



**ALLERGIES, SENSITIVITIES,
AND INTOLERANCE:
DO YOU KNOW THE DIFFERENCE?**

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What is an Allergy and How is it Different from a Sensitivity or Intolerance?

Allergies and food sensitivity or intolerance affect millions of people in the United States. There may be underlying issues that are causing one to be unable to lose weight, have behavioral issues or experience chronic migraines, hives or a runny nose. If you don't know why, ask yourself a few questions:

- Do you often feel fatigued or sluggish but you're not sure why?
- Do you have the sniffles in the spring or first thing in the morning and every once in a while you have trouble breathing?
- Do you suspect that certain foods are causing a reaction?
- Do you feel nauseous or does your body feel swollen (bloating)?
- Do you have an irritable digestive issue immediately after eating, or a few hours later?
- Have your symptoms or discomfort gotten progressively worse?

Many people try to manage these symptoms with over-the-counter (OTC) medications to control the reaction or skip the foods that they think might be causing the problems. For example, gluten is in the news quite a bit these days due to the rise in and awareness of celiac disease so eliminating gluten is all the rage. But this may not be helpful and gluten free foods are not diet foods so you may not be doing any good at all for your body. There are good reasons beyond just your discomfort to take the next step and really do something about determining if you have an allergy, or if your body is just sensitive or intolerant to certain substances.

Many people believe that they are allergic to foods that don't agree with them but this is not necessarily true. A food allergy is a very specific immune system response involving either the immunoglobulin E (IgE) antibody or T-cells. Both are immune system cells that react to a particular food



protein, such as milk protein. An IgE reaction occurs within minutes to an hour or so of either smelling, touching, or ingesting a particular food. The presence of the food triggers the immune system to overreact and interpret the food as harmful. Histamine is released, causing symptoms that range from mild to severe, including hives, itching, trouble breathing, wheezing, and anaphylaxis. About 30,000 Americans per year go to the emergency room due to severe allergic reactions to food, and as many as 200 die every year from food allergies, according to the [Food Allergy and Anaphylaxis Network](#).

A reaction to food that does not involve the immune system could be a food intolerance. A non-IgE immune system reaction can occur within three to four hours of ingestion and can often be mistaken for food insensitivity or food poisoning. Experts say "food intolerance" and "food sensitivity" are often used interchangeably by the public, causing misunderstanding. Add "food poisoning" to the list and people become even more confused.

"The biggest misunderstanding is that there are different types of food allergies, [but food allergies are]... reproducible, the reactions are the same," says [Dr. A. Wesley Burks](#), Chair of Pediatrics at the University of North Carolina at Chapel Hill, Physician-in-Chief of North Carolina Children's Hospital and President of the American Academy of Allergy, Asthma and Immunology (AAAAI). "You can't eat cheese, feel sick, and claim a food allergy, but then turn around and enjoy ice cream and feel OK. With a true food allergy, the trigger does not change and the trigger will always set off the same immune system response."

"Unfortunately, the term 'allergy' is sometimes used by the public or health care providers to describe any unpleasant experience patients have with eating food, including 'feeling bad,'" says Marc Riedl, MD, MS.¹ The National Institute of Allergy and Infectious Diseases, which funded the study, "Diagnosing and Managing Common Food Allergies: A Systematic Review", has released new guidelines



about definition, diagnosis, and management of food allergies. The guidelines define food allergy as "an adverse health effect arising from a specific immune response that occurs reproducibly on exposure to a given food." It distinguishes allergies from intolerances. Foods that cause the same reproducible adverse reaction but don't have a likely or established immune system response are not considered allergies, but rather intolerances.

For instance, someone allergic to cow's milk due to an immune system response to milk protein has a food allergy. But someone who has difficulty drinking milk due to an inability to digest the lactose in milk has a food intolerance. Anaphylaxis, a serious allergic reaction that comes on rapidly and may cause death, can occur in response to food². Up to 65% of anaphylaxis cases are thought to be due to food. Nearly a third of people living in the U.S. believe they have a food allergy, according to a recent study published in *The Journal of the American Medical Association*¹, but only 5% of children and 4% of teens and adults have true food allergies.

