ImmunoCAP

A convenient blood test for allergen identification

MID AMERICA CLINICAL LABORATORIES
MACL™

Why examining a patient's history and symptoms just isn't enough

Respiratory Profile: 51315
Food Allergy Profile: 10715
Childhood Profile: 10659

Did you know 65 percent of patients taking antihistamines are not allergic?[1] Unfortunately, this means many patients end up paying for drugs that do not treat the cause of their symptoms. An Immunoglobulin E (IgE) test is the most effective way to find out if a patient's symptoms are caused by an atopic allergy.

Testing also allows you to:

- Guide your plan for the patient's medication, treatment and avoidance.
- Manage co-morbid allergic rhinitis and asthma symptoms.
- Guide your approach to timely and appropriate referrals if necessary.
- Improve patient care and treatment options.

Skin prick tests are uncomfortable, and require the patient to stop taking antihistamines days before the procedure. The ImmunoCAP blood test offers results comparable to that of a skin prick test, but with less discomfort. All the information can be gathered from one small blood sample, and the patient can continue to take prescribed medications.

ImmunoCAP fast facts:

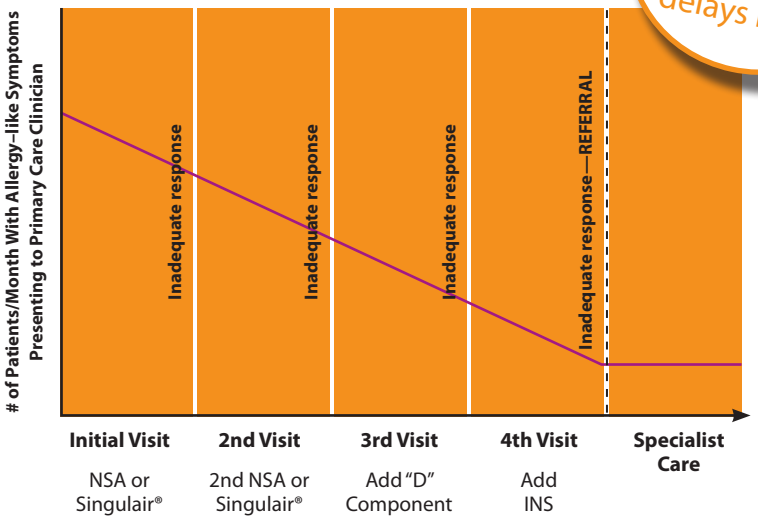
- FDA-cleared for quantitative measurement of specific IgE.
- Can identify specific seasonal and perennial allergens.
- Helps guide medication decisions including IgE-specific therapies.
- Requires one blood sample.
- Accuracy superior to RAST technology® tests.[7]

(continued)

Allergic rhinitis

Medication trial and error takes time, delays relief

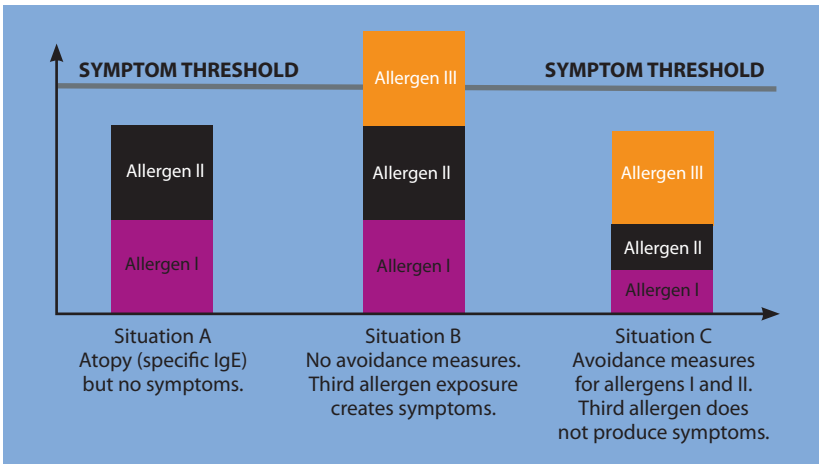
Patient treatment continuum



After a failed trial of over-the-counter medications, patients with allergy-like symptoms will see a primary care clinician—often for multiple visits and prescriptions prior to symptom resolution or referral. That's because only half of rhinitis patients have allergies,[1] and non-sedating antihistamines and leukotriene modifiers are not effective for non-allergic symptoms.[1]

