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FOOD ALLERGY

INTRODUCTION

The patient plays a key role in the management and identification of food allergies. We cannot follow you home and monitor what you eat. It is essential that the patient learn the signs and symptoms of food allergies, be able to identify potential allergic foods, and understand how to implement a successful elimination and rotary diversified diet to control symptoms.

It is widely accepted that pollens, dust mites, and animals can cause a runny nose, sneezing, and wheezing in susceptible individuals. It is also widely accepted that direct skin contact with nickel or other chemicals can cause a rash. Drug allergies to penicillin or sulfa also are common, but the importance of food allergies is often underestimated. Patients with food allergies are symptomatic when eating allergic foods, breathing allergic food particles into their noses and lungs, and when their skin touches the allergic food.

There are four ways that an allergic substance comes in contact with the body: skin contact, inhalation, ingestion, and injection.

FACTORS CAUSING FOOD ALLERGY

1. Repetitious Eating

The habit of repetitious eating is the most important factor in the development of food allergies. Incidence of food sensitivity is proportional to frequency of usage. For example, the person who eats wheat at every meal: cereal, toast, sandwich, and roll. You can become allergic to any food. Eating a diversified diet may minimize allergy symptoms and prevent the development of new food sensitivities.

2. Inheritance of Allergies

Another important contributing factor is genetic predisposition. There is a 30% chance of the offspring developing allergies if one parent has allergies, and the chances will double if both parents have allergies.

3. Food Allergies are Common in Children

Age is another important factor. Children are more susceptible to food allergies due to increased intestinal permeability. Food antigens are absorbed through the gut and the amount of food allergen reaching the immune system depends upon the permeability of the gut.

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4. Cross-Reactivity between Foods and Inhalant Allergens

On a molecular level, some foods and inhalant allergens (dust, pollen, grass, etc) are very similar, resulting in a phenomenon called cross reactivity. Typically, symptoms are localized to the mouth and throat (itching, burning, tingling, and blistering) and occur immediately after eating the allergic food. This “oral allergy syndrome” is thought to affect 40% of people with pollen allergy, and is usually self limited and benign.

Oral allergy syndrome may occur seasonally, only when the inhalant allergen is abundant. A well known reaction is the spring time cross reactivity between birch tree pollen and apple, carrot, celery, hazelnut, kiwi, peach, pear, and potato. Similarly, patients allergic to grasses may react to kiwi, melon, tomato, watermelon, wheat, and other grains during the peak grass season of summer. In the fall, people with ragweed allergy can have oral allergy symptoms to banana, cucumbers, lettuce, melons, and watermelon. For other allergens which are perennial (occurs all year round), there is no seasonal variation. Dust mites can cross react with shrimp and snail. Latex can cross react with avocado, banana, chestnut, kiwi, cherry and peach.

TWO TYPES OF FOOD ALLERGY

1. Fixed Food Allergy

Fixed food allergy means that there is an immediate reaction within seconds to hours after contact with the allergic food. Sometimes, there may be itching 24 hours after the exposure. Fixed food allergies can manifest as eczema, asthma, allergic rhinitis, urticaria, angioedema, oral allergy syndrome, gastrointestinal distress, or severe anaphylaxis.

The most common foods causing eczema in children are cow’s milk, fish, and eggs. Inhalation of airborne foods can trigger asthma attack in susceptible individuals who are exposed to the steam emitted from cooking foods. Eating allergic foods can also trigger asthma attack. Contact urticaria (raised, itchy rash) can occur when skin touches allergic food. Contact urticaria is commonly seen around the mouth of children and in individuals who handle raw food. Contact urticaria is often accompanied by angioedema (swelling). Oral allergy syndrome is another example of a fixed food allergy, and was discussed earlier in the section on cross reactivity.

When urticaria and angioedema accompany systemic symptoms (such as headache, cough, hoarseness, wheezing, abdominal pain, diarrhea, and dizziness), the patient has anaphylaxis. Anaphylaxis can lead to death in minutes from irreversible respiratory or cardiac failure. Shellfish and peanut are the most common foods causing anaphylaxis. Gastrointestinal anaphylactic syndrome (abdominal cramping, nausea, vomiting, and diarrhea) occurs minutes after consuming the allergic food. Patients with fixed food

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allergies, particularly anaphylaxis, should carry an EpiPen and oral antihistamine at all times.

Once a fixed food allergy has developed, allergic symptoms will occur every time the patient is exposed to the allergic food. Symptoms are not dependent upon the quantity of food eaten, and may occur from very small exposures. Fixed food allergies may be successfully treated by eliminating the food item completely from your diet or by sublingual allergy drops.

2. Cyclic Food Allergy

Whereas fixed food allergy causes only 20% of all food allergies, cyclic food allergy is responsible for 80% of food sensitivities. It is different from fixed food allergy because it is both dose and frequency dependent. Only a large amount or repeated ingestions of an allergic food will cause symptoms. Treatment is either sublingual allergy drops or elimination/rotary diversified diet.

A very interesting phenomenon of cyclic food allergy is “masking”. The patient transiently feels better after eating the allergic food, followed hours later by feeling poorly again. Some patients crave the allergic food, and therefore, eat the allergic food often. This attempt to feel better by eating the allergic food is known as food addiction. It is ironic that the precise foods being craved are the ones causing the symptoms.

