevalance of Perceived Allergy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanut</td>
<td>1.0%</td>
</tr>
<tr>
<td>Tree Nut</td>
<td>1.2%</td>
</tr>
<tr>
<td>Fish</td>
<td>0.5%</td>
</tr>
<tr>
<td>Shellfish</td>
<td>1.6%</td>
</tr>
<tr>
<td>Sesame</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

J ALLERGY CLIN IMMUNOL
JUNE 2010
In Israel

- 3rd most common food allergy (after milk and egg)
- Prevalence 0.1 – 0.2%
Prevalence: Australia, Age 12 months

**TABLE 1. Prevalence of any food sensitization (≥1 mm) and challenge-proven food allergy in HealthNuts study (2848 participants)**

<table>
<thead>
<tr>
<th>Food tested</th>
<th>SPT at immunization session (n)</th>
<th>Missing SPT (n)*</th>
<th>Proportion recruited SPT (%)</th>
<th>SPT ≥1 mm (n)†</th>
<th>Prevalence sensitization SPT ≥1 mm (%)</th>
<th>95% CI</th>
<th>Prevalence sensitization SPT ≥3 mm (%)</th>
<th>95% CI</th>
<th>Attended RCH for OFC (n)†</th>
<th>Positive OFC (n)</th>
<th>Food allergy prevalence (%)§</th>
<th>95% CI</th>
<th>Weighted food allergy (%)∥</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanut</td>
<td>2757</td>
<td>91</td>
<td>96.8</td>
<td>246</td>
<td>8.9</td>
<td>7.9-10.0</td>
<td>6.4</td>
<td>5.5-7.3</td>
<td>251</td>
<td>81</td>
<td>2.9</td>
<td>2.2-3.5</td>
<td>3.0</td>
<td>2.4-3.8</td>
</tr>
<tr>
<td>Raw egg</td>
<td>2768</td>
<td>80</td>
<td>97.2</td>
<td>455</td>
<td>16.5</td>
<td>15.1-17.9</td>
<td>11.7</td>
<td>10.6-13.0</td>
<td>383</td>
<td>248</td>
<td>9.0</td>
<td>7.9-10.0</td>
<td>8.9</td>
<td>7.8-10.1</td>
</tr>
<tr>
<td>Sesame</td>
<td>2695</td>
<td>153</td>
<td>94.6</td>
<td>69</td>
<td>2.5</td>
<td>2.0-3.1</td>
<td>1.6</td>
<td>1.2-2.1</td>
<td>65</td>
<td>19</td>
<td>0.7</td>
<td>0.4-1.0</td>
<td>0.8</td>
<td>0.5-1.2</td>
</tr>
<tr>
<td>Shellfish</td>
<td>2375</td>
<td>118</td>
<td>95.3</td>
<td>25</td>
<td>0.9</td>
<td>0.6-1.5</td>
<td>0.4</td>
<td>0.2-0.7</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
</tbody>
</table>
Sesame allergy diagnosed in:

- **13.2%** of patients with peanut allergy
- **14.8%** of patients with tree nut allergy
- **50%** of patients with both peanut and tree nut allergy
Relationship to Other Seed Allergies

- Most patients with sesame allergy do not have other seed allergies
- Sunflower allergy appears to be most common concomitant seed allergy
- We do not recommend automatic testing or avoidance of other seeds
Limited studies on the natural history of sesame allergy

Two studies that have been done suggest that 20 – 30% of children with sesame allergy will outgrow their allergy

As with peanut and tree nuts, recommend regular follow-up and testing until a pattern has been established
Sesame Allergy: Diagnosis

• Diagnosis is based on a combination of:
  • History of reactions
  • Skin test results
  • Blood test results
  • Food challenge
The use of serum-specific IgE measurements for the diagnosis of peanut, tree nut, and seed allergy

Jennifer M. Maloney, MD, Magnus Rudengren, BSc, Staffan Ahlstedt, PhD, S. A. Bock, MD, and Hugh A. Sampson, MD