Contrary to widespread belief, symptoms do not gradually increase with the allergen exposure. The symptoms only appear when the total exposure exceeds the threshold. That means that by reducing the exposure, you can eliminate some of these symptoms.[6,7]

Cumulative allergic load and symptom threshold[8]



Asthma

60% of people with asthma have allergic asthma![6]

The right allergen diagnosis can help treat the cause of a patient's asthma. Typically, patients are not monosensitized. So, multiple allergens play a part in creating allergic upper respiratory symptoms.[8]

The National Institutes of Health (NIH) recommends the following steps for patients with persistent asthma on daily medications:

- Identify allergen exposures.
- Use patient history to assess sensitivity to seasonal allergies.
- Use testing to identify sensitivity to perennial indoor allergens.
- For selected patients, detection of IgE sensitivity to seasonal or perennial allergens may be the basis for avoidance.

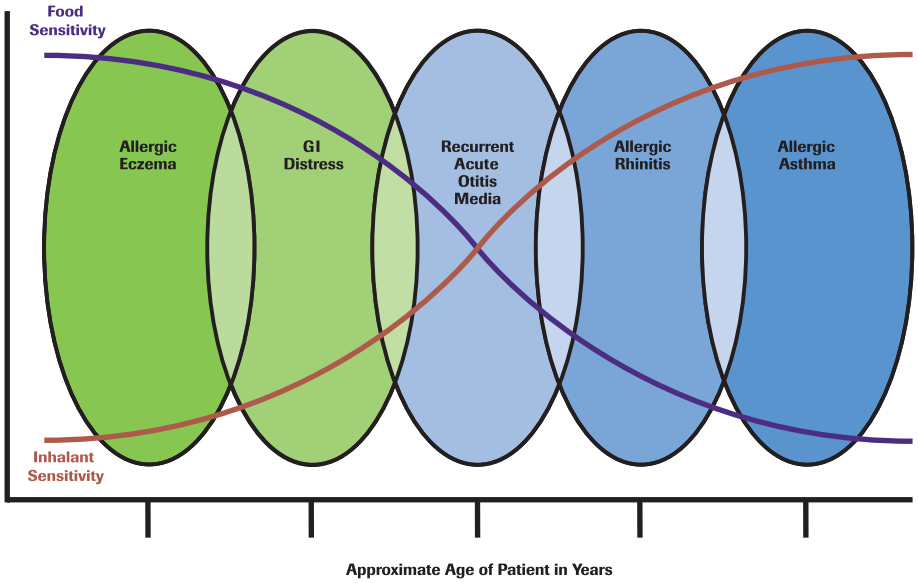
Childhood allergies

Approximately 40% of infants with atopic dermatitis may develop asthma by the age of three to four years.[9]

The road toward developing asthma often begins with infant eczema. As a child is exposed to more and more allergens, the skin condition evolves into other sensitivities, including asthma.[2] ImmunoCAP can help create an individualized plan to stop the chain reaction.

Symptom Manifestations of the Allergy March[2,3]

Eczema often marks the first step in an allergic progression toward asthma.[2]



Food allergies

A quarter of adults think they have food allergies, while less than five percent actually do.[2] Patients who have the following factors are at risk for food allergies[5]:

- A family history of food or atopy allergies.
- Symptoms that suggest a potential allergy.
- Infant patients with moderate to severe atopic dermatitis.

