Allergies

What Is It?

Simply put, an allergic reaction is an exaggerated response of the immune system to a substance that is normally considered harmless. An allergy begins when the immune system mistakenly recognizes a harmless substance as a foreign invader, also known as an allergen or antigen. Proteins called immunoglobulin antibodies (IgE, IgM, IgG, and IgA) are produced against this substance, and remain in circulation ready to recognize that substance the next time it is encountered. At that point, an immune response will occur that releases chemicals that cause the inflammation and symptoms of allergies. This reaction does not happen in everyone. Certain people are more prone to develop allergies than others.

When people think of allergies, they are usually referring to hay fever, or allergic rhinitis—the seasonal reaction to inhalant allergens like pollen and mold. Actually, there are a few allergic conditions, also known as atopic diseases. These include:

- Allergic rhinitis (hay fever or nasal allergies)
- Food allergy
- Atopic dermatitis (eczema)
- Asthma

This section will cover allergic rhinitis and food allergy. Eczema and asthma are covered in separate sections of this book.

Allergic rhinitis, or nasal allergies, is considered a classic allergy disease in that it involves the IgE immune response.

Did You Know

Allergic rhinitis (nasal allergies) affects about 35 million Americans. It is the most common of the allergic diseases.

The most common nasal allergens include:

- Pollen
- Mold
- Pet dander
- Dust mites
- Cockroaches

Nasal allergies occur when the person comes in contact with the allergen. Pollen is the most common trigger of seasonal allergies, which are usually experienced in the spring and fall when pollen counts are highest.
In both nasal allergies and food allergies, the classic allergic production of IgE antibodies is observed. But it is important to note that some foods produce different allergic responses known as IgG and IgA immune responses. These are seen in people with food sensitivities, and are often associated with a delayed symptomatic reaction. People with food sensitivities may not notice symptoms until days or weeks after the food is ingested. These food sensitivities are not always permanent, like the IgE food allergies mentioned above. With IgG allergies, the foods must be eliminated for a time period so that the body has a chance to de-sensitize to them.

Going further, some people have reactions to food that do not involve the immune system. This is considered a food intolerance. A classic example of a food intolerance is lactose intolerance. It does not involve an Ig immune response, but it does involve a reaction to the food. The terms allergy, sensitivity and intolerance will be used interchangeably throughout the rest of this section.

Allergies, sensitivities and intolerances are not limited to foods. Inhalant irritants may also cause any of these three reactions.

Some people may not exhibit obvious symptoms of food sensitivity or intolerance, but when the suspected food is eliminated from the diet, the individual feels an improvement in health. The most common food culprits include:

- Cow’s milk proteins (casein, and lactalbumin)
- Wheat
- Gluten (wheat protein)
- Corn
- Soy
- Fish
- Shellfish
- Peanuts
- Tree nuts
- Kiwi
- Eggs
An important concept to understand is that with food allergy, sensitivity or intolerance, the symptoms may manifest in different areas of the body. For nasal allergies, symptoms occur mostly in the nasal passages. For food allergy, they may occur in the mouth, GI tract, or even in other areas of the body since the food antibodies may enter the bloodstream after being ingested, triggering inflammation in other areas of the body.

**What Causes It?**

Direct contact with an allergen is the basic cause of an allergic reaction. Contact may be through digestive, inhalant (oral or nasal), skin contact, rectal, intravenous or intramuscular routes. Since not everyone experiences classic allergic reactions, other factors must come into play. Some of these factors include:

- Chronic infections
- Candida overgrowth
- Dysbiosis
- Antibiotic overuse
- Parasites
- Leaky gut
- Low stomach acid (HCl)
- Enzyme deficiency
- Toxic load
- Chemical sensitivity
- Obesity
- Stress

- Pollution
- Heredity

Chronic bacterial, viral, or fungal infections, or even a severe acute infection, may compromise the immune system and trigger an allergic response. For instance, an intestinal infection resulting in diarrhea may damage the intestinal lining. This damage creates intestinal permeability, or leaky gut, allowing toxins and undigested food particles to enter the body. The immune system, which is already overworked from fighting the infection, recognizes these toxins and particles as foreign invaders and triggers an inflammatory allergic response. Maintaining a healthy digestive tract, therefore, can ensure these invaders do not enter the body.

Candida overgrowth and dysbiosis (an imbalance in gut bacteria), which often go hand in hand, may contribute to allergies in the same way that infections do—by lowering immunity and creating a leaky gut through which allergenic and toxic substances can get into the body and cause an allergic reaction. The more undigested food particles enter through the leaky gut, the more immune reactions occur in response. It has been shown that infants with higher amounts of lactobacilli and bifidobacteria were less likely to develop allergic diseases than children who lacked these bacteria in their guts, but instead had higher amounts of other bacteria such as Clostridia and Streptococcus aureus. This illustrates the importance of developing a healthy balance of beneficial bacteria in the gut. It is the gut-immune connection.

