

Peter's parents suspected pollen as the cause of his rhinitis. Testing showed that several allergens may have contributed to his symptoms.

House
Dust
Mite

Birch

Dogs

Cats

ALLERGIC RHINITIS

 **ImmunoCAP**[®]
Is it allergy?

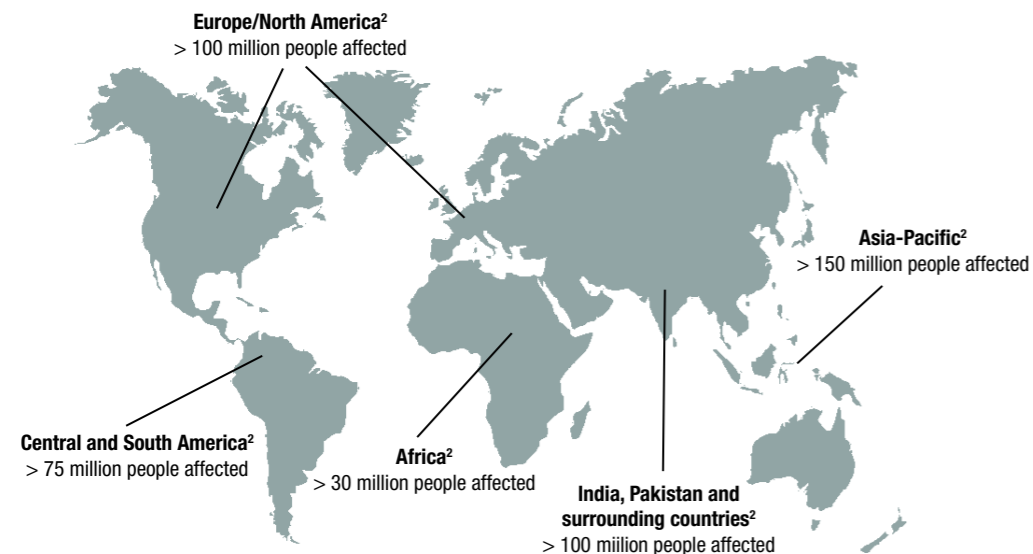
Allergy and rhinitis

Discover the connection

ImmunoCAP[®] blood tests help you rule in or rule out allergy and identify the allergens that add up to symptoms

Allergic rhinitis – A global burden and a diagnostic challenge

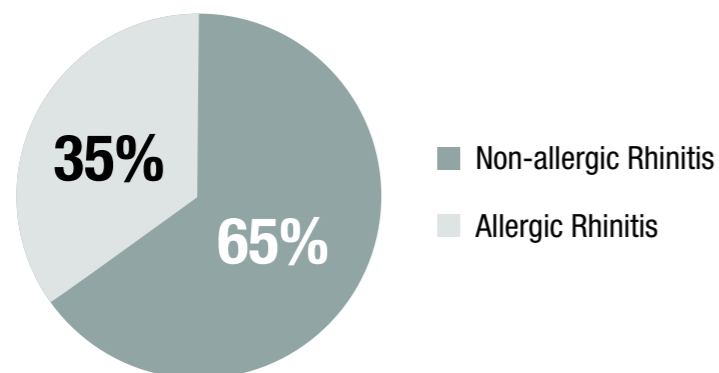
Allergic rhinitis is on the rise worldwide^{1,2}



