Reveal the truth behind

the rhinitis symptoms

ImmunoCAP® blood test helps you rule in or rule out allergy and consequently improve patient well-being

Thermo
SCIENTIFIC

Case history and physical examination alone may lead to uncertain diagnoses

Misdiagnosed rhinitis has significant impact on patient well-being

Over-diagnosis of allergic rhinitis:

1. Patients with rhinitis symptoms have likely already failed on an OTC, non-sedating antihistamine (NSA).[1]
2. Approx. 65% of patients diagnosed as having allergic rhinitis and prescribed an NSA are not allergic.[2,3]
3. NSAs and leukotriene receptor antagonists don´t work in non-allergic rhinitis.[4,5]

Under-diagnosis of allergic rhinitis:

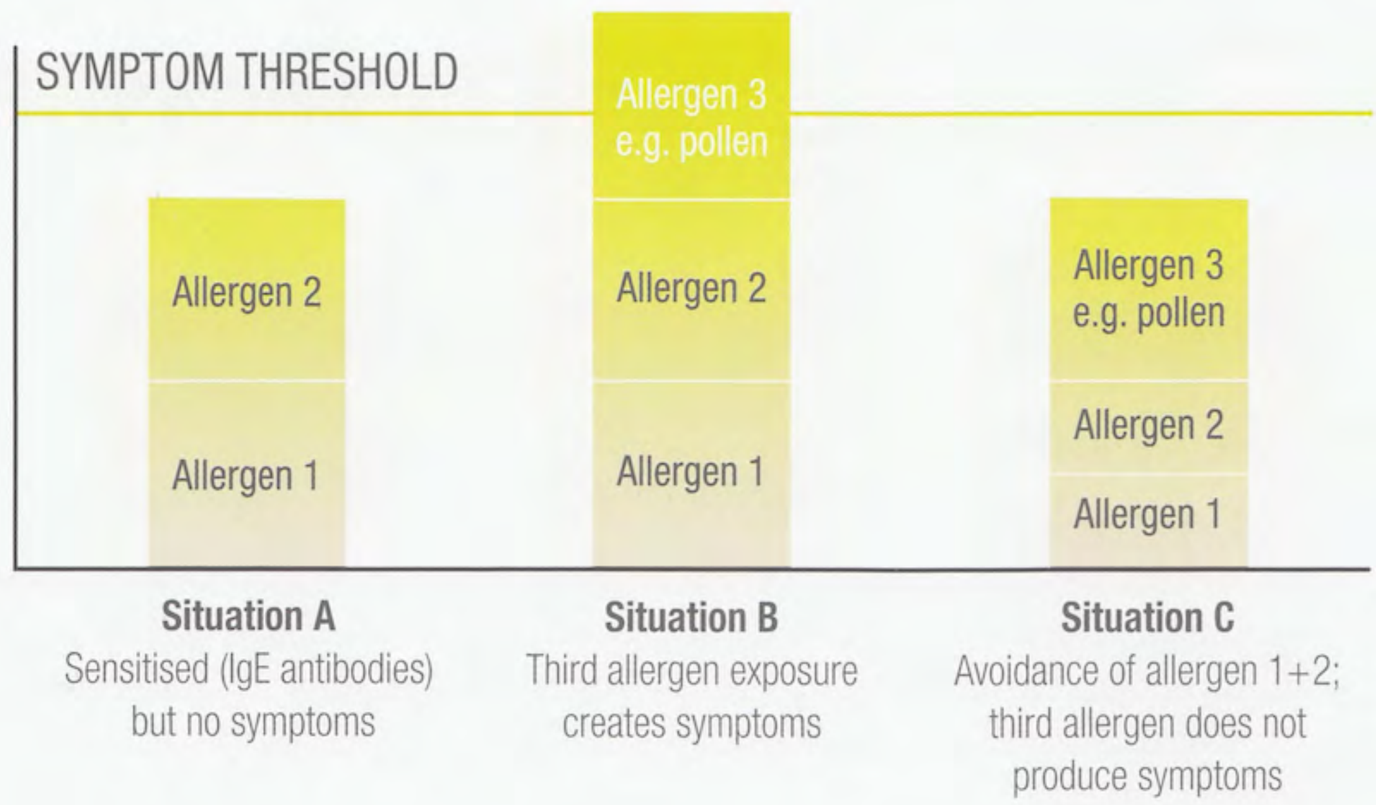
1. Allergic rhinitis is often confused with recurrent infectious colds, leading to unnecessary use of antibiotics.[6]
2. Patients have unnecessary low quality of life: symptoms, disturbed sleep, concentration/performance difficulties in school/at work.[1,5,7]
3. Improper management of allergic rhinitis can lead to asthma.[7,8]