Common Allergic Foods for U.S. Adults

Alcoholic Beverages	Coffee	Pineapple
Apple	Corn	Pork/Ham
Banana	Egg	Potato
Beans	Fish	Rice
Beef	Lettuce	Soybean
Berries	Milk	Sugar (cane)
Buckwheat	Mustard	Sugar (corn)
Chicken	Nuts	Tea
Chocolate	Oat	Tomato
Citrus	Onion	Vinegar
Cola Drinks	Peanut	Wheat
Coconut	Peas	Yeast

Common Allergic Foods for U.S. Children

Apple	Egg	Rice
Banana	Milk	Soy
Barley	Oat	Sugar (cane)
Beef	Orange	Sugar (corn)

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Carrot	Peach	Tomato
Chicken	Pear	Wheat
Chocolate	Pork/Ham	Yeast
Corn		

Signs and Symptoms of Food Allergy

Neurologic	headache, migraine, learning disability, behavioral problem, hyperactivity, forgetfulness, short attention span, cognitive problems, insomnia, depression, chronic fatigue
Eye:	pruritus, stinging, irritation, eyelid edema, periorbital or lid edema or eczema with itching, scaling and erythema
Ear:	chronic otitis externa, narrowed ear canals, red ears, scaling or cracking, eczematous otitis externa; middle ear clicking, popping, pressure, recurrent otitis media, chronic serous otitis media with effusion, persistent otorrhea, dizziness or disequilibrium, Meniere's syndrome, tinnitus
Nose:	obstruction, voice change, snoring, edema of turbinates, runny nose, thick post nasal drainage, pruritus, sneezing, sniffing, snorting, clucking, decreased smell, allergic salute, sinus headaches, facial fullness, pain and pressure; recurrent sinusitis, adenoiditis, nasal polyps
Oral:	oral, perioral, and palatal pruritus, dry mouth, halitosis, dysphagia, geographic tongue, aphthous ulcers, angioedema of lips and oral mucosa.
Lungs:	cough, shortness of breath, wheezing, exercise-induced symptoms, thick mucous
GI:	abdominal pain, vomiting, diarrhea, constipation or alternating constipation and diarrhea, gastroesophageal reflux, abdominal distention, gas, belching, and fatigue after meals, perirectal itching and inflammation
GU:	bed wetting (bladder irritation), pruritic vaginitis or balanitis; rarely nephritic ID reaction
Skin:	eczema, urticaria, angioedema, and dermatophytid (Id) reaction

IDENTIFYING HIDDEN FOOD ALLERGIES

Some patients clearly know what foods make them sick (fixed food allergy) and naturally avoid those foods (food aversions). There is a significant challenge in identifying cyclic food allergies due to masking. Many people have both fixed and cyclic food allergies. There are several ways to help identify hidden food allergies.

Two Week Diary

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A two week diary is very useful in identifying commonly eaten foods and may show an association between certain foods and symptoms. You are more likely to become allergic to foods that you eat often. You can do this on your own or request a handout on how to perform a two week diary.

Blood Test: RAST

A simple blood test called RAST can be used to measure IgE IgG levels for common foods. RAST permits many foods to be tested at one time with minimal risk and inconvenience. RAST results should be used in conjunction with other testing methods. RAST testing is useful in confirming fixed food allergies.

Food Testing

Food allergies may be detected by placing food extracts under the tongue. Allergic foods will cause flare up of typical allergy symptoms. Another method for identifying food allergies entails injecting small amounts of food extracts into the upper arm. Allergic foods will cause an acute exacerbation of symptoms and a local skin reaction. Insurances may not cover food testing.

Oral Challenge

The suspected food item is eliminated from the diet completely for four days. On the fifth day, the food is eaten. If there are adverse symptoms, then you have identified the allergic food. This testing method requires perseverance and diligence on the part of the patient. It is time consuming since only one food may be tested at one time. Request Oral Challenge handout.

Elimination Diet/Rotary Diversified Diet

This method may be difficult if you are allergic to more than one food. You must first eliminate the suspected food item for two weeks. If there is significant improvement of symptoms at the end of two weeks, then you have most likely identified the allergic food. You must eliminate the food for 5-6 months. During this time period, you will lose your food sensitivity. The allergic food may then be reintroduced into the diet on a rotating basis, not to be eaten more often than every 4 days. Eating the food more often than every 4 days can lead to allergic symptoms again. If symptoms recur, then the offending food must be eliminated for another 5-6 months. Please remember that the main cause of food allergies is repetitious eating. Request handouts on Rotary Diversified Diet.

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Cave Man Diet

For patients with severe symptoms, fasting or going on a strict “cave man diet” will be necessary to eliminate all possible allergic foods, preservatives, and chemicals. Request handout on Cave Man Diet.

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TREATMENT FOR FOOD ALLERGIES

Elimination Diet

Eliminating the allergic food will improve your symptoms. For patients with fixed food allergies, the results will be dramatic. Elimination diet may be difficult if you have more than one food allergy. Also foods like milk, egg, wheat, soy, and yeast are found in many foods, and will be difficult to eliminate and eat on a rotating schedule.

Rotary Diversified Diet

Once you have eliminated the allergic food for several months from your diet, the allergic foods may be reintroduced into your diet on a rotary diversified schedule, which means that the allergic food is eaten once every four days. This method is very effective in preventing new food sensitivities from developing and will control symptoms caused by allergic foods. You will need diligence and creativity in maintaining this diet. In many respects, we should all try to eat a rotary diversified diet.

Sublingual Drops for Food Allergy

Sublingual treatment entails delivering a low dose of the allergic food under the tongue. Allergy drops can “mask” symptoms, but in some situations, can lead to desensitization of food allergies. Sublingual treatment for food allergies may not be reimbursed by insurance carriers.

Conclusion

The method you choose in detecting and controlling food allergies depends upon the severity of your symptoms, your temperament, and your level of determination. It may be necessary to use several different methods over time. Identifying food allergies is difficult and hard work, but well worth the effort.