Food intolerance occurs when the body lacks a particular enzyme to digest that food. Two common examples are lactose intolerance and celiac disease, an autoimmune disorder in which the gastrointestinal tract cannot process gluten, a protein in wheat-based products such as cereal and bread. An intolerant person avoids the foods that trigger a reaction, but these reactions aren't caused by the immune system and they are not life threatening. Food intolerance is much more common than food allergies, affecting 70-80% of the population, and is characterized by digestive disorders, migraines, obesity, chronic fatigue, aching joints, skin disorders and behavioral issues.

Food sensitivity, an understudied area, generally means people have an unpleasant reaction to certain foods; perhaps they develop acid reflux, nausea, or abdominal cramps, but again, these are not



immune system reactions, and these reactions do not always occur in the same way when eating the food.

You could also have a bad reaction to food tainted by bacterial contamination or not properly prepared. Our bodies are intolerant to a toxin that was not intentionally put into food and that's food poisoning. Symptoms often involve diarrhea and vomiting and typically clear up in 24-48 hours.

There are two major problems with this approach," Riedl says. "Unintentional food exposures occur, even in the most cautious individuals with true food allergy. The 'self-diagnosed' patient is unlikely to be properly prepared to manage this potentially life-threatening reaction, such as use of an Epi-Pen." Epi-pen and Twinject are injectable forms of epinephrine. Proper diagnosis, Riedl says, enables patients to understand how best to manage the allergy and eliminates the anxiety, inconvenience, and expense of going to great lengths to avoid foods that do not cause allergies. More research is also needed to better understand if food allergies can be predicted, particularly during childhood, and why some people outgrow certain food allergies. Insights to both of these issues could help improve prevention and treatment of food allergies. Because there are so many options for treating only the symptoms of allergies, most people have turned to those rather than going for a long-term solution. If you have allergic-asthma or allergy induced asthma and the culprit is pollen, dust mites, dander, your exposure can trigger not only an allergic reaction with swollen, itchy eyes and sneezing but also an asthma attack with shortness of breath, wheezing and chest tightness. These symptoms can be not only uncomfortable, but dangerous.

If you are able to determine whether you have food intolerances and then are willing to take the time to adjust your diet you may be able to eliminate causes of nausea, swelling and obesity which are frustrating your attempts to eat better, exercise and live a healthier lifestyle to feel alert and energetic.



Sometimes, it's a small change that can make a big difference. The first step is to find out what is causing your symptoms.

How Do I Know if I Am Allergic to Something or I Have a Sensitivity or Intolerance?

How many times have you heard, "I'm not sick, I just have allergies"? Although it's true that when you are suffering from allergies or an allergic reaction, you don't have a "disease" and you aren't contagious, you are still sick. Your body is making you ill and you are suffering as much as anyone who has a cold or the flu but you're expected to soldier on. Although it isn't completely clear why more people suffer from allergies now than they have in the past, the chronic allergy sufferer may be damaging their bodies without realizing it.

According to Dr. Marc Riedl, MD, the "diagnosis of allergies is not uniform and confusion exists regarding allergy versus intolerance.¹" Experts say it's because people don't understand what really constitutes a food allergy and they often misuse the term.

New advances in allergy testing include the Spectrum Allergy Test that can identify reactions to many regional inhalants and foods. No more nasty skin pricks and skin scraping. With one simple blood test, if you have been exposed to something and are allergic to it, the test will give you a clear answer on your specific allergies. The Spectrum Allergy test will provide information on how sensitive you are to an allergen: Negative, Low, Mild, Moderate, High or Very High. You must have been exposed to the allergen for it to give a true positive result. For foods, unfortunately, avoiding the offending food is about all you can do, but for some people with severe allergies that last more than 3 months out of the year, there are immunotherapy options that have been used in the past for pollen and dust mold that can reduce or eliminate the allergic reaction over time. Dr. A. Wesley Burks at the University of North



Carolina is working on research to develop a long-term cure for allergies that are riskier, like peanuts, and has worked with others to collect resources and support for physicians treating allergy patients³.

Additional tests, available at many **ANY LAB TEST NOW**[®] locations, can reveal sensitivities to food additives, food colorings and other substances. Sometimes these sensitivities to a substance are not a full-blown allergy, but an intolerance. Why would that matter? Beyond knowing that you have an intolerance so that you can avoid the food so that you feel better, knowing you have an intolerance can alert you to the fact that this can cause your body's innate immune system to activate, and in fact, to be chronically activated. This can create inflammation, migraines, fatigue, aching joints, gastrointestinal disorders, obesity and many other symptoms. The constant reaction can make it difficult to lose weight and to maintain a healthy weight.