Optimal patient management needs accurate diagnosis

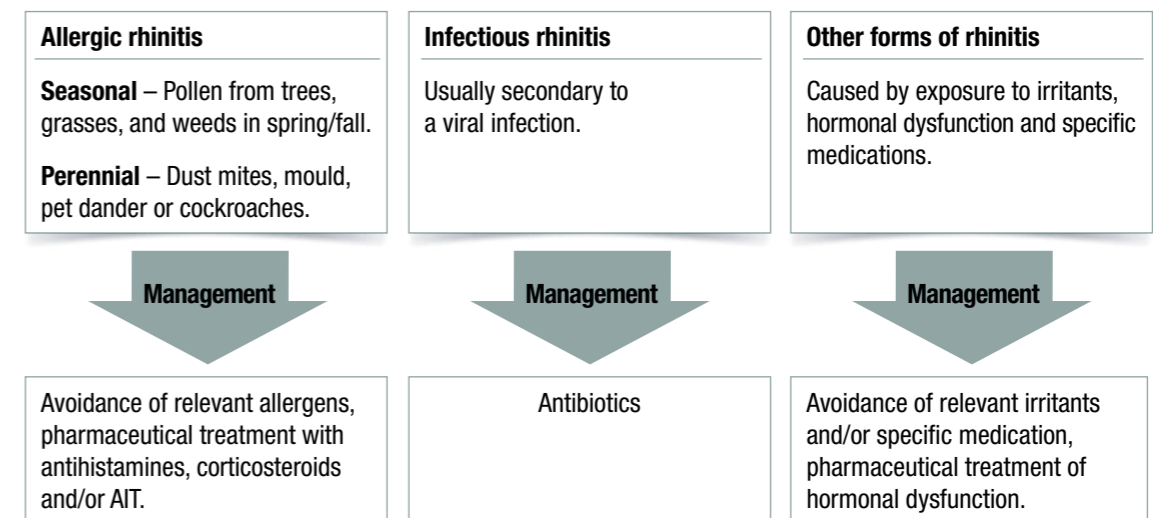
But: Case history alone may not be sufficient

Nearly 2/3 of patients prescribed antihistamines for their reported allergic rhinitis have symptoms that are not due to allergy^{3,*}



*Study of 1-year managed care records among 4,643 patients who received one or more prescriptions for an oral antihistamine (loratadine, fexofenadine, or cetirizine).³

Similar symptoms – different causes and management⁴



The impact on patients' quality of life can be substantial

- Symptoms impact negatively on physical, social and psychological well-being.^{2,4,5}
- The effects of symptoms like sleep disturbance, daily fatigue and use of antihistamines can result in impaired school/work performance.^{2,4,5}
- Allergic rhinitis is a risk factor for the development of asthma.^{2,4,6}

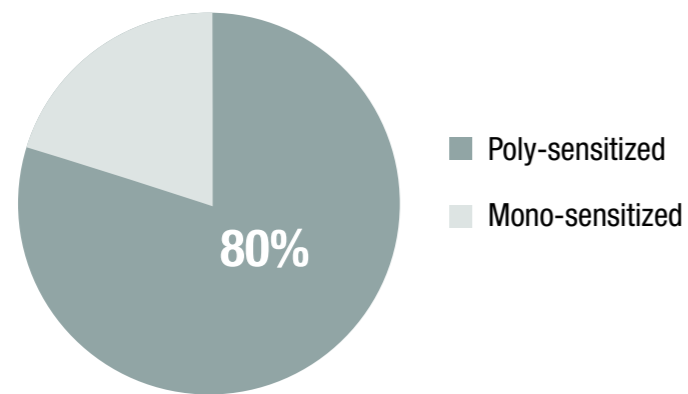


Sensitization to more than one allergen complicates diagnosis and patient management

DISCOVER THE CONNECTION

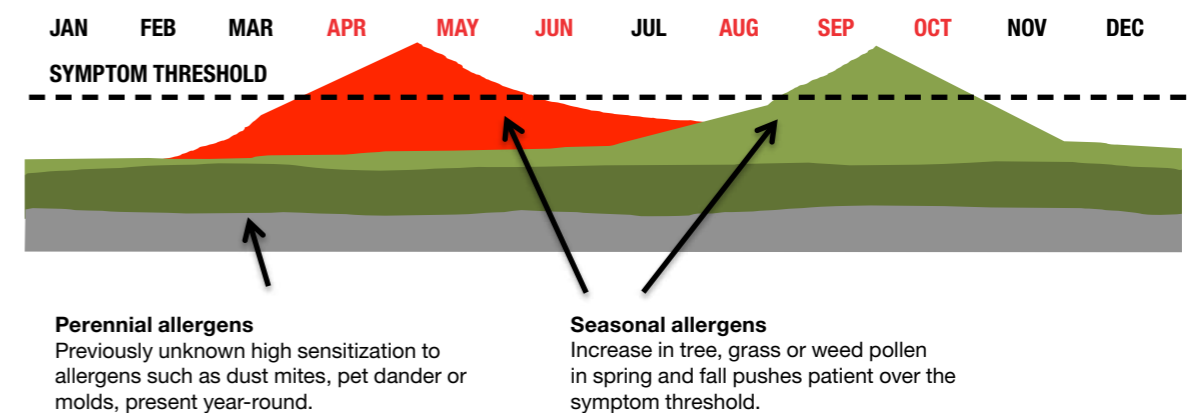
In patients with allergic rhinitis poly-sensitization is common