Differentiation between allergic and non-allergic rhinitis requires evaluation for specific IgE antibodies.[7,9]

Individual allergens add up to symptoms – pollen may not be the sole cause!

Identifying the obvious allergen is not always enough e.g. pollen during pollen season. Knowing all relevant allergens is a prerequisite for giving your patients comprehensive allergen avoidance advice and thereby push the patient below the symptom threshold.[10]

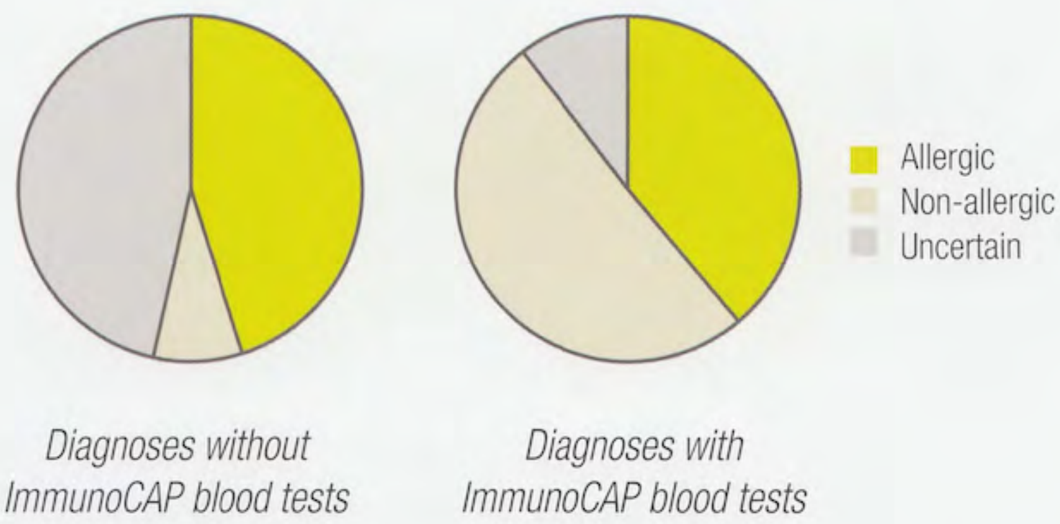
- Up to 80% of allergy patients are polysensitised, i.e. allergic to more than one allergen.[10]
- The average primary care patient is sensitised to three and often more allergens.[10,11]



Blood tests will help you increase the number of correct diagnoses

ImmunoCAP blood test* increases certainty in allergy diagnosis and helps rule out allergy

- Decrease in patients with uncertain allergy diagnosis – from 50% to 10%.[16,17]
- Increase in patients diagnosed as non-allergic – from 10% to 50%.[16,17]
- Resulting in cost savings of 242 EURO/patient including allergy tests, medication and physician visits over a period of 2 years.[18]



*In addition to case history and physical examination in primary care.

