



## Unorthodox Allergy Tests and Treatments

Allergy is a science-based speciality, which relies on understanding the biological mechanisms underlying allergic conditions. These include asthma, allergic rhinitis (hay fever), food allergy, insect allergy, drug allergy and anaphylaxis. Accurate diagnosis requires a combination of allergy tests and clinical (medical) history, to check if allergy or another immune condition is the cause of symptoms. Skin testing or blood allergen specific IgE testing, and in some cases allergen challenges, are used to confirm the diagnosis.

### **Advice needs to be evidence based**

When considering tests and treatments, advice needs to be evidence based. There needs to be evidence that a particular test or treatment is reliable, based on studies of other people with the same condition.

Studies are designed to show if any improvement seen is due to the treatment, and not just due to chance or coincidence. Studies can also confirm if a particular treatment may cause harm as well as benefit.

Levels of evidence have been developed to rate the quality of published studies, with Level I being the highest quality of evidence, and level IV being of lesser quality. These levels assist doctors to select a test and/or treatment that is most likely to help people.

### **Unproven allergy tests and treatments are not regulated**

Some people with allergies consult alternative practitioners for unproven diagnostic allergy testing or treatments, even though there have been great advances in scientific knowledge about allergic disorders.

There are currently limited regulations of unproven tests, treatments and devices, which can be listed by the TGA in Australia without having to prove that they work. Unsubstantiated claims to test, treat or cure allergy and other immune disorders are only regulated by government, medical boards or advertising regulators if the practitioner is a registered medical practitioner.

### **Allergy falsely defined**

Instead of correctly relating allergy as a disorder of the immune system, which is scientifically proven, some unorthodox practitioners claim that many conditions are due to “hidden” allergies. These conditions include headaches, migraine, irritable bowel, muscle tension, pain, addiction, premenstrual syndrome, fatigue or depression.

Some unorthodox practitioners may attribute allergy to a disturbance of vital life force or energy, or to external triggers. These triggers include environmental toxins, chemicals, food allergens, food additives, or chronic infection with organisms like *Candida albicans*. They may state that the body can generally cure itself if given the opportunity to correct these imbalances, or avoid environmental toxins, allergens and infections.

These philosophies use terms loosely and confuse the difference between fatigue and immunity. They blend concepts of immunology, neurology and spirituality to explain the nature and causes of disease. There is no scientific evidence for these claims.

### **There are many types of unproven tests**

Many tests have been proposed to detect “hidden” allergies, that have no scientific basis, and have not been shown to be reliable or reproducible in studies. These tests are promoted even when there is no evidence of immune system involvement. ASCIA strongly advises against the use of these tests for diagnosis or to guide medical treatment. Unlike skin testing or blood allergen specific IgE testing, no Medicare rebate is available in Australia for unproven tests, and their use is not supported in New Zealand.

**Vega (electro-diagnostic) testing (Evidence Level II: inaccurate test)**

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Vega testing claims to detect disease by measuring changes in body electrical currents using a vega machine. The patient holds one negative electrode in one hand, and the positive electrode is applied to acupuncture points over fingers or toes. An allergen such as food extract in a sealed glass container is brought into the electrical circuit. An alteration in current is interpreted as meaning the person is sensitive to that substance. Formal examination of this technique shows that practitioners are unable to distinguish between healthy and allergic individuals, and between responses using allergens as well as dummy control solutions. Results also don't correlate with those obtained using conventional allergy testing.

**Cytotoxic testing (Bryan's test) and the Alcat test (Evidence Level II: inaccurate test)**

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In cytotoxic food testing (Bryan's test), the size and shape of white cells is assessed after incubation with food extracts on a microscope slide. These results have been shown to give different results when duplicate samples of the same blood are analysed repeatedly, and diagnose food allergy in people with symptoms that do not suggest food allergy. The Alcat test is a variant on a theme; the results are analysed on an expensive laboratory machine instead of under the microscope. Results from these techniques don't correlate with those obtained using conventional allergy testing.

**Iridology (Evidence Level II: inaccurate test)**

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Iridology claims to diagnose disease by examining iris patterns. Its theoretical basis is undermined by the fact that iris patterns (like fingerprints) are so unique and unchanging, that they can be used as biometric identification markers to distinguish one person from another. Studies of iridology have also demonstrated that practitioners are unable to distinguish healthy from sick individuals, and even give different diagnoses using iris photographs from the same patients taken minutes apart.

**Kinesiology (Evidence Level II: inaccurate test)**

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Kinesiology is based on the concept that exposure to exogenous toxins or allergens will be reflected in a reduction in muscle strength. Muscle strength is measured before and after exposure to food. Provocation to food occurs by having drops of food extracts given under the tongue or by holding a vial of food extracts in one hand. Children are assessed by testing the parent's strength first and again while holding the child's hand. The two test results are then subtracted to give the final results. Controlled study has shown that kinesiology results are not reproducible and are no more accurate than guessing. Unfortunately, kinesiology and other unproven diagnostic techniques are used as the basis of unorthodox treatment techniques as well.