Symptoms

Chronic allergic reactions, sensitivities and intolerances can cause inflammation and make it difficult for people to lose weight or to maintain a healthy weight. There has been a lot of research conducted recently that shows the negative effects on our bodies from inflammation. Continuing to subject your body to allergic asthma or allergy-induced asthma can also wreak havoc, preventing you from engaging in healthy activities like exercise and can be extremely dangerous for some people.

Identifying and managing allergies or food and environmental intolerances isn't just about itchy eyes and sneezing. It could finally help clear up that nagging headache or stomachache, and get you on the road to a leaner, healthier you. It's pretty common to have a reaction to a certain food, but in most cases it's an intolerance rather than a true allergy. These clues can help you figure out if it is an allergy or intolerance. Getting tested and consulting a doctor can help you know for sure.



Food Allergy:

- Usually comes on suddenly
- Small amount of food can trigger it
- Happens every time you eat the food
- Can be life-threatening

A food allergy happens when your immune system mistakes something in food as harmful and attacks it. It can affect your whole body, not just your stomach. Symptoms may include:

- Rash, hives, or itchy skin
- Shortness of breath
- Chest pain
- Sudden drop in blood pressure, trouble swallowing or breathing -- this is life-threatening. Call 911 immediately.

Food Intolerance:

- Usually comes on gradually
- May only happen when you eat a lot of the food
- May only happen if you eat the food often
- Is not life-threatening

Food intolerances can be caused by many different factors such as the absence of an enzyme needed to digest a particular food, like lactase which processes lactose in milk, irritable bowel syndrome which can cause chronic cramping, diarrhea and constipation, food poisoning due to toxins in the food, recurring stress, a sensitivity to food additives such as sulfites, BHT or MSG which can trigger asthma attacks or celiac disease in which the body cannot process gluten.

Shared Symptoms

A food allergy and an intolerance both can cause:

- Nausea
- Stomach pain
- Diarrhea
- Vomiting



Different Symptoms

When a food irritates your stomach or your body can't properly digest it, that's an intolerance. You may have these symptoms:

- Gas, cramps, or bloating
- Heartburn
- Headaches
- Irritability or nervousness

Common Food Allergies and Intolerances

These 8 foods or triggers are legally recognized by the Federal Drug and Food Administration⁴ as major food allergens and cause about 90% of food allergies:

- Peanuts
- Tree nuts (such as walnuts, pecans and almonds)
- Fish
- Shellfish
- Milk
- Eggs
- Soy
- Wheat

The most common food intolerance is lactose intolerance. It happens when people can't digest lactose, a sugar found in milk and dairy. Another kind of intolerance is being sensitive to sulfites or other food additives. Sulfites can trigger asthma attacks in some people.

What about a gluten allergy? While celiac disease -- a long-lasting digestive condition that's triggered by eating gluten -- does involve the immune system, it doesn't cause life-threatening symptoms.

Diagnosis

Typically, it can be very difficult to determine exactly what a person is allergic or intolerant to and generally includes the following steps:



- Keep a diary of the foods you eat and the symptoms you have
- Stop eating some foods to help figure out which one is causing symptoms
- Have allergy tests, or lab tests to determine any specific sensitivities or intolerances

Newer allergy tests can pinpoint specific allergens if you have been exposed to them. Knowing what you are allergic to is the first step in addressing health issues caused by allergies and intolerances that can be blocking you from feeling your best. One allergy test becoming more common is the IgG test that measures the body's antibody response to possible allergens. If the body produces IgE in response to a food or environmental substance, the test indicates the level of reactivity to the allergen. Another test measures changes in white blood cells when exposed to a particular substance, both in size and in shape. With this test, results will indicate an intolerance or sensitivity even if the person has never been exposed to the allergen before.

Developed over 25 years ago, the ALCAT Test can identify sensitivities or intolerances to over 350 foods, chemicals and other substances. The ALCAT Test is not an allergy test so it is not identifying or measuring IgE or IgG antibodies. This test measures the chronic activation of the immune system based on cellular reactions to these foods and substances and is available in several different panel combinations. The report provided after testing breaks down the intolerances or sensitivities into categories so that you are able to determine no sensitivity, "mild" intolerances, "moderate" intolerances and "severe" intolerances. Those items marked on the report as "severe" should be completely avoided for at least 6 months to make the largest positive health impact. The report may also suggest a food rotation plan to assist you in achieving better health as quickly as possible with recommendations for whether and when to reintroduce foods into your diet for the long term.

