



as she

grows,

her allergies and the diseases they affect  
may grow right along with her.

atopic dermatitis • gastrointestinal distress • recurrent ear infection • rhinitis • asthma

**ImmunoCAP**<sup>®</sup>  
Specific IgE blood test

# you

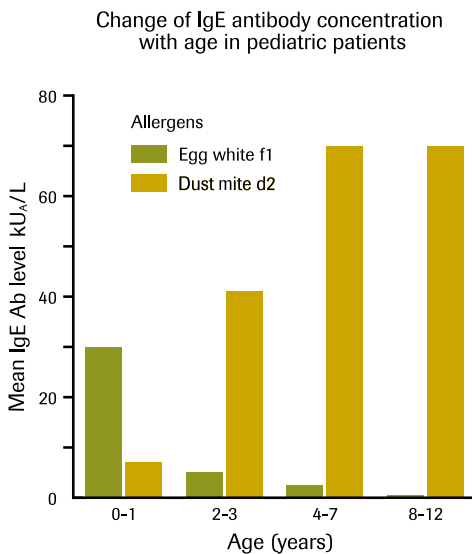
**can diagnose and alter  
the progression of allergy  
for happier, healthier patients.**

Atopic dermatitis, including chronic diaper dermatitis; gastrointestinal distress; eczema; ear infections—they're problems you see every day. Relieving the suffering caused by these conditions is the number-one priority for you, your patients, and their parents. Although some children present with symptoms of these common childhood conditions once or twice, many others return again and again with the same or progressively worse symptoms. While many children appear to grow out of their symptoms, they may actually be growing into them.



**You need to know when atopy (presence of specific IgE antibodies) is a dominant factor in these persistent, recurrent, progressive conditions.**

## “Typical” allergic symptoms are not always seen early in life, even in the presence of atopy.



Source: Sasai et al, 1996.<sup>1</sup>

- The symptoms caused by allergy in young children and infants rarely are typical nasal symptoms.
- IgE antibody formation starts early in life and can be measured by 3 months of age—even before clinical symptoms appear.
- Clinical symptoms, not typically thought of as allergy but attributable to atopy, can manifest as atopic dermatitis, gastrointestinal distress, recurrent ear infection, rhinitis, and asthma.
- Children actually grow *into* their allergies, and their sensitivities can change as exposures change. Atopy may be the linking factor in many childhood conditions. Testing for specific IgE is the only way to determine the underlying cause. And repeated specific IgE assessment may be valuable in identifying these changing sensitivities.

**These conditions may indicate future problems with inhalant allergens.<sup>2</sup> For the predisposed child, repeated exposure to cow’s milk, egg white, soy, wheat, or fish can lead to sensitization; vomiting, diarrhea, and colic can result. Further symptoms such as atopic dermatitis or eczema may appear. As the infant grows, recurrent ear infections and allergic upper respiratory diseases are common, often followed by the development of asthma.**

**This progression is known as the Allergy March. Early recognition of underlying atopy can change the course of allergic disease progression.**

Identification of offending allergens and appropriate treatment early in the disease process, including the avoidance of food allergens and inhalant allergens, may alter the path of the allergy march and blunt further symptoms.<sup>2</sup>

# the Allergy March



## genetic factors

Genetic predisposition is often a factor in the development of allergic disease.<sup>3</sup>



## atopic eczema

As a child is exposed to more potential allergens, a skin reaction like eczema may be the first sign of a lifelong disposition to allergy.<sup>4</sup>

*Exposure drives sensitization.*

**Current literature suggests the prevalence of specific allergen sensitivities and the incidence of allergic symptoms can be linked to age. Eczema is typically the first symptom in the youngest age group, followed by gastrointestinal symptoms.<sup>3</sup> Patients may also experience recurrent otitis media as a result of eustachian tube dysfunction associated with food allergies.<sup>6</sup> Sensitization to inhalant allergens occurs next, with a marked increase in incidence and prevalence by age 3.<sup>3</sup>**

## **Allergy doesn't have to make childhood an ordeal.**

The progressive development of allergy through childhood is referred to by specialists as the allergy march. It's a serious concern. At least 1 child in 5 will develop allergy and face a difficult journey into adult life.<sup>10</sup> Diagnostic testing for atopy can provide valuable information to help identify the sensitized child and understand how best to manage the allergy march in the clinical setting. Once an atopic component is ruled in or ruled out, you can work with the child and parents to determine the best therapeutic approach. Without objective evidence to support diagnosis and treatment, allergy and allergic disease progression may not be interrupted, and this can have a profound effect on a child's physical and emotional quality of life.

