DECODE allergies to manage important health risks.

ImmuNoCAP offers you the most comprehensive allergy testing available—including tests for aerosolergens and food allergies to:

- Identify specific allergy triggers to help control allergic asthma and viral symptoms
- Reduce costs associated with absenteeism and lost productivity at work and school
- Prevent unnecessary medications and unscheduled doctor visits

To better manage your patients’ asthma and allergies, start by DECoding them.

The more you know about all of their allergic sensitivities, the better you can optimize their management.

Before you treat it, ImmunoCAP it.
Allergies tend to progress and change over time. Because allergic triggers can exacerbate atopic conditions in patients as they age, it may help to identify IgE sensitization early.

A combination of clinical history and possible allergic symptoms suggests that it is time for ImmunoCAP.

- A history of atopic dermatitis
- Sleep problems due to congestion
- Persistent cough
- Abdominal pain
- A history of otitis media
- Persistent wheeze
- Reactions to milk, eggs, peanuts, or other foods
- Rhinitis symptoms
- Diarrhea
- Nausea or vomiting

![Relative Prevalence of Symptoms According to Age](image)
ImmunoCAP offers the most comprehensive aeroallergen and food allergy testing available in just 2 simple steps with one blood sample.

**STEP 1:** Decode the whole spectrum of allergic triggers.

Sample **Whole** Allergen Results

<table>
<thead>
<tr>
<th>SPECIMEN INFORMATION</th>
<th>ORDERING PHYSICIAN</th>
</tr>
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<tbody>
<tr>
<td>SPECIMEN:</td>
<td>JONES, S.</td>
</tr>
<tr>
<td>REQUISITION:</td>
<td>CLIENT INFORMATION</td>
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<tr>
<td>COLLECTED: 10/30/12</td>
<td>NEW YORK LABS.</td>
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<tr>
<td>REPORTED: 10/30/12</td>
<td>123 MAIN ST, Suite 1100</td>
</tr>
<tr>
<td>AMENDED:</td>
<td>NEW YORK, NY 12345</td>
</tr>
<tr>
<td>REPRINTED:</td>
<td></td>
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</table>

- Egg white IgE: 1.79
- Oak IgE: <0.35
- Elm IgE: <0.35
- White ash IgE: <0.35
- Birch pollen IgE: <0.35
- Mold (aspergillus fumigatus) IgE: 1.22

ImmunoCAP can reveal IgE sensitivity for over 650 available allergens.
- Profiles are customized to specific regions and the most common food allergens
- Regional inhalant profiles contain up to 25 allergens based on geography
- Test can be performed irrespective of age, symptoms, medication, and disease activity and/or severity

**STEP 2:** Decode specific allergy risks.

Sample **Egg Component** Results

<table>
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- Ovomucoid: <0.35
- Ovalbumin: 2.36

ImmunoCAP identifies and quantifies sensitivity to specific allergen proteins.
- A growing variety of allergen component tests are available—including peanuts, eggs, and milk
- Helps distinguish between cross-reactivity and clinical allergy
- Determines the risk of reaction to heat stable vs. heat labile proteins
Max still uses inhaled corticosteroids (ICS) to control his moderate, persistent asthma. After ImmunoCAP, he was able to lower his dose.

- Implemented an allergen exposure reduction plan tailored to his specific needs
- Takes an antihistamine only when his seasonal allergies hit

**CURRENT NIH GUIDELINES RECOMMEND** in vitro IgE testing, as well as clinical history and physical exam for all patients with persistent asthma.\(^5\)

**PERCENTAGE OF ASTHMA PATIENTS ON MEDICATION WHO CONTINUE TO EXPERIENCE SYMPTOMS\(^2\)**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>0%</th>
<th>50%</th>
<th>100%</th>
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<tbody>
<tr>
<td><strong>86%</strong></td>
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Up to **90%** of children and **60%** of adults with asthma have allergic triggers.\(^3,4\)
Identify the triggers that lead to allergy and asthma symptoms.
Symptoms occur when asthma patients reach the symptom threshold.

**BEFORE TRIGGER EXPOSURE REDUCTION**

Reducing cumulative allergen load reduces the need for medication. A customized trigger avoidance plan helped Max stay under his asthma symptom threshold.

**AFTER TRIGGER EXPOSURE REDUCTION**

Improving indoor environments can result in as much as a 30% reduction in asthma symptoms.
Alice has mild, persistent asthma. After ImmunoCAP, her asthma symptoms are better controlled.