ImmunoCAP blood test can easily be performed

- Irrespective of age, even in early infancy.[19,20]
- Irrespective of a patient's skin condition, medication, symptoms, disease activity and pregnancy.[21,22]

Guidelines and recommendations around the world urge clinicians to perform allergy testing in patients with suspected allergic rhinitis

EAACI (European Academy of Allergy and Clinical Immunology): *"Generally, all children with persisting/recurrent/severe "allergic symptoms" or individuals with need for continuous treatment should be tested for allergy irrespective of the age of the child."*[23]

BSACI (British Society of Allergy and Clinical Immunology): *"Diagnosis of allergy by history taking as well as IgE testing and allergen/irritant avoidance is recommended before prescribing an antihistamine in rhinitis."*[15]

ARIA (Allergic Rhinitis and its Impact on Asthma): *"The diagnosis of allergic rhinitis is based upon the concordance between a typical history of allergic symptoms and diagnostic tests."*[7]

NICE (National Institute for Health and Clinical Excellence): *"…if IgE-mediated allergy is suspected, offer the child or young person a skin prick test and/or blood tests for specific IgE antibodies to the suspected foods and likely co-allergens."*[29]

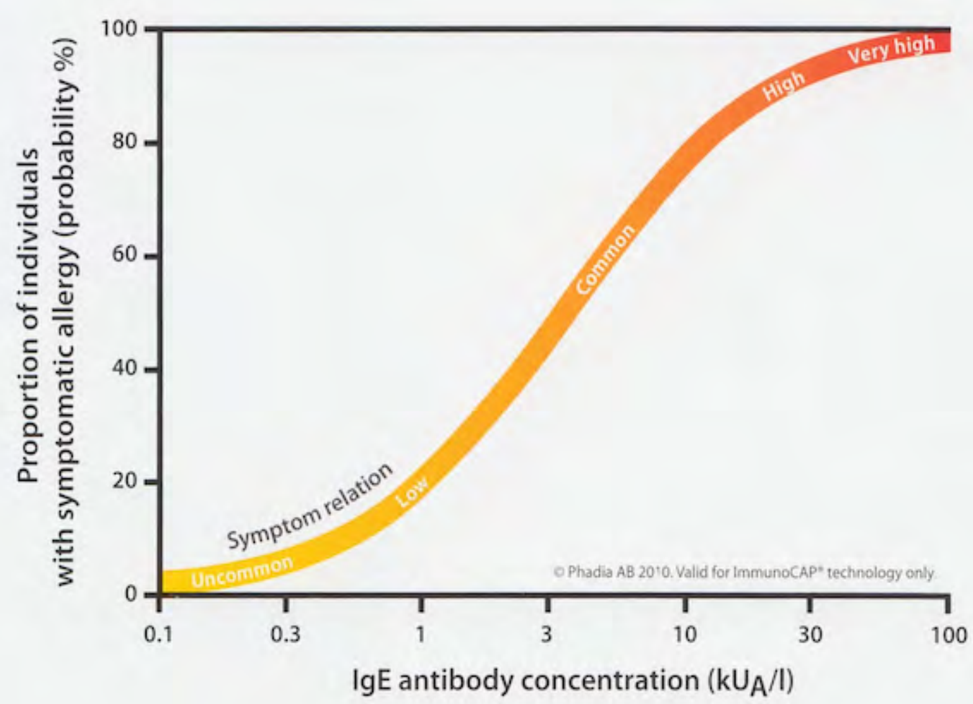
ImmunoCAP gives specific and reliable answers

1. **Request an ImmunoCAP test** for the relevant allergens based on the patient's clinical history. ImmunoCAP symptom profiles identify the most commonly found offending allergens.
2. **Draw a blood sample.** 80 µl whole blood (40 µl serum) for each allergen.
3. **Send the sample** and request form to your local lab using ImmunoCAP.
4. **You get the results 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

Interpretation of ImmunoCAP test results

The higher the specific IgE antibodies, i.e. sensitisation, the higher the risk for symptomatic allergy.* [25,26]



Factors to consider for a final diagnosis:

- Age
- Degree of atopy
- Allergen load
- Type of sensitising allergens
- Previous symptoms
- Other triggering factors

Positive test results:

≥0.35 kU_A/L indicate sensitisation.