- Up to **80%** of allergic patients are sensitized to several allergen extracts.^{7,8}
- The average patient is sensitized to 3 allergens.^{7,8}



Sensitization to seasonal and perennial allergens add up to symptoms

Allergens can have cumulative effects, pushing the patient over the symptom threshold^{9,10}



Identifying the sensitizing allergens will help you outline a comprehensive avoidance plan to keep patient below symptom threshold.

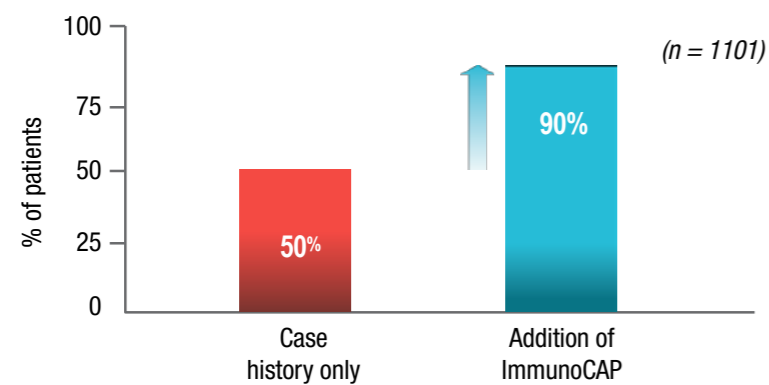


ImmunoCAP can help to achieve a more accurate diagnosis

DISCOVER THE CONNECTION

Add ImmunoCAP to your case history to improve diagnosis

Diagnostic certainty in ruling in or out allergy has been shown to increase when ImmunoCAP Complete Allergen results are added to clinical history^{11,12}



Adapted from: Duran-Tauleria E, et al.¹¹ and Niggemann B, et al.¹²

Study among patients with symptoms of eczema, wheezing and/or asthma, and rhinitis in primary care.^{11,12}

Guidelines recommend IgE testing, such as ImmunoCAP, in addition to clinical history and physical examination for patients with allergic rhinitis.¹³⁻¹⁵

“ Adequate allergy testing is the prerequisite for optimal care, including allergen avoidance, pharmacotherapy and immunotherapy. ”

EAACI (European Academy of Allergy and Clinical Immunology)¹³

Easy and safe testing for all kinds of patients

ImmunoCAP testing can be performed irrespective of:¹⁶⁻¹⁹

- Patient age (even in infants)
- Skin condition
- Medication
- Disease state
- Pregnancy status

No need for precaution for severe reactions as with skin-prick test (SPT)^{16,20}



How to improve diagnostic certainty with ImmunoCAP

- 1 Request an ImmunoCAP test** for the relevant allergens. Symptom profiles* help you identify the offending allergens.
- 2 Draw a blood sample.** 80 µl whole blood (40 µl serum) for each allergen (capillary or a venous sample) and one extra 200 µl for the instrument.
- 3 Send the sample** and request form to your local lab using ImmunoCAP.
- 4 Results come back**

Wheeze/Rhinitis Child	Asthma/Rhinitis Adult
g6 Timothy	g6 Timothy
t3 Birch	t3 Birch
t25 Ash	t25 Ash
w6 Mugwort	w1 Ragweed
e1 Cat	e1 Cat
e5 Dog	e5 Dog
d1 House dust mite	d1 House dust mite
f1 Egg white	w6 Mugwort
f2 Cow's milk	m6 Alternaria
f13 Peanut	i6 Cockroach