- Implemented an allergen exposure reduction plan tailored to her specific needs
- After exposure reduction, she was able to avoid adding a second medication

Children with allergies and asthma have a 3x greater risk for hospitalization when exposed to allergens compared to children with asthma only.9
Compared to non-sensitized children, children with underlying allergies have:

- **47%** greater chance of symptomatic viral illnesses\(^\text{10}\)
- Almost **50%** greater likelihood of moderate to severe asthma symptoms when they have a virus\(^\text{10}\)
- **Overall increase in frequency, duration, and severity of asthma and virus-related symptoms**\(^\text{10}\)

**Reduce the risk of asthma exacerbations by reducing allergen exposure.**\(^\text{9}\)

![Graph showing the risk of asthma-related hospitalization](image)

- Exposure reduction results in an almost **50% cut in severe asthma exacerbations**

Up to an average of **2.1** fewer unscheduled office visits per year.\(^\text{11}\)
BETTER ASTHMA CONTROL MEANS:

- **4.4** fewer missed school days per year\(^{11}\)
- up to **17** fewer days wheezing per year\(^{11}\)
  - Didn’t miss this year’s field trip
  - Enjoyed more games of kickball during recess

- **7** fewer missed work days per year\(^{12}\)
- **21.3** fewer symptom days per year\(^{11}\)
  - Able to travel to finish a major project
  - Working out at the gym again

The cost of symptom days can be up to **$126.71.**\(^{13}\)
Allergen exposure reduction can be as effective as pharmacotherapy in reducing asthma symptoms.\textsuperscript{6}

\begin{itemize}
  \item Exposure reduction cut rescue inhaler usage by 72\%\textsuperscript{6}
\end{itemize}

IgE testing leads to allergen exposure reduction.

<table>
<thead>
<tr>
<th>RECOMMENDATIONS FOR ALLERGEN SYMPTOM REDUCTION\textsuperscript{6}</th>
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<tbody>
<tr>
<td><strong>TYPE</strong></td>
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<td>-----------------</td>
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</table>
| **FIRST LINE**  | • Install mattress and pillow covers  
                  • Wash bedding weekly  
                  • Vacuum carpets more frequently  
                  • Remove stuffed animals and extra pillows from bed |
| **SECOND LINE** | • Dehumidify  
                  • Remove carpeting  
                  • Replace draperies  
                  • Replace fabric furniture |

Allergen exposure reduction led to \textit{61\% medication reduction}.\textsuperscript{6}
Jeremy has a history of atopic dermatitis and sensitivity to egg. After ImmunoCAP, he was able to enjoy birthday cake.

- Sensitized only to ovalbumin (egg protein) and is likely to outgrow
- Ovalbumin is heat labile, so it can be tolerated in baked products. Eggs not fully cooked should be avoided

ImmunoCAP helps identify which patients are appropriate for a cooked/baked oral food challenge with a specialist—which can save time and money.

Patients with asthma and food allergy are at greater risk for severe respiratory symptoms when exposed to food allergen triggers.
Step 1: ImmunoCAP whole allergen test.
IgE testing can determine allergen sensitization to help identify which patients are appropriate for further food component testing.

Approximately 75% of children with self-reported food allergy are not actually allergic.15 This highlights the need for objective measurements to establish a true food allergy diagnosis.

Step 2: ImmunoCAP allergen component test.
ImmunoCAP Component testing reveals sensitization to unique proteins for specific food allergens to help diagnose and optimize management.

Some proteins may:
- Cause no reactions or mild localized reactions18
- Be tolerated only when cooked or baked19,20
- Cause systemic reactions (i.e., anaphylaxis)15-23

Component tests can help determine what a patient can or cannot eat.*
For example, as with other common food protein sensitivities (milk, peanut), the specific egg protein(s) will indicate the risk for a systemic reaction.

EGG PROTEIN SENSITIVITIES

· ALBUMIN 11 S/7% MAY TOLERATE COOKED EGG 46
· OVOHUM (2S) AVOID ALL FORMS OF EGG 46

70% of children with egg allergy can tolerate cooked egg.46
*ImmunoCAP helps identify which patients are appropriate for a cooked/baked oral food challenge with a specialist.15

To better manage your patients’ asthma and allergies, the better you can optimize their management.

1. IgE testing can determine allergen sensitization to help identify which patients are appropriate for further food component testing.
2. Component tests can help determine what a patient can or cannot eat.
3. “Avoid all forms of egg” or “may tolerate cooked egg” can be used to guide dietary recommendations.

Prevent unecessary medications and multiple doctor visits.
Reduce costs associated with emergency and urgent productivity at work and school.
Decrease school absences to help improve academic achievement and overall performance.
Avoid exacerbations and school absences.
Manage allergies to improve overall health and quality of life.

Before you treat it, immunoCAP it.
Once you’ve established that the symptoms are related to allergies, you can take steps to manage the condition and prevent recurrence. This involves understanding the specific allergens that are triggering the reactions and developing strategies to avoid or mitigate exposure.

ImmunoCAP offers a comprehensive approach to allergy testing, helping healthcare providers identify the underlying allergens and tailor management plans accordingly. By understanding the specific triggers, patients can make informed decisions about their diet, lifestyle, and environmental exposures, ultimately improving their quality of life and reducing the impact of allergic reactions.

As more research is conducted and our knowledge of allergies expands, the tools and approaches for managing these conditions will continue to evolve. Stay informed and seek guidance from healthcare professionals to ensure the best possible care for you or your loved ones.

References:
1. https://www.worldallergy.org/professional/allergic_diseases_central/allergic_march/
3. https://www.worldallergy.org/professional/allergic_diseases_central/allergic_march/