

TOP 5 Low-value practices and interventions

The Australasian Society of Clinical Immunology and Allergy (ASCIA) has reviewed the evidence and consulted with its expert members to develop the following recommendations to support best patient care and reduce the use of unnecessary or ineffective practices within a given clinical context.

1 Don't use antihistamines to treat anaphylaxis — prompt administration of adrenaline is the only treatment for anaphylaxis

2 Alternative/unorthodox methods should not be used for allergy testing or treatment

3 Allergen immunotherapy should not be used for routine treatment of food allergy — research in this area is ongoing

4 Food specific IgE testing should not be performed without a clinical history suggestive of IgE mediated food allergy

5 Don't delay introduction of solid/complementary foods to infants — ASCIA Infant Feeding Advice recommends early introduction of solid foods to infants, from 4-6 months old

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1 Don't use antihistamines to treat anaphylaxis – prompt administration of adrenaline is the only treatment for anaphylaxis

For emergency treatment of a severe allergic reaction (anaphylaxis) it is important to promptly administer adrenaline by intramuscular injection using an adrenaline autoinjector if available, or by using adrenaline ampoules and syringe (the latter is only suitable in a medical setting).

There is a high risk of potential harm (disability or death) from anaphylaxis if it is not treated promptly with adrenaline.

There are also cost implications from delayed or inappropriate treatment of anaphylaxis, such as additional ambulance, emergency department and hospital costs, as well as additional anxiety for patients and their families or carers.

Antihistamines are recommended for treatment of mild and moderate allergic reactions, including allergic rhinitis (hay fever), but have no role in treating or preventing respiratory and cardiovascular symptoms of anaphylaxis.

In particular, oral sedating antihistamines should never be used in patients with anaphylaxis as side effects (drowsiness or lethargy) may mimic some signs of anaphylaxis. Injectable promethazine should not be used in anaphylaxis as it can worsen hypotension and cause muscle necrosis.

2 Alternative/unorthodox methods should not be used for allergy testing or treatment

Whilst there is currently no cure for allergy, reliable tests and a range of treatments for allergy are available, which are backed up by scientific studies that demonstrate proven safety and efficacy.

In contrast, numerous studies have demonstrated the uselessness of several alternative/unorthodox methods that claim to test or treat allergy. These methods continue to be promoted in the community and some even make false claims that they can cure allergy. There is also currently no stringent regulation of alternative/unorthodox diagnostic techniques and devices, so they can be "listed" in Australia without having to prove that they work.

There is a risk of potential harm if individuals with allergies are incorrectly diagnosed and inappropriately treated using alternative/unorthodox methods, particularly if they have severe allergies. The costs of alternative/unorthodox methods are significant, and are usually paid for by individuals, with rebates from some private health funds. There are cost implications for healthcare services as well as individuals, as these funds are being directed into non-productive areas, and are therefore not available for more useful medical tests and treatments.

Examples of alternative/unorthodox methods that have been demonstrated to lack evidence for testing or treating allergy include food specific IgG and IgG4 tests, homeopathy, cytotoxic testing and kinesiology.

3 Allergen immunotherapy should not be used for routine treatment of food allergy – research in this area is ongoing

Research into allergen immunotherapy for food allergy is ongoing and until further work determining safety and efficacy is determined, it should not be performed outside of well-defined medical research studies, as there is a high risk of potential harm in individuals with severe food allergy.

Allergen immunotherapy is currently only recommended for treatment of allergic rhinitis (hay fever) due to pollen or dust mite allergy (and sometimes asthma) in appropriate patients when symptoms are severe, the cause is difficult to avoid (such as grass pollen) and medications don't help or cause adverse side effects.

4 Food specific IgE testing should not be performed without a clinical history suggestive of IgE mediated food allergy

Reliable and proven diagnostic tests for food allergy include skin prick testing, blood tests for food specific IgE antibodies and medically supervised food allergen challenges. Allergy test results should never be used on their own, and must be considered together with the patient's clinical history. In the absence of a history of clinical symptoms, low levels of allergen specific IgE are usually of little diagnostic significance.

Allergy testing of individuals where there is no evidence that food allergy plays a role in their clinical symptoms increases the likelihood of irrelevant false positive results. This may lead to potential harm due to inappropriate and unnecessary dietary restrictions, with nutritional implications for the individual (particularly in children) and unnecessary fear and anxiety (particularly for the family or carers).

5 Don't delay introduction of solid/complementary foods to infants — ASCIA Infant Feeding Advice recommends early introduction of solid foods to infants, from 4-6 months old

This recommendation is consistent with ASCIA Infant Feeding Advice (first developed in 2008) which recommends early introduction of solid foods to infants, from 4-6 months old (including foods considered to be highly allergenic such as peanut) preferably whilst breast feeding, with no delayed introductions, unless an allergic reaction occurs.

It is important to seek medical advice if an allergic reaction occurs and also regarding the safe introduction of foods if an infant has a sibling or parent with food allergy.

This recommendation is also consistent with findings from recent studies, including the 2015 LEAP (Learning Early About Peanut Allergy) trial published in the New England Journal of Medicine (NEJM). The LEAP trial concluded that the early introduction of peanuts significantly decreased the frequency of the development of peanut allergy among children at high risk for this allergy and modulated immune responses to peanuts.