ImmunoCAP can measure levels as low as 0.1 kU_A/L which in some instances, particularly in infants, can be clinically significant and indicate sensitisation.

Follow-up tests keep track of a changing allergy

Allergy undergoes dynamic changes over time. Regular blood testing of relevant allergens provides information as to if and how patient management can be changed.[7,9]

Regular follow-up with ImmunoCAP will help you determine:

- If allergies have been outgrown and if allergen avoidance is no longer needed.
- If new allergies have developed and if new allergen avoidance advice is necessary.

*** Please note!** ImmunoCAP measures specific IgE antibody concentrations i.e. sensitisation which is one part of the diagnosis of allergy. 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.

Early and correct diagnosis of allergic rhinitis will help you improve patient well-being

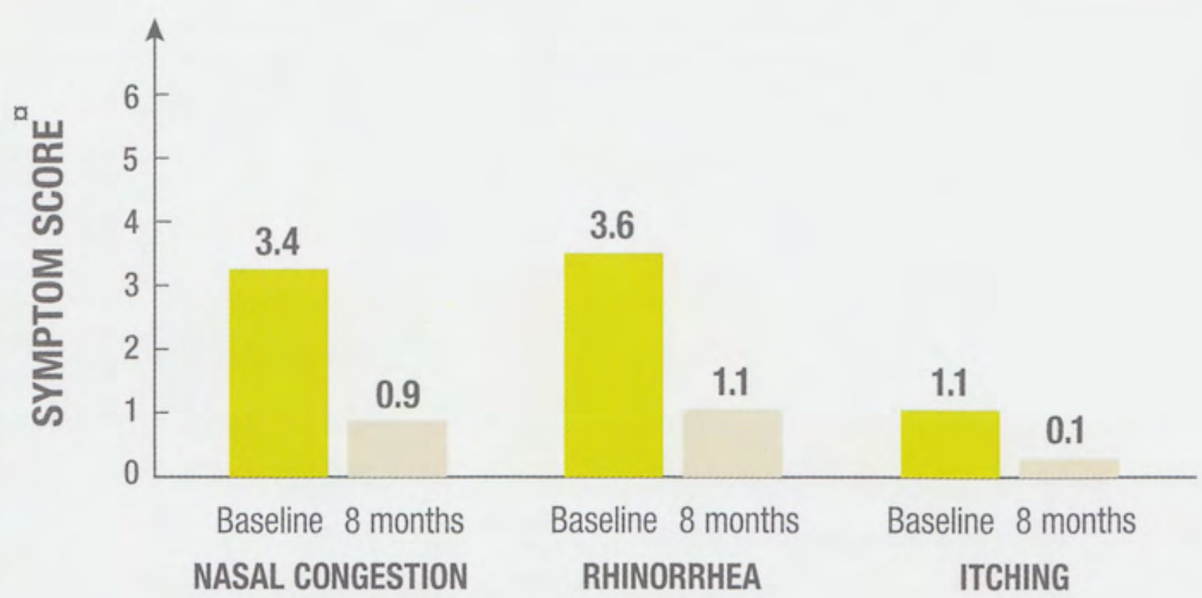
If allergy is ruled out, you may:

- **exclude** treatment with non-sedating antihistamines and leukotriene receptor antagonists as they don't work in non-allergic rhinitis.[4,5]
- **continue** to search for other causes of the symptoms.

If allergy is ruled in, your allergen avoidance advice may:

- **decrease** patient's rhinitis symptoms.[7,12,13]

Cat avoidance example*[14]



Please Note! *Avoidance to reduce total allergen load is clearly beneficial in allergy to furry animals, horses and certain occupational allergens.*[7,15]

- **and as a consequence of reduced symptoms:**
  - **improve** quality of life, sleep and reduce concentration/performance difficulties in school/at work.[1,5,7]
  - **reduce** usage of antihistamines and leukotriene receptor antagonists.[2,4,5]
  - **delay** development of asthma.[7,8]

¤Scale of 0 – 10, 0 being asymptomatic.*40 patients with cat allergy randomised to multifaceted environmental control measures (15 completed) (not single measures) or control (16 completed). There was no diference between baseline and after 8 months for the control. Environmental control was significantly better than control.