Footnotes

1. Szeinbach S., Boye M, Muntendam P, O'Connor R, Diagnostic Assessment and resource utilization in patients prescribed non-sedating antihistamines. Presented at Am. College of Osteopathic Family Physicians. March 2001; Philadelphia, PA.
2. Basset CW. Food allergies and reactions. *Allergy and Asthma Advocate* [newsletter online]. Fall 2006.
3. The Allergy Report: Diseases of the Aptopic Diathesis. Milwaukee, Wis: American Academy of Allergy, Asthma & Immunology, Inc. 2000;2:33,111.
4. Ahlstedt S. Mediators in allergy diagnosis. *ACI Intl.* 1998;10(2):37-44.
5. ETAC® Study Group. Allergic factors associated with the development of asthma and the influence of cetirizine in a double-blind, randomised, placebo-controlled trial: first results of ETAC®. *Pediatr Allergy Immunol.* 1998;9:116-124.
6. NH. Guidelines for the diagnosis and management of asthma. 1997. NH publication 97-4051:41-42.
7. Williams PB, Barnes JH, Szeinbach SL, Sullivan TJ, Analytic precision and accuracy of commercial immunoassays for specific IgE: establishing a standard. *J Allergy Clin Immunol*. 2000; 105(6): 1221-1230.
8. Fromer L. Clinical rationale for obtaining a precise diagnosis. *J Fam Pract*. April 2004; S4-S14.
9. Kulig M, Bergmann R, Tackell, et al. Long-lasting sensitization to food during the first two years precedes allergic airway disease. *Pediatr Allergy Immunol*. 1998; 9: 61-67.

Childhood allergy profile—Test Code 10659 3 months–3 years

- Cat dander, e1
- Cockroach, i6
- Cod fish, f3
- Dog dander, e5
- Egg white, f1
- House dust mite (D. farinae), d2
- Milk, f2
- Mold (Alternaria alternata), m6
- Peanut, f13
- Soybean, f14
- Wheat, f14
- Total 1gE

Respiratory allergy profile—Test Code 51315 3 years and older

- D. pteronyssinus, House Dust Mite
- D. farinae, House Dust Mite
- Cat dander
- Dog dander
- Bermuda grass (Cynodon dactylon)
- Timothy grass (Phleum pratense)
- Cockroach
  - Penicillium notatum
  - Cladosporium herbarum
  - Aspergillus fumigatus
  - Alternaria alternata
- Maple (box elder; Acer negindo)
- Birch (Betula verrucosa)
- Mountain Cedar (Juniperus sabinoides)
- Oak (Quercus alba)
- Elm (Ulmus americana)
- Walnut (Juglans californica)
- Maple leaf sycamore, London Plane
- Cottonwood (Populous deltoides)
- White Ash (Fraxinus americana)
- Pecan/Hickory (Carya soecue, pecan)
- Mulberry
- Common ragweed (short; Ambrosia elatior)
- Russian Thistle (Saltwort, Salsola kali)
- Rough pigweed (Ameranthus retroflexus)
- Sheep sorrel (Rumex acetosella)

Food allergy profile—Test Code 10715

- Clam, f207
- Cod fish, f3
- Corn (Maize), f8
- Egg white, f1
- Milk, f2
- Peanut, f13
- Scallop, f338
- Shrimp, f24
- Soybean, f14
- Walnut, f256
- Wheat, f4

Specimen Requirement = 2 mL (1mL min.) serum in SST tube for every 18 allergens tested.
CPT: 86003* [times the number of allergens], 82785* (1x) for Total 1gE.

Interpretation Guidelines

Class	Specific IgE (kUA/L)	Level	Clinical Correlation	Management Options
0	<0.35	Undetectable	Consider non-allergic causes	Consider causes other than allergic disease
1	0.35-0.69	Low	Uncertain clinical relevance; weak IgE antibody response may be a risk factor for future sensitization	Allergen Avoidance Trial of Pharmacotherapy
2	0.70-3.49	Moderate	Probably a contributing factor to total allergic load	Allergen Avoidance Trial of Pharmacotherapy
3	3.50-17.49	High	Clinically relevant	Allergen Avoidance Trial of Pharmacotherapy
4	17.50-49.99	Very High	Highly clinically relevant	(same as 2/3 if not controlled consider referral to an allergist)
5	50.00-100.0	Very High	Highly clinically relevant	(same as above)
6	>100	Very High	Highly clinically relevant	(same as above)

For additional information on one of the allergy tests, call 1-877-803-1010.

*The CPT codes provided are based on AMA guidelines and are for informational purposes only. CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed.