

IgE Allergy Panels

Food allergies can cause a wide range of symptoms and disorders including asthma, eczema and migraines. The IgE food allergy test offers a useful tool for detecting the foods causing immediate allergic reactions. The results are patient specific and provide an easy, precise and effective starting point for dietary manipulation.

Table 1: Conditions which Frequently have Food Reaction Components

ADHD	Gallbladder disease
Arthritis	Inflammatory bowel disease
Asthma	Irritable bowel syndrome
Eczema	Migraine
Enuresis	Mouth ulcers
Epilepsy	Otitis media
Fatigue	Psoriasis

Health Disorders and Adverse Reactions to Food

Adverse reactions to foods can cause both mild and severe health problems in a subset of the population. Immediate food allergies are known to affect 4% of the general population, whereas general adverse reactions to food may affect more than 20%. The symptoms caused by the food reactions can be as mild as bloating and as severe as anaphylaxis (see Table 1). Conditions which may be caused or exacerbated by adverse food reactions include asthma, arthritis, irritable bowel syndrome (IBS), migraines otitis media and skin rashes (see Table 2).

Allergies versus Sensitivities to Foods

Adverse food reactions include any abnormal reaction resulting from the ingestion of a food. They can be categorised as food allergies (with an immune response) or food sensitivities/intolerance. IgE mediated food allergies are well-known, easily diagnosed and usually give physical symptoms within minutes. Food sensitivities on the other-hand are difficult to diagnose because the time between consumption and response may be delayed (up to 2 days). In addition, symptoms are often subtle and in many cases ingestion of the offending food paradoxically masks the symptoms temporarily.

Table 2: Common Symptoms of Food Reactions

Acne	Insomnia
Bladder infections	Irritability
Bloating	Itching or rash
Coughing	Loss of appetite
Depression	Postnasal drip
Diarrhea	Reflux
Fatigue	Vomiting
Headaches	Weight gain

IgE Allergy Testing

Food allergies with an immediate onset (<2 hours) is usually IgE-mediated. In these circumstances patients normally recognise the link between the allergen and the symptom as the time between consumption and the adverse response is short. Common conditions associated with an IgE-mediated allergy include asthma, rhinitis and dermatitis, as well as anaphylactic events. The development of IgE-mediated allergies involves two steps. Firstly the body is sensitised to the allergen or reactive food. In this process activated plasma cells produce IgE antibodies specific to this allergen, which then bind to receptors on the surface of basophils and mast cells (these IgE molecules are also present in serum). When these sensitised individuals are then exposed to the allergen a second time, the allergen binds to the IgE antibodies causing a release of histamine and other chemical mediators. Effects such as dilation of blood vessels, increased vascular permeability and constriction of smooth muscle in pulmonary blood vessels results in symptoms characteristic of an IgE allergic reaction.

Blood tests for IgE can be used to diagnose allergens (both food and inhalants) that may be causing allergies with an immediate onset. Many studies have observed that the results correspond well with skin prick testing or oral challenge. It has also been mentioned in the medical literature that IgE testing would assist general practitioners in identifying patients to be kept in primary care from those who should be referred to an allergy specialist.

IgE testing has been shown to be very useful for detecting food allergies in various conditions. In a study on children with dermatitis and asthma, food allergies were investigated by the double-blind placebo-controlled food challenge (DBPCFC), skin prick testing and IgE blood test. The IgE levels were able to predict 95% of positive and 90% of negative food challenge reactions, providing comparable results to skin prick testing. The authors suggested that use of the IgE test could eliminate the need to perform the more time consuming DBPCFC in patients suspected of having IgE-mediated allergies. It may also be a safer option for those at risk of an anaphylactic event.

IgE antibody testing was also shown to be useful for predicting acute reactions to eggs. Forty children who were known to have problems from ingestion of eggs were screened by IgE antibody and oral challenge tests. The results to the oral challenge correlated well with the concentration of egg specific IgE antibody at the time of the challenge. IgE testing can also detect allergens from the environment that can be causing allergic reactions. One recent study investigated a possible allergy to cat as a causative factor in asthma. They found a better relationship between IgE testing and bronchoprovocation, than the widely used skin prick test.