Food sensitivities can cause cravings for sugar and sweets as well as water retention. Determining which panel to select will depend on what your diet is currently like, how much of your diet is organic



and knowing when and how often you don't feel well or feel poorly after eating. With symptoms ranging from migraines, asthma, chronic fatigue to Attention Deficit Hyperactivity Disorder, obesity and Fibromyalgia, knowing which foods are triggering the inflammation causing the symptoms is critical to making significant changes to your health and well-being.

What Can I Do to Feel Better or Prevent a Serious Allergic Reaction?

For some allergies to prevent a severe anaphylactic shock reaction the food should be eliminated from the diet and completely avoided. This is sometimes the case for nuts or shellfish or bee stings more than for other foods or environmental triggers. In other cases, such as a lactose or gluten intolerance, or seasonal allergies to ragweed or other pollens minimizing the exposure to small amounts may be enough. It is dependent on how severe the allergy or intolerance is.

Allergies

For an environmental/seasonal allergy avoiding the trigger pollen is the most effective, although it's not always possible. Over the counter antihistamines, nasal steroid sprays and antihistamine eye drops can provide relief. To avoid high pollen counts don't go outside on windy, dry and sunny days. Pollen counts are highest on days when it's dry, sunny, and blustery, and lowest during and just after a big storm. Levels are also generally higher in the morning than in the afternoon.

To keep pollen out of your home the best bet is to keep your windows closed at all times. "Many people think that opening the windows for 30 minutes is equivalent to taking a walk in the park," says J. Allen Meadows, M.D., of the American College of Allergy, Asthma & Immunology. "But it's actually more like moving your bed to a field of tall grass and leaving it there permanently."

Is it possible to enjoy the outdoors without bringing on an allergy attack? Yes, if you follow some simple steps to minimize the amount and length of exposure:



- Wear a wide-brimmed hat and sunglasses
- Change your clothes as soon as you come inside
- Take a shower before you go to bed

When you're out and about, a hat and a pair of shades (preferably oversize and wraparound) will help keep pollen away from your face. Once you're home, tossing your clothes in the laundry means you'll scatter less pollen around the house, and showering before bed washes pollen away so it doesn't settle on your sheets and pillows.

Over-the-counter antihistamines can fight the body's immune response, but that isn't always effective for long-term treatment. Immunotherapy may be the right solution if you've been suffering from migraines, inflammation, fatigue and achy joints. There are several forms of immunotherapy including allergy shots and sublingual (under the tongue) treatments that are used to desensitize your body to a specific allergen. Over time the body is exposed to small amounts of the allergen so that the immune system doesn't react and gets used to it. The hope is that eventually, after 2-5 years, the immune system won't react to the allergen even in large amounts.

Immunotherapy in the United States refers primarily to allergy shots. The science behind how they work is that a person is injected with the allergen every 2 to 4 weeks over a period of 2 to 5 years. This won't cure your allergy, but it will increase your tolerance for these allergens and over time reduce your sensitivity to these substances. After several years of treatment, your doctor may want to have you retested to determine if you are less sensitive to the allergens. If your allergic reactions are reduced, your asthma symptoms will decrease as well, possibly averting a severe asthmatic attack.

If you have a food allergy, you'll need to stop eating the food altogether because you could be at risk for anaphylaxis, a life-threatening reaction. Ask your doctor if you need to carry an Auvi-Q or Epi-Pen (epinephrine shot) that you could give yourself in an emergency.



Many people firmly believe that eating local honey will perform the same function for your immune system as allergy shots or vaccinations for seasonal allergies. Honey from local bees contains pollen that the bees have collected. The theory is that eating two teaspoons or so a day will subject your body to small amounts of the allergens without enough to cause an allergic response. The immune system will get used to the allergen and become less sensitive so that when exposed to larger amounts of it the allergic response won't be triggered. Although this theory isn't supported by research studies, the anecdotal evidence prompts many allergy sufferers to try it with success. Some allergy sufferers in an unfunded study conducted at Xavier University in New Orleans that was never published showed that the local honey was very effective and participants wanted to continue with the "honey treatments" after the study was completed. Most people say it's an inexpensive option so go for it! But be careful and consult your doctor first. There may be contaminants in the honey and those with very severe allergies could experience a strong allergic reaction to the pollen in honey. Remember that you are introducing a known allergen into your system.