*Sensitization changes over time; that is, some sensitivities disappear and others emerge as exposures change.<sup>6</sup>*



**recurrent ear infections**

As many as 79% of children with recurrent ear infections have confirmed allergic rhinitis.<sup>7</sup>

*Symptoms or diseases caused by allergies also change over time.<sup>8</sup>*

**asthma/persistent wheezing**

40% of infants who have atopic dermatitis may develop asthma by the age of 4.<sup>9</sup>

**gastrointestinal distress**

Food sensitivities can produce colic, diarrhea, persistent vomiting, stomachaches, and other gastrointestinal symptoms.<sup>5</sup>

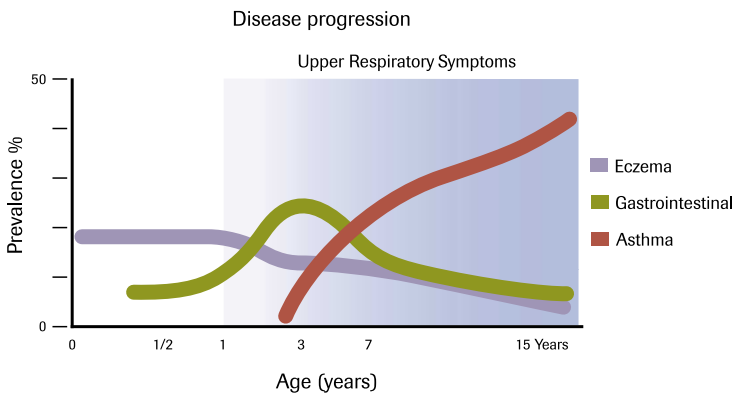


**rhinitis**

Effective treatment of rhinitis may improve asthma symptoms.<sup>4</sup>

**Mild allergy-related symptoms can progress to more serious illnesses.**

- Approximately 40% of infants with atopic dermatitis may develop asthma by age 4.<sup>2</sup>
- Children with early and long-lasting food sensitization have a 3-fold greater risk of developing allergic rhinitis and more than a 5-fold greater risk of developing asthma than children sensitized only transiently.<sup>2</sup>
- As many as 79% of children with recurrent ear infections have confirmed allergic rhinitis.<sup>7</sup>
- Allergic rhinitis is associated with numerous comorbid disorders, including asthma, recurrent ear infections, sinusitis, lymphoid hypertrophy, sleep disorders, and consequent behavioral and educational effects.<sup>11</sup>
- The Early Treatment of the Atopic Child (ETAC<sup>®</sup>) Study Group observed that children with atopic dermatitis who were also sensitized to grass pollen or house dust mites and were managed with cetirizine and allergen avoidance were half as likely to develop asthma as those who went untreated.<sup>9</sup>



Source: Sasai et al, 1996;<sup>1</sup> Sigurs et al, 1994.<sup>7</sup>

**At least 1 child in 5 will develop allergy and face a difficult journey into adult life.<sup>3</sup>**



# Finally—

a safe, easy, and

## accurate way

to get to the underlying cause and more effectively  
**manage common childhood diseases.**

Researchers are discovering that atopy may contribute to the underlying inflammatory process in common childhood diseases and, if left untreated, can lead to lifelong suffering. Now there's an easy and reliable way to test children, even the very young, for specific IgE-mediated disease.

ImmunoCAP® Specific IgE blood test uses a single blood sample to determine if a child has an allergy and exactly what the child is allergic to. In addition, periodic IgE testing should be performed throughout childhood to help manage a patient's allergic load and treat sensitization appropriately.