Thermo
SCIENTIFIC
Part of Thermo Fisher Scientific

ImmunoCAP blood test helps you rule in or rule out allergy and consequently improve patient well-being

EASY: Can be performed irrespective of a patient's age, skin condition, medication, symptoms, disease activity and pregnancy.[19–22]

RELIABLE: Performed without procedure variations and the results are of excellent standardisation.[27]

QUANTITATIVE: The results can help you predict and follow the disease development and determine what your patient is allergic to.[26, 28]

References: 1. Nathan RA. The burden of allergic rhinitis. *Allergy Asthma Proc 2007;28:3–9.* **2.** Szeinbach SL et al. *J Manag Care Pharm 2004;10(3):234–238.* **3.** Welsh NR et al. *J Am Pharm Assoc 2006;46:627.* **4.** Greiner AN et al. *J Allergy Clin Immunol 2006;118:985–986.* **5.** Ryan D et al. *Allergy 2008;63:981-989.* **6.** Stewart MG. *Clin Expr Allergy 2008;38:751-760.* **7.** Bousquet J et al. *Allergy 2008;63 (suppl 86):8–160. (ARIA Guideline)* **8.** *NIH. Guidelines for the Diagnosis and Management of Asthma 2007. NIH Publication 08-4051.* **9.** Wallace DV et al. *The diagnosis and management of rhinitis: an updated practice parameter. J Allergy Clin immunol 2008;122:S1–S84.* **10.** Wickman M. *Allergy 2005;60 (suppl 79):14–18.* **11.** 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.* **12.** Plaut M et al. *Allergic rhinitis. N Engl J Med 2005;353:1934–1944.* **13.** Custovic A et al. *The effectiveness of measures to change the indoor environment in the treatment of allergic rhinitis and asthma: ARIA update (in collaboration with GA2len). Allergy 2005;60:1112–1115.* **14.** Bjornsdottir US et al. *Ann Allergy Asthma Immunol 2003;91:189–194.* **15.** Scadding G.K et al. *BSACI guidelines for the management of allergic and non-allergic rhinitis. Clinical and Experimental Allergy 2008;38:19–42.* **16.** Adapted from: Duran-Tauleria E. et al. *Allergy 2004; 59 (suppl 78):35–41.* **17.** Adapted from: Niggemann B. et al. *Pediatr Allergy Immunol 2008;19:325–331.* **18.** Zethraeus N. *Ital J Pediatr. 2010;36: 61.* **19.** Bønnelykke K. et al. *J Allergy Clin Immunol 2008;121:646–51.* **20.** Belhocine W. et al. *Pediatr Allergy Immunol 2011;22:600–607.* **21.** Bacharier LB et al. *Allergy 2008;63:5–34.* **22.** James T. *Am Fam Physician 2002;66:621-626.* **23.** Høst A et al. *Allergy 2003;58(7):559-569.* **24.** The Co-ordination Group for Mutual Recognition and Decentralised Procedures – *Rapporteur's Public Assessment Report for pediatric studies submitted in accordance with Article 45 of Regulation (EC) No1901/2006.* **25.** Söderström L et al. *Allergy 2003;58:921–8.* **26.** Sampson HA. *J Allergy Clin Immunol 2001;107:891–6.* **27.** Hamilton R et al. *Arch Pathol Lab Med. 2010;134:975–982.* **28.** Yunginger J et al. *J Allergy Clin Immunol 2000;105:1077–84.* **29.** NICE Diagnosis and assessment of food allergy in children and young people in primary care and community settings, 2011. *http://guidance.nice.org.uk/CG116/Guidance.*

© 2011 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries.

www.thermoscientific.com/phadia