Similarly, parasites may also destroy the intestinal barrier function and leave the body more vulnerable to allergens.

### Did You Know

**Allergy:** causes an immediate immunoglobulin E (IgE) response of the immune system

**Sensitivity:** causes a delayed immunoglobulin G (IgG) or IgA response of the immune system

**Intolerance:** causes an adverse reaction in the body that does not necessarily involve the immune system
It is interesting to note, however, that children raised in Western societies, which harbor less parasites than developing countries, are more prone to develop allergic diseases. The hygiene hypothesis has therefore been proposed which states that children who are raised in ultra-hygienic environments are more likely to develop allergic diseases. The belief is that their immune systems do not get built up sufficiently due to the lack of immune challenge by low amounts of bacteria and parasites, such as are seen in children in developing countries and rural areas.

The overuse and repeated use of antibiotics, especially in infants and children, can interfere with the healthy population of beneficial bacteria in the gut that is so essential in developing proper immune response. Indeed, early use of antibiotics in children, and even antibiotic use by the mother during pregnancy, has been associated with the development of allergic disease in children.7,8

Food digestion is another factor to consider. Even before food reaches the intestines, it must be adequately broken down. If there is not enough hydrochloric acid in the stomach—which may occur in those suffering from heartburn or taking acid-suppressing heartburn medication—food may not be broken down into digestible parts, triggering a food sensitivity. Acid suppressing drugs have been found to increase food sensitivity for this very reason.9 In the same way, if there is an enzyme deficiency, or if food is not adequately chewed it will not be broken down appropriately and undigested food particles may be absorbed in the intestine activating an adverse reaction to the food.

Toxin exposure is another factor to consider. If the body is over-burdened with toxins, it will have difficulty removing them. When toxins build up in the body they can effect other parts of the body, including the digestive system. Toxins can interfere with the normal functioning of the immune system, causing it to become overactive and attack the body’s own tissues, leading to a variety of health problems. The most common health conditions that may result from a food allergy or sensitivity include:17-20

- Acne
- Anxiety
- Arthritis
- Asthma
- ADD/ADHD
- Autism
- Chronic fatigue syndrome
- Diarrhea
- Diabetes
- Ear infections
- Eczema
- Fibromyalgia
- Hay fever
- Headache
- Inflammatory bowel disease
- Irritable bowel syndrome
- Migraine
- Obesity
- Rheumatoid arthritis
- Sinusitis
may trigger an inflammatory immune response which can cause allergy-like symptoms. Chemical sensitivity may also produce allergy symptoms. (For more information about this condition, see the Multiple Chemical Sensitivity section.)

Air pollution is another trigger for allergies. Vehicle exhaust has been found to trigger nasal allergies, while industrial pollution and ozone have also been found to trigger an allergic response in patients.\textsuperscript{10}

One study found that children who frequently swam in chlorinated pools were at a much higher risk of developing allergic disease than children who did not have much exposure to chlorinated pools.\textsuperscript{11} The chlorine and other pool chemicals can irritate the skin and nasal passages, which can encourage the development of allergies.

Obesity may also play a role in allergic disease—especially food allergy. Allergic IgE levels were found to be higher in overweight and obese children as compared to normal-weight children.\textsuperscript{12} The recent increase in overweight and obese children is thought to be related to a similar increase in allergic diseases among children.

Stress has been linked to so many illnesses. Indeed, stress is likely to worsen any illness through its negative effects on many different body systems. Allergies, too, are affected by stress. Stress alters the regulation of the connection between the immune system and neurological system, which can produce the hypersensitive reactions seen in allergic people.\textsuperscript{14,15}

Allergies seem to run in families. When one parent experiences allergies, the child has a 50 to 58 percent chance of also being allergic. When both parents are allergic, the child has a 67 to 100 percent chance.\textsuperscript{16}

**What Are the Signs and Symptoms?**

Symptoms of nasal allergies include:

- Nasal congestion
- Itchy, runny nose
- Itchy, watery eyes
- Eye swelling
- Sneezing
- Scratchy throat
- Post nasal drip
- Sinus pressure

Symptoms of classic food allergy include:

- Swelling of lips, tongue, face, throat
- Hives
- Tingling mouth
- Anaphylactic shock

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**Healing HOPE Testimonial**

"Every time I do a cleanse or detox, I feel great. I was recently taking prednisone and antibiotics for some bad allergies, and felt like my body had been through the ringer. I ached. My hormones were way out of whack. I was feeling depressed and had even gained 12 pounds. I did a Total Body Cleanse, and then the Liver Detox. What a difference! My allergies are almost gone and I haven’t had to take my allergy medication. I plan to do the Kidney Detox next, and then the Liver Detox once more.”