## Who doesn't want healthier, happier kids (and parents)?

Early and objective allergen identification using ImmunoCAP® Specific IgE blood testing, followed by appropriate treatment,

- alters the progression of the allergy march<sup>8,9</sup>
- improves quality of life and ensures better outcomes<sup>12</sup>
- reduces office visits
- allows avoidance of unnecessary antibiotics and other medications and treatments
- increases patient and parent satisfaction
- allows more economical care

## The following is a typical test profile for a child, combining inhalants and food allergens.

### Childhood Allergy March Profile - CPT 86003 (11X), 82785

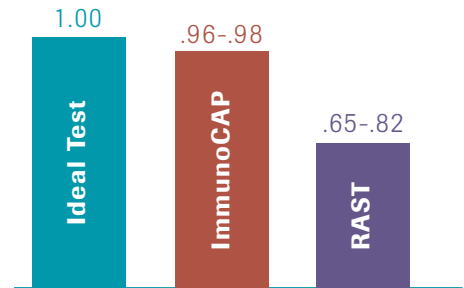
The childhood profile includes the following 11 allergen-specific IgE tests in addition to total IgE.

- Milk, f2
- Soybean (*Glycine max*), f14
- Fish, cod (*Gadus morhua*), f3
- House dust mite (*Dermatophagoides farinae*), d2
- Dog dander, e5
- Outdoor mold (*Alternaria alternata*), m6
- Egg white, f1
- Wheat (*Triticum aestivum*), f4
- Peanut (*Arachis hypogaea*), f13
- Cat dander, e1
- Cockroach, i6

Test Method: ImmunoCAP Specific IgE blood test

Specimen Requirement\*: 1.5 mL serum

\*Note that specimen requirements may vary from laboratory to laboratory.



ImmunoCAP Specific IgE blood test is vastly different from earlier *in vitro* technology such as RAST™ or modified RAST. ImmunoCAP compared favorably to the ideal standard in laboratory tests and has been accepted by the FDA as a truly quantitative measure of IgE. ImmunoCAP is the worldwide preferred method for specific IgE testing by both primary care physicians and specialists.<sup>13</sup>

## References

1. Sasai K, Furukawa S, Muto T, Baba M, Yabuta K, Fukuwatari Y. Early detection of specific IgE antibody against house dust mite in children at risk of allergic disease. *J Pediatr*. 1996; 128:834-840.
2. Kulig M, Bergmann R, Tacke U, Wahn U, Guggenmoos-Holzmann I, MAS Study Group. Long-lasting sensitization to food during the first two years precedes allergic airway disease. *Pediatr Allergy Immunol*. 1998;9:61-67.
3. Ahlstedt S. Mediators in allergy diagnosis. *ACI Intl*. 1998;10(2):37-44.
4. American Academy of Allergy, Asthma and Immunology. *Diseases of the Atopic Diathesis*. Milwaukee, Wis: AAAAI; 2000. *The Allergy Report*. Vol 2:33,111.
5. American Academy of Allergy, Asthma and Immunology. *Conditions That May Have an Allergic Component*. Milwaukee, Wis: AAAAI; 2000. *The Allergy Report*. Vol 3:71.
6. Nsouli TM, Nsouli SM, Linde RE, O'Mara F, Scanlon RT, Bellanti JA. Role of food allergy in serous otitis media. *Ann Allergy*. September 1994;73:215-219.
7. Sigurs N, Hattevig G, Kjellman B, et al. Appearance of atopic disease in relation to serum IgE antibodies in children followed up from birth for 4 to 15 years. *J Allergy Clin Immunol*. 1994;94:757-763.
8. Meltzer EO. Quality of life in adults and children with allergic rhinitis. *J Allergy Clin Immunol*. 2001;108:S45-S53.
9. 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.
10. Lack G. Pediatric allergic rhinitis and comorbid disorders. *J Allergy Clin Immunol*. 2001; 108:S9-S15.
11. Meltzer EO, Grant JA. Impact of cetirizine on the burden of allergic rhinitis. *Ann Allergy Asthma Immunol*. 1999;83:455-463.
12. Yman L. Allergy. In: Wild D, ed. *The Immunoassay Handbook*. 2nd ed. New York: Nature Publishing Group. 2001:664-680.
13. 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;105:1221-1230.

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