Precaution

IgE *in vitro* testing is a powerful screening tool for determining foods and inhalents that are causing allergies. However, if a food that has been suspected of causing an anaphylactic event is found to be a negative on this *in vitro* test, we suggest that reintroduction of the food is only undertaken under the guidance of an allergy specialist.

Tests Available

- Allergy Panel – IgE Asian Foods (96 Foods)
- Allergy Panel – IgE General Foods (96 Foods)
- Allergy Panel – IgE Inhalants (64 Allergens)
- Allergy Panel – IgE Vegetarian Foods (95 Foods)

Test Preparation

- Do not eat any food 12 hours prior to the blood draw (i.e. you should be fasting). You can consume water. Take morning medications after the blood draw if possible.
- Avoid using anti-histamines, anti-inflammatories and any other immunosuppressive medications for two weeks prior to testing. These medications suppress the immune response and may affect the results. We suggest that you discuss with your healthcare practitioner whether you need to discontinue these medications prior to collecting your specimen. Never discontinue prescription medications without first consulting your healthcare practitioner.

Specimen Collection Requirements

Either serum or blood collected in a SST (orange) vacutainer tube.

Result Turnaround Time:

Two weeks after receipt of sample and test fee payment to NutriPATH.

How to order a test kit:

Phone Customer Service on 1300 688 522.



Phone **1300 688 522** for further details
www.nutripath.com.au

*Please Turn Over
for the full list of items
assessed in
IgE Allergy Panels*

IgE Allergy Panels

IgE General Foods (96 Foods)

Dairy: Casein, Cheese (Cheddar), Cheese (Cottage), Cheese (Mozzarella), Milk, Milk (Goat), Whey, Yoghurt

Fruits: Apple, Apricot, Banana, Blueberry, Coconut, Cranberry, Grape, Grapefruit, Lemon, Orange, Papaya, Peach, Pear, Pineapple, Plum, Raspberry, Strawberry.

Grains/Legumes/Nuts: Almond, Amaranth, Barley, Beans (Kidney, Lima, Pinto), Buckwheat, Corn, Filbert (hazelnut), Gliadin (Wheat), Gluten (Wheat), Lentil, Oats, Peas, Peanut, Pecan, Rice (White), Rye, Sesame, Soybean, Spelt, String beans, Sunflower, Walnut, Wheat (whole).

Vegetables: Asparagus, Avocado, Beet, Broccoli, Cabbage (white), Carrot, Cauliflower, Celery, Cucumber, Garlic, Lettuce, Mushroom (common), Olive (black), Onion (white), Pepper (Green ball), Potato (sweet), Potato (white), Pumpkin, Radish, Spinach (green), Tomato (red), Zucchini.

Meat/Fowl: Beef, Chicken, Egg white (chicken), Egg yolk (chicken), Lamb, Pork, Turkey.

Fish/Seafood: Clam (Manila), Cod (Atlantic), Crab (Dungeness), Halibut, Lobster, Oyster, Red Snapper, Salmon (Pacific), Shrimp (Western), Sole, Tuna (Yellowfin).

Misc: Cocoa bean, Coffee bean, Honey, Sugar cane, Yeast (Bakers), Yeast (Brewers).

IgE Asian Foods (96 Foods)

Dairy: Casein, Milk, Whey, Yoghurt.

Fruits: Apple, Banana, Cantaloupe, Cherry, Coconut, Grape, Grapefruit, Guava, Honeydew, Kiwi, Lemon, Lian Woo (wax apple), Mango, Orange, Papaya, Peach, Pineapple, Strawberry, Watermelon.

Grains/Legumes/Nuts: Almond, Beans (Kidney, Mung, Red, Soy), Cashew, Corn, Gluten (Wheat), Job's Tears, Oat, Peanut, Rice (white), Sesame, Sunflower, Walnut (English).