Whilst a recent Cochrane review cautioned against the use of this treatment despite finding benefits, this was on the basis that it had only found one valid study with 28 subjects and therefore randomised controlled trials with larger samples were needed to strengthen the evidence. The recent LEAP trial occurred after the publication of this review and had 640 subjects.

How this list was developed...

The RACP Strategic Policy and Advocacy group assisted ASCIA in compiling an original list of 25 tests, treatments and services, that have been identified either in past work by ASCIA, other literature reviews, or in evidence reviews performed by overseas specialist physician bodies or health agencies as being overused, inappropriate or of limited effectiveness.

Two surveys were sent to ASCIA members who are also RACP Fellows (256 members in total) in February 2015 and March 2015, to firstly rank a top 5 from the list of 25, and secondly to review the wording and rankings of the top 5 recommendations. The overall response rate for these surveys was 20%. All ASCIA members and relevant patient organisations were then invited to review the list for a 2 week review period.

Australasian society of clinical immunology and allergy – Top 5 recommendations

EVIDENCE SUPPORTING RECOMMENDATION 1

Sheikh et al, 'H1-antihistamines for the treatment of anaphylaxis: Cochrane systematic review', *Allergy*. 2007 Aug;62(8):830-7

Cox et al, 'Allergen immunotherapy: a practice parameter third update', *J Allergy Clin Immunol*. 2011 Jan;127(1 Suppl):s1–55

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Andreae, D. and M. Andreae, 'Should Antihistamines be Used to Treat Anaphylaxis?', *BMJ*. 2009;338:b2489

EVIDENCE SUPPORTING RECOMMENDATION 2

Beyer and Teuber, 'Food allergy diagnostics: scientific and unproven procedures', *Curr Opin Allergy Clin Immunol*. 2005 Jun;5(3):261-6.

Antico et al 'Food-specific IgG4 lack diagnostic value in adult patients with chronic urticaria and other suspected allergy skin symptoms', *Int Arch Allergy Immunol*. 2011;155(1):52-6. doi: 10.1159/000318736. Epub 2010 Nov 6.;

Bernstein et al, 'Allergy Diagnostic Testing: An Updated Practice Parameter', *Ann Allergy Asthma Immunol*. 2008 Mar;100(3 Suppl 3):S1–148.

National Health and Medical Research Council. 2015. NHMRC Information Paper: Evidence on the effectiveness of homeopathy for treating health conditions. Canberra: National Health and Medical Research Council; 2015

Barton et al 1983, 'Controversial techniques in allergy treatment', *J Natl Med Assoc*. 1983 Aug;75(8):831-4.

Garrow, J. S. Kinesiology and food allergy. *Br Med J (Clin Res Ed)* 1988; 296: 1573-4

EVIDENCE SUPPORTING RECOMMENDATION 3

Nurmatov et al, 'Effectiveness and safety of orally administered immunotherapy for food allergies: a systematic review and meta-analysis', *Br J Nutr*. 2014 Jan 14;111(1):12-22. doi: 10.1017/S0007114513002353. Epub 2013 Aug 15.

Lucendo et al, 'Relation between eosinophilic esophagitis and oral immunotherapy for food allergy: a systematic review with meta-analysis', *Ann Allergy Asthma Immunol*. 2014 Dec;113(6):624-9. doi: 10.1016/j.anai.2014.08.004. Epub 2014 Sep 10.

Wang, J. and H. Sampson, 'Oral and sublingual immunotherapy for food allergy', *Asian Pac J Allergy Immunol*. 2013 Sep;31(3):198-209

EVIDENCE SUPPORTING RECOMMENDATION 4

Sicherer and Wood, 'Allergy Testing in Childhood: Using Allergen-Specific IgE Tests', *Pediatrics*. 2012 Jan;129(1):193-7. doi: 10.1542/peds.2011-2382. Epub 2011 Dec 26.

Bernstein et al, 'Allergy Diagnostic Testing: An Updated Practice Parameter', *Ann Allergy Asthma Immunol*. 2008 Mar;100(3 Suppl 3):S1–148

EVIDENCE SUPPORTING RECOMMENDATION 5

Du Toit et al 2015, 'Randomized Trial of Peanut Consumption in Infants at Risk for Peanut Allergy', *N Engl J Med*. 2015 Feb 26;372(9):803-13. doi: 10.1056/NEJMoa1414850. Epub 2015 Feb 23.

Nurmatov et al 2012, 'Allergen-specific oral immunotherapy for peanut allergy', *Cochrane Database Syst Rev*. 2012 Sep 12;9:CD009014. doi: 10.1002/14651858.CD009014.pub2.

Agostoni et al, 'Complementary feeding: a commentary by the ESPGHAN Committee on Nutrition', *J Pediatr Gastroenterol Nutr*. 2008 Jan;46(1):99-110.

Allen et al, 'Food allergy: is strict avoidance the only answer?', *Pediatr Allergy Immunol*. 2009 Aug;20(5):415-22. doi: 10.1111/j.1399-3038.2008.00811.x.

Greer et al, 'Effects of early nutritional interventions on the development of atopic disease in infants and children: the role of maternal dietary restriction, breastfeeding, timing of introduction of complementary foods, and hydrolyzed formulas', *Pediatrics* 2008; 121:183-91.

Snijders BE et al, 'Age at first introduction of cow milk products and other food products in relation to infant atopic manifestations in the first 2 years of life: The KOALA Birth Cohort Study', *Pediatrics* 2008; 122:e115-122