New York, NY, Uppsala and Stockholm, Sweden, and Boulder, Colo

<table>
<thead>
<tr>
<th>Allergen</th>
<th>n</th>
<th>&lt;0.35 kUA/L (n [%])</th>
<th>Minimum</th>
<th>25th Percentile</th>
<th>Median</th>
<th>75th Percentile</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sesame seed</td>
<td>54</td>
<td>0 (0)</td>
<td>0.62</td>
<td>2.63</td>
<td>7.74</td>
<td>29.1</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Peanut</td>
<td>234</td>
<td>10 (4)</td>
<td>&lt;0.35</td>
<td>4.46</td>
<td>38.3</td>
<td>&gt;100</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Hazelnut</td>
<td>37</td>
<td>8 (22)</td>
<td>&lt;0.35</td>
<td>0.75</td>
<td>1.27</td>
<td>4.17</td>
<td>27.0</td>
</tr>
<tr>
<td>Almond</td>
<td>41</td>
<td>14 (34)</td>
<td>&lt;0.35</td>
<td>&lt;0.35</td>
<td>0.82</td>
<td>3.42</td>
<td>39.2</td>
</tr>
<tr>
<td>Pecan nut</td>
<td>21</td>
<td>2 (10)</td>
<td>&lt;0.35</td>
<td>1.23</td>
<td>3.93</td>
<td>12.3</td>
<td>57.8</td>
</tr>
<tr>
<td>Cashew</td>
<td>44</td>
<td>3 (7)</td>
<td>&lt;0.35</td>
<td>2.79</td>
<td>5.48</td>
<td>10.1</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Pistachio</td>
<td>43</td>
<td>3 (7)</td>
<td>&lt;0.35</td>
<td>1.71</td>
<td>9.01</td>
<td>21.3</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Walnut</td>
<td>53</td>
<td>6 (11)</td>
<td>&lt;0.35</td>
<td>1.39</td>
<td>6.51</td>
<td>12.0</td>
<td>82.3</td>
</tr>
</tbody>
</table>
Diagnosis – Symptoms with Exposure

FIG 2. Organ system involvement with peanut, tree nut, and seed reactions.
Oral Food Challenges

• For sesame, challenges can be done with different goals in mind
  • Intact seeds
    • Delayed reactions may occur
  • Pulverized seeds
  • Tahini
  • Other
Treatment

• Avoidance

• Treatment of reactions

• Possible role for immunotherapy
  
  • Has been included in some trials of multi-allergen oral immunotherapy but no sesame specific results are available
Sesame Allergy - Avoidance

- Sesame is not covered by the labeling law so it could be present in foods where it is not clearly labeled (such as a “natural flavoring”).
- Cross-contact from sesame seed products made on the same line as non-sesame products is common. Breads and bagels are particularly prone to cross-contact.
- Sesame oil is used unrefined in food products and as a result it is hazardous to those allergic to sesame. It is especially popular in Asian foods but can be added to salad dressings, marinades, barbecue sauces, and a variety of other foods.
- Sesame may also be known as Benne, Gingelly, Til (or Teel), Simsin and Anjonjoli on foreign (imported) products.
- The herbal drink, Aqua Libra, contains sesame.
- Sesame oil is also sometimes used in skin care products, such as lotions, ointments, and soaps. It is also used in cosmetics, where it may be listed as sesamum indicum.
Sesame Allergy - Avoidance

- **Hummus, Tahini, and Halvah** are three very popular sesame products which are used in a variety of ways in different foods. They are especially common in Middle Eastern foods. Other possible sources of sesame include:

  Bakery products
  Confection bars
  Dips
  Sausages
  Veggie burgers
  Stir Fries
  Bagels
  Muesli
  Sauces
  Processed Meats
  Chutneys

- **Sesame oil** is commonly used in Asian foods
Practical considerations, to be discussed on an individual patient basis. For example:

- What products pose a risk (e.g. a few seeds, lots of seeds, oils, tahini)?
- What is the risk of cross-contact?
- What is the chance it will appear in a food “unlabeled”?
Sesame – Advocacy and Policy Update

Scott Riccio, MBA
Senior Vice President, Advocacy and Education
Food Allergy Research & Education
Food Allergen Labeling and Consumer Protection Act of 2004 (FALCPA)

- Defined list of major food allergens ("Big Eight")
- Requires major food allergen to be disclosed on food label, when the food is or contains one of the listed allergens.
- FALCPA also gave FDA authority to amend regulations to require that specific spice, flavoring, coloring, or incidental additive be declared by name on label, when that ingredient is a food allergen.
FALCPA and Sesame

- Citizen Petition submitted to FDA in late November, 2014 requesting FDA to require sesame to be listed by name on ingredient list and added to “major food allergens” list

- Senator Chris Murphy (CT) submitted letter to FDA asking for expansion of FALCPA to include sesame. FARE has provided letter of support and data

- FDA also a sponsor of FARE-championed Institute of Medicine study, consider total burden of food allergies
FARE and Sesame

- Communicating support to FDA for addition of sesame to FALCPA labeling requirements
- Building public awareness and specific education and support for sesame
- FARE education resources coming soon:
  - How to Read a Label reference sheet and cards specific to sesame
  - Chef Cards for individuals with sesame allergy to present when dining out
Questions?
Our Next Webinar

If I Only Knew Then What I Know Now...
Allergy Tips for Teens

Kyle Dine
Wednesday, November 18, 2015
4:00 – 5:00 PM ET

Member registration opens
Friday, October 16

General registration opens
Monday, October 19