With a doctor's assistance, an elimination diet and/or immunotherapy can be prescribed to attempt to eliminate the allergic response. Allergy tests can be taken again after treatment to determine whether the allergic reaction has been eliminated. Eliminating the allergy can mean eliminating inflammation, migraines, aches as well as barriers to a healthy weight. For some foods, even avoiding the food for a period of time has been found to eliminate the allergic reaction, eliminating the inflammation and allowing the food to be eaten again.

Sensitivities or Intolerances

Similar methods can be used to eliminate specific foods from your diet or to avoid environmental substances that your body can't tolerate. Through testing, food elimination and working



with your doctor you should learn which foods -- and how much -- cause you to have symptoms. Either avoid the food or only have as much as you can without triggering symptoms. For lactose intolerance, you can look for lactose-free milk or take a lactase enzyme supplement. When you eat out, be sure to ask your server about how your meal will be prepared. It may not always be clear from the menu whether some dishes contain problem foods. Take the time to learn to read food labels and check the ingredients for trigger foods. Don't forget to check condiments and seasonings many of which tend to contain MSG, BHT, sulfites or another additive or preservative that can cause symptoms.

Food intolerances have multiple causes and eliminating these can also help to relieve symptoms:

- Stress or other psychological factors: Sometimes just the thought of a food can make you sick.
- The lack of a particular enzyme: Some of these are well known such as the enzyme to digest gluten or lactase to digest milk. Over time additional supplements, such as lactase may become available to assist in digestion.
- Irritable bowel syndrome: There are several natural remedies that may help including increasing water intake, gradually increasing the fiber in your diet, reducing stress with techniques such as yoga or meditation, eating more slowly, probiotics and not overeating.
- Food poisoning: Be careful with food purchases and preparation paying attention to expiration dates and sanitary cooking and food handling.

Trends and the 2004 Food Allergen Labeling and Consumer Protection Act

According to the Centers for Disease Control (CDC) food allergies among children in the United States is becoming more common. In 2007 3.9% of children were reported to have food allergies, an 18% increase since 1997⁵, up from 3.3%. Most scientists agree that 6 to 8% of infants have food allergies. The National Institute of Allergy and Infectious Disease (NIAID)⁶ states that the 6 most common food allergies in infants and children are:

- Egg
- Milk
- Peanuts
- Tree nuts, such as walnuts
- Soy (primarily in infants)
- Wheat

They usually outgrow allergies to egg, milk and soy, but generally do not outgrow allergies to peanuts which helps to explain the increased focus on avoiding peanut contamination in schools and day care centers. Children with food allergies are more likely to suffer from asthma (29% compared to 12% of those without food allergies) and hospitalizations with diagnoses related to food allergies has increased significantly since 1998. Until further study is completed it is unclear right now whether the increases are due to increased reporting and awareness of food allergies or whether the increases are caused by actual increases in the number of children who suffer from food allergies. Experts don't recommend that women avoid specific foods during pregnancy or breastfeeding to reduce the chance of allergies in their children.

In recent years there are more stories in the media about such severe allergies that many schools and classrooms now provide peanut free classrooms and cafeterias to protect children who are at risk of death from anaphylactic shock, and public pressure has caused changes in the laws governing



labeling of foods to better identify allergens in foods. The 2004 Food Allergen Labeling and Consumer Protection Act (FALCPA) has made it easier to read food labels and quickly determine what's safe to eat and what isn't. The federal law requires warnings written in plain English for the eight most threatening food allergens: wheat, soy, milk, peanut, tree nut, shellfish, fish, and egg.

However, there is still risk, because a manufacturer "cannot ensure 100% that there are not traces of the food allergen in their product," Dr. A. Wesley Burks says. Manufacturers are not federally required to report food allergens beyond the main eight, which could pose risks to your health if you're allergic to something other than the ones covered by the 2004 law.