Vegetables: Asparagus, Bamboo shoots, Bitter Gourd, Broccoli, Cabbage (white), Carrot, Cauliflower, Celery, Cucumber, Eggplant, Garlic, Kelp, Leek, Lettuce, Mushroom (common), Olive (black), Onion (white), Pepper (green), Potato (sweet), Potato (white), Radish, Spinach (green), Spinach (water), Sponge (vegetable), Taro, Tomato (red).

Meat/Fowl: Beef, Chicken, Duck, Egg (whole), Goose, Lamb, Pork.

Fish/Seafood: Abalone, Clam (Manila), Cod (Atlantic), Crab (Dungeness), Cuttlefish, Lobster, Oyster, Salmon Pacific, Sea Bass, Sea Perch, Shrimp (Western), Tuna (Yellowfin).

Spices: Curry, Ginger, Mustard, Pepper (black), Pepper (Cayenne), Vanilla, Woo-hsiang.

Misc: Cocoa Bean, Coffee Bean, Honey, Tea (Woolong), Yeast (Bakers), Yeast (Brewers).

IgE Vegetarian Foods (95 Foods)

Dairy: Casein, Cheese (Cheddar), Cheese (Cottage), Cheese (Mozzarella), Milk, Milk (Goat), Whey, Yoghurt.

Fruits: Apple, Apricot, Banana, Blueberry, Cantaloupe, Cherry, Coconut, Cranberry, Grape, Grapefruit, Lemon, Orange, Papaya, Peach, Pear, Pineapple, Plum, Raspberry, Strawberry, Watermelon.

Vegetables: Artichoke, Asparagus, Avocado, Beansprouts, Beet, Broccoli, Cabbage (white), Carrot, Cauliflower, Celery, Cucumber, Eggplant, Garlic, Lettuce, Mushroom (common), Olive (black), Onion (white), Pepper (chilli), Pepper (green ball), Potato (sweet), Potato (white), Pumpkin, Radish, Spinach (green), Tomato (red), Zucchini.

Grains/Legumes/Nuts: Almond, Amaranth, Barley, Beans (Kidney, Lima, Navy, Pinto), Buckwheat, Cashew, Corn, Hazelnut, Flaxseed, Gliadin (wheat), Gluten (wheat), Kamut, Lentil, Millet, Oat, Pea (green), Peanut, Pecan, Pistachio, Quinoa, Rice (brown), Rice (white), Rye, Sesame, Soybean, Spelt, String bean, Sunflower, Walnut, Wheat (whole).

Misc: Cocoa bean, Coffee bean, Egg white (chicken), Egg yolk (chicken), Honey, Sugar cane, Yeast (Bakers), Yeast (Brewers).

IgE Inhalants (64 allergens)

Grasses: Bahia, Bermuda, Smooth Brome, Fescue, Johnson, Perennial Rye, Sweet Vernal, Timothy.

Weeds: Dog Fennel, English Plantain, Firebush, Iodine Bush, Lambs Quarters, Marshelder (rough), Mugwort, Pigweed (rough), Poverty Weed, Rabbit Bush, Ragweed (short), Ragweed (western), Russian Thistle, Sagebrush, Saltbush, Sheep Sorrel, Stinging Nettle.

Trees: Acacia, Alder (white), Ash (white), Beech (American), Box Elder, Californian Pepper, Mountain Cedar, Cottonwood, Cypress (Arizona), Elm, Eucalyptus, Hazelnut, Hickory, Red Maple, Mesquite, Mulberry (red), Mulberry (white), Oak (Arizona), Oak (Black), Oak (White), Palm (Queen), Pecan, Pine, Sweet Gum, Sycamore (Eastern), Sycamore (Western), Black Walnut, English Walnut Moulds: *Alternaria tenuis*, *Aspergillus fumigatus*, *Cladosporium herbarum*, *Penicillium notatum*.

Indoor: Cat antigen, Cockroach (german), Dog epithelia, Dust Mite mix, House Dust.