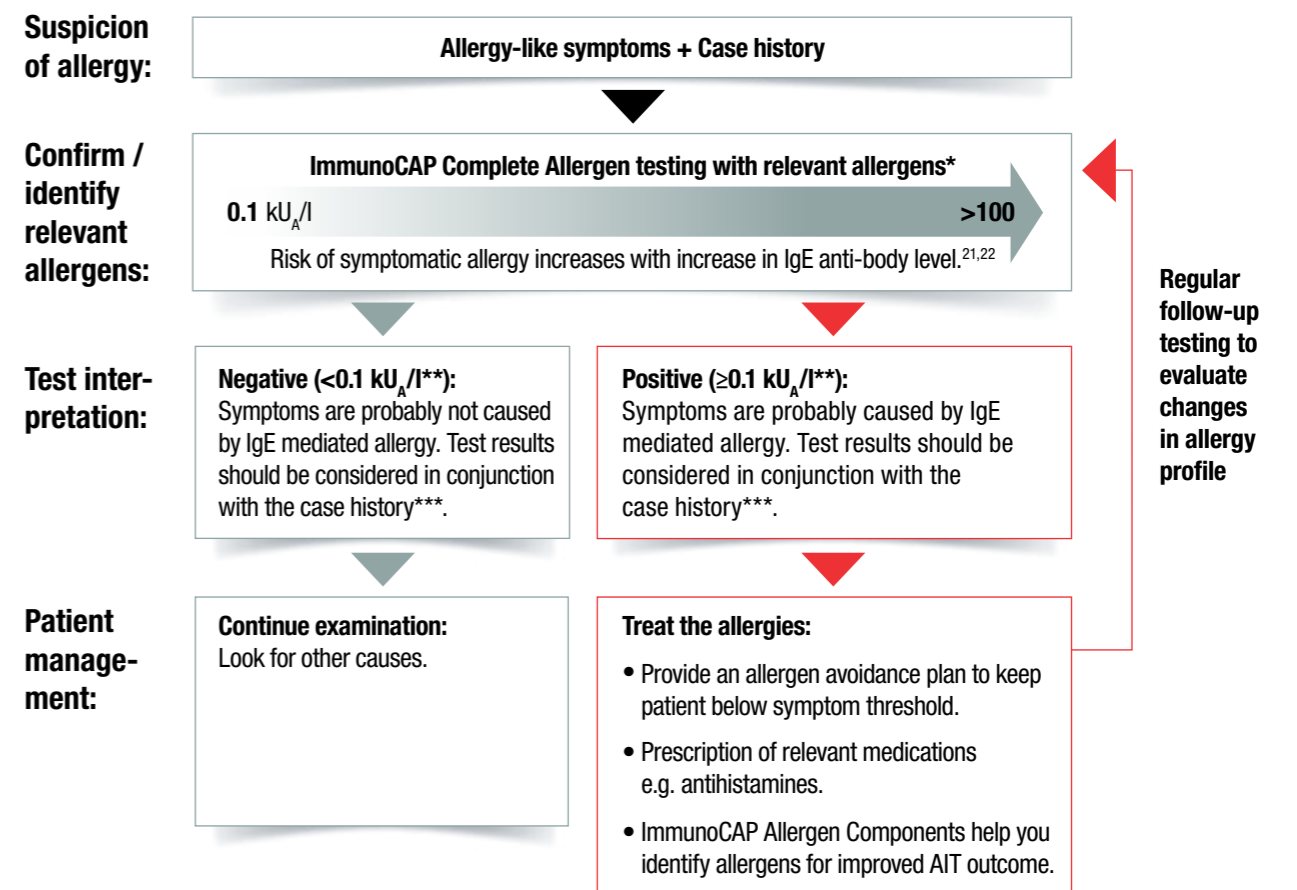
*Symptom profile containing relevant allergens. Local adaptation with respect to age and regional differences is recommended

Limitations of procedure – please refer to limitations contained in Directions for Use.

Confirmation of allergy and identification of causative allergens are crucial to correctly manage allergic diseases. Precise diagnosis allows the implementation of therapies oriented to the etiologic factors of allergic diseases, such as environmental measures and immunotherapy.

World Allergy Organization (WAO)¹⁵

ImmunoCAP helps identify the allergen(s) that add up to symptoms



*Symptom profile containing relevant allergens. Local adaptation with respect to age and regional differences is recommended.

**The IgE antibody level should be regarded as additional information helping the clinician confirm the clinical decision, based also on a case history and physical examination.

***Factors to consider for a final diagnosis: age, degree of atopy, allergen load, type of sensitizing allergens, previous symptoms, other triggering factors.