The 2004 law also doesn't require manufacturers to declare allergenic ingredients introduced through cross-contact, such as cooking a food in peanut oil or eating food cut with the same utensils that were used to prepare fish. The FDA is working on ways to standardize food labeling so that they are more uniform and even clearer for consumers. Restaurants also pose a risk for people with food allergies. People should be very careful. Even small traces can cause severe reactions in people who are highly allergic to those triggers.

A disease progression that has been documented in scientific research is the Allergy March or the "atopic march"⁷. This progression is characterized by eczema in infants that progresses throughout the individual's life to asthma and allergic rhinitis. 77% of infants that develop eczema within the first 3 months of age and have a family history of allergies had asthma and allergic rhinitis by the age of 5. Boys are more likely to develop the typical progression of allergies to food and/or environmental substances than girls and will develop the IgE antibodies to multiple allergens. The cause of this disease progression is thought by many researchers to be the "hygiene hypothesis". The idea of this hypothesis is that we are keeping our homes "super-clean" which prevents children from properly developing



immunities to foods and environmental triggers. Some theories regarding how to prevent the progression of allergies from eczema to asthma and other widespread allergies is breastfeeding infants through the first four months, delaying the introduction of solid foods for infants until the age of 6 months and the use of probiotics.

Food intolerance is more common in general and reports put the number of adults with a food intolerance at between 70 and 80%. Food intolerances may develop later in life because as we age digestive functions may be compromised due to stress, alcohol intake and the use of NSAIDs such as aspirin. In addition, the production of digestive enzymes and digestive function overall become more sluggish so it is common to develop an intolerance, for example, lactose intolerance, after the age of 40 when the production of lactase, the enzyme responsible for lactose digestion, slows and people become intolerant to dairy products which they had previously enjoyed.⁸

Additionally, allergies to environmental substances are on the rise as well. A study completed by Quest Diagnostics found that during a four year period, from 2005 to 2008, the allergen sensitization rate increased by 5.8%⁹. The greatest increase seems to be due to increased sensitivity to common ragweed which increased 15% during the same period, closely followed by mold sensitization to mold which increased 12% and is commonly believed to trigger asthma symptoms.

It isn't clear based on the research that is available whether the increase in environmental allergies is due to increased awareness, testing and reporting or whether it is due to climate change producing more pollen and longer spring allergy seasons or even super clean houses that don't allow children's bodies to develop immunities to mold or other allergens. Regardless of the cause there are more people aware of and dealing with environmental allergies and the sooner people know their



allergy enemy, the sooner they can avoid and treat the histamine response and feel better. Symptoms are easier to handle if addressed early rather than allowing them to turn into infections.

Conclusion

The trends in food and additive intolerances and allergies, both food and environmental, are enough for anyone who struggles to feel well, maintain a healthy weight and have the energy to be active and productive to take action and look for the source of their struggles. The move toward simpler, less invasive testing and research on cures or treatments is making it easier to discover what is causing discomfort and providing steps for better health. If the number of adults who suffer from food or additive intolerances is truly over 70-80% of the US population, this is taking a huge physical and emotional toll of most of us. The financial cost of the treatment of the symptoms of long term inflammation, migraines and obesity that result from the continuing onslaught of allergies and intolerances could be quickly reduced if we address the true causes. The reality that a quick blood test can reveal the reason that so many of us deal with poor health on a daily basis can be a step toward a long term solution that many people don't realize is within their reach.

ANY LAB TEST NOW[®] is available to answer any questions you have regarding allergy and intolerance testing and its benefits. Our experienced Medical Assistants are thoroughly trained in allergy and intolerance testing. We are here when you are ready.

Footnotes:

¹ Diagnosing and Managing Common Food Allergies: A Systematic Review, Jennifer J. Schneider Chafen, MD, MS, Sydne J. Newberry, PhD, Marc A. Riedl, MD, Dena M. Bravata, MD, MS, Margaret Maglione, MPP, Marika J. Suttorp, MS, Vandana Sundaram, MPH, Neil M. Paige, MD, MSHS, Ali Towfigh, MD,



Benjamin J. Hulley, BS, Paul G. Shekelle, MD, PhD; Journal of the American Medical Association, Clinical Review, May 12, 2010

² <http://www.foodallergy.org/>, Copyright ©2013, Food Allergy Research & Education, Inc.

³ICON: Food allergy, The Journal of Allergy and Clinical Immunology, [Volume 129, Issue 4](#) , Pages 906-920, April 2012.

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