**IgG food antibody testing and other techniques (Evidence Level II: inaccurate test)**

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IgG antibodies are proteins produced by the immune system in response to exposure to external triggers, like pollens, foods or insect venoms. Their presence reflects exposure to these triggers, not disease that results from exposure. IgG antibodies to food are commonly detectable in healthy adults and children, whether food-related symptoms are present or not. There is no credible evidence that measuring IgG antibodies is useful for diagnosing food allergy or intolerance, nor that IgG antibodies cause symptoms. The only exception is that gliadin IgG antibodies can be used to monitor the success of avoiding gluten in people with proven celiac disease. Despite studies showing how ineffective this technique is, it continues to be promoted in the community.

**VoiceBio (Evidence Level: no evidence)**

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This technique is based on the concept that internal organs communicate with each other via sound waves, with each organ vibrating at certain frequencies, and with organ dysfunction being detectable by analysis of such frequencies using a computer assisted analysis of the patient's voice. There is no scientific rationale for this technique, and no evidence that results are useful for diagnosing any disorder, including allergies.

**Other techniques**

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Other techniques such as pulse testing, stool or hair analysis or oral provocation/neutralisation have no scientific basis and no proven role in the diagnosis or management of any medical condition.

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### **Unorthodox treatments are unproven**

Claims of breakthrough treatments and variations of other unorthodox treatments continue to appear in the media, often with testimonials. These treatments have either not been subject to careful study or have been shown to be unhelpful when studied.

Unorthodox treatments appeal to a common desire to cure disease rather than control symptoms. There are very few cures for disease, other than those that can be eliminated with antibiotics, removed surgically, or eliminated by chemotherapy.

Unorthodox treatments are usually based on diet manipulation, diet supplements that claim to strengthen the immune system (such as herbal remedies and anti-candida supplements), or techniques that claim to cure or eliminate allergy.

### **Adverse outcomes from unorthodox testing and treatments**

Adverse outcomes following some unorthodox tests and treatments include:

- Major dietary restrictions, due to misleading results, that may impair growth and cause malnutrition, particularly in more vulnerable groups such as young children.
- Delayed access to more effective diagnostic tests and treatments, with lost productivity from inadequately controlled disease.
- Individual and public health implications, due to substitution of homoeopathic vaccines for those with proven effectiveness (or even discouragement to undertake vaccination at all).
- Impact on employment and social functioning, due to unnecessary environmental and chemical avoidance, creating a perception of allergy when there may be other causes of symptoms.
- Severe allergic reactions (anaphylaxis) in people who have severe allergy and consider themselves protected from exposure, after having unorthodox treatments.

### **The costs of unproven tests and treatments**

The costs incurred for complimentary medicines in Australia and New Zealand are very high. While it can be argued that this is a cost for individuals rather than governments, this has the following cost implications:

- Adverse outcomes requiring assessment by medical practitioners, resulting in further costs.
- Lost income and productivity resulting from inadequately controlled disease.
- Private funds directed into non-productive areas and therefore not available for more useful activities.
- Private health insurance funds being directed into some unproven tests and treatments.

### **Proven treatments**

The only proven technique which is close to being a cure for allergy is allergen immunotherapy (AIT), in people with a confirmed allergy to inhaled allergens, or to stinging insects. In controlled studies AIT has been shown to reduce the severity and frequency of symptoms in the most people.

Other proven allergy treatments include:

- Adrenaline (epinephrine) for treatment of life threatening severe allergic reactions (anaphylaxis).
- Allergen avoidance which is essential in the management of severe allergies to foods, insects and drugs (medications). It is important to have strategies in place to minimise the risk of exposure to allergens that that can result in anaphylaxis.
- Allergen minimisation can be useful in the management of allergic rhinitis (hay fever). If it is possible to identify and minimise exposure to the confirmed allergens, this may reduce symptoms.
- Allergic rhinitis medications include non-sedating antihistamines (tablets, syrups, nasal sprays, eye drops), intranasal corticosteroid (INCS) sprays, sprays containing a combination of INCS and antihistamine, salt water nasal sprays and rinses.

### Questions to ask unorthodox practitioners

In the absence of government regulation for unsubstantiated claims for unorthodox allergy tests or treatments, and to minimise the chance of harm, the following questions should be asked before proceeding with any tests or treatments:

- What is the evidence that it works?
- Has this evidence been published? If so, can I find it on Medline/Pubmed?
- What are the risks (such as side effects) and benefits?
- What might happen if I do not undertake this form of test or treatment?
- How much does it cost?
- Why doesn't my own doctor suggest this type of test or treatment?
- What are the qualifications of the practitioner recommending the test or treatment?
- Why can this one test or treatment detect or treat so many different problems?
- Why don't I get any Medicare (Australia) rebate for this type of test or treatment?

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