The connection: Clinical history plus ImmunoCAP

DISCOVER THE
CONNECTION

Peter, 10 years old — case history:

- Peter, ten years old, visits his doctor due to perennial nasal obstruction and itchy and watery eyes.
- He says the symptoms have exacerbated during the spring.
- His mother explains that Peter suffered from mild eczema during infancy and he has a tendency to catch colds easily.

Diagnostic procedure

- Physical examination shows a slightly inflamed conjunctivae and pale blue nasal mucosa.
- The doctor suspects pollen allergy, infection and possibly non-specific nasal hyper responsiveness.



The patient described here is a fictitious example.

Peter's doctor orders ImmunoCAP Complete Allergen tests to get a better understanding of his allergy triggers

ImmunoCAP test results:			
Allergen	slgE (kU _A /l)	Allergen	slgE (kU _A /l)
g6 Timothy	<0.1	e5 Dog	<0.1
t3 Birch	12.02	d1 House dust mite	8.43
t25 Ash	<0.1	f1 Egg white	<0.1
w6 Mugwort	<0.1	f2 Cow's milk	<0.1
e1 Cat	7.23	f13 Peanut	<0.1
Total IgE 149			

Interpretation and management

- Peter is diagnosed as allergic to birch, house dust mites and cats
- In order to push Peter below the symptom threshold, the doctor recommends that he limits his exposure to house dust mites by removing the carpet in his room and using allergen-protective bed covers.
- He is also recommended to not let the neighbour's cat into the house.
- An antihistamine is prescribed.
- During a follow up visit, Peter says he is experiencing fewer symptoms during pollen season and hardly ever needs to use his antihistamine.

Discover the connection with ImmunoCAP

Incorporate ImmunoCAP in your diagnostic process and help improve allergy management

- Find out if the symptoms are allergic or non-allergic^{11,12}
- Identify all the responsible allergens that push the patient over the symptom threshold¹⁰⁻¹²
- Develop an optimal management strategy to keep your patient below the symptom threshold¹³⁻¹⁵



References: 1. European Academy of Allergy and Clinical Immunology; Global Atlas of Allergic Rhinitis and Chronic Rhinosinusitis, 2015. 2. Bousquet J, et al. *Allergy*. 2008;63(Suppl 86):8-160. (ARIA Guideline). 3. Szeinbach SL, et al. *J Manag Care Pharm*. 2004;10(3):234-8. 4. Roberts G, et al. *Allergy*. 2013;68:1102-16. 5. Nathan RA. *Allergy Asthma Proc*. 2007;28:3-9. 6. NIH. Guidelines for the Diagnosis and Management of Asthma 2007. NIH Publication 08-4051. 7. Ciprandi G, et al. *Eur Ann Allergy Clin Immunol*. 2008;40(3):77-83. 8. Petersson CJ, et al. Sensitization profile in undiagnosed children with skin and respiratory allergy-like symptoms in primary care. Abstract presented at WAO, Buenos Aires, Argentina 6-10 December 2009. 9. Wickman M. *Allergy*. 2005;60(Suppl 79):14-18. 10. Burbach GJ, et al. *Allergy*. 2009;64:1507-15. 11. Adapted from Duran-Tauleria E, et al. *Allergy*. 2004;59(Suppl 78):35-41. 12. Adapted from Niggemann B, et al. *Pediatr Allergy Immunol*. 2008;19:325-31. 13. Eigenmann PA, et al. *Pediatr Allergy Immunol*. 2013;24:195-209. 14. Seidman MD, et al. *Clinical Practice Guideline: Allergic Rhinitis. Otolaryngology - Head and Neck Surgery*. 2015;152(1S) S1-S43. 15. Pawankar R, et al. *World Allergy Organization (WAO) White Book on Allergy*, 2011. 16. Siles RI, et al. *Cleve Clin J Med*. 2011;78:585-92. 17. Bonnelykke K, et al. *J Allergy Clin Immunol*. 2008;121:646-51. 18. Belhocine W, et al. *Pediatr Allergy Immunol*. 2011;22:600-7. 19. Bacharier LB, et al. *Allergy*. 2008;63:5-34. 20. Walsh J, et al. *Br J Gen Pract*. 2011;61:473-5. 21. Söderström L, et al. *Allergy*. 2003;58:921-8. 22. Sampson HA. *J Allergy Clin Immunol*. 2001;107:891-6.

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