– Renee
Other symptoms that may occur due to food allergy or food intolerance are wide ranging and affect all areas of the body. These include:

- Abdominal pain
- Bloating
- Gas
- Constipation
- Diarrhea
- Heartburn
- Food cravings
- Nausea
- Congestion
- Runny nose
- Coughing
- Wheezing
- Acne

- Itching
- Muscle pain
- Depression
- Irritability
- Fatigue
- Headache
- Insomnia
- Joint pain

A serious symptom that may occur as a result of food allergy is anaphylactic shock. It involves the release of histamine in the body which causes swelling of the throat and tongue, shortness of breath and wheezing. It can even completely block the airways leading to suffocation. This is a life-threatening situation, and emergency treatment is needed immediately. This reaction may occur within a couple of minutes of contact with the allergen, or it may be delayed by a couple of hours. It may be accompanied by symptoms of hives, nasal congestion, stomach pain or vomiting, and low blood pressure.

**How Is It Diagnosed?**

Diagnosis of allergies will be based on a thorough medical history and physical exam. In addition to this, there are a few different tests that may be performed. Traditional allergists will use either a skin prick test or a RAST (radioallergosorbent test) blood test to determine IgE allergies. The skin prick test looks at how the skin reacts to allergens. The blood test looks for a response in the blood. The accuracy of these tests for diagnosing food allergy has been questioned, however.

There are also blood tests that detect IgE allergies, and IgA and delayed reaction IgG food sensitivities. These tests can evaluate a large variety of foods, and may be helpful for determining food sensitivities.

**Did You Know**

As many as 45 to 60 percent of people may have food intolerance.\(^{13}\)
Another way to determine a food allergy, sensitivity or intolerance is a food elimination diet. This involves removing the suspected allergenic foods from the diet for at least four weeks, and then reintroducing them one at a time. When reintroduced, if allergic symptoms return, it is likely that a food sensitivity exists. Additionally, a food diary may be used in conjunction with an elimination diet to track adverse reactions to foods.

**What Is the Standard Medical Treatment?**

Avoiding allergens is the best way to prevent an allergic reaction, but this is often difficult or even impossible, depending on the allergen. With severe food allergies, however, there is no question that the food must be avoided due to the risk of anaphylactic shock, a serious reaction that can quickly become fatal.

For nasal allergies, over-the-counter medications which treat symptoms are the most common treatment. Of these, antihistamines such as diphenhydramine (Benadryl) and oral decongestants such as pseudoephedrine (Sudafed) are the most common. Other medications that may be used are nasal decongestant sprays, nasal steroids or nasal antihistamines. For irritation in the eyes, topical eye drops are available, often as an antihistamine. One way to help alleviate allergy symptoms is nasal irrigation. Clearing the nasal passages with saline water helps to keep mucus and irritants from accumulating, which can lead to further complications of nasal congestion such as sinusitis.

For airborne allergens, frequent washing of bedding and stuffed animals in hot water, maintaining low air humidity, frequent vacuuming and use of HEPA filters and mattress covers can help to reduce exposure to these allergens. Allergen immunotherapy is one type of treatment for allergies in which the individual is administered increasing amounts of the allergen over a long period in order to desensitize the immune system. The amount of allergen is gradually increased over time, and eventually the body recognizes the allergen as harmless, even in large amounts.

Immunotherapy can be used for inhalant allergies, and is currently being studied for treatment of food allergies. There is a risk of developing anaphylactic shock during treatment, but medical centers are prepared for this, and it can be treated without becoming fatal.

Treatment for anaphylactic shock is injection of epinephrine (adrenaline) which quickly reverses the effects of histamine. This shot is available in an easy-to-inject form so that it can be self-administered at any time. Patients are also advised to seek emergency medical treatment in case the effects of the shot wear off.

*Nasal irrigation is helpful during acute phases of nasal allergies.*
Historically, only IgE antibody mediated food allergies were accepted by traditional medicine. These reactions produced dramatic symptoms like sudden onset of itching, tearing of the eyes, rash, swelling of the face, shortness of breath, and, in severe cases, massive constriction of the airways of the lungs, cardiovascular collapse and death.

However, it became more apparent to clinicians over the last decade that there was an entirely different set of patients who would eat certain foods who then would not notice any symptoms for up to four days, at which time they would have a headache, muscle aches, or discomfort in their abdomen. Antibody testing to antigens in 100 or more common foods began to show elevations of IgG antibodies. It is not uncommon to see patients with eight to 10 food sensitivities.

The usual treatment is to remove all sensitive foods from the body for three to six months, and place the patient on a rotation diet so that whatever they eat on day one will not be included again until day four. In addition, checking these sensitive patients for leaky gut is a good idea, since this may be the primary cause of the allergic or food sensitivity immune response.

If the patient has an intestinal permeability test which shows increased permeability (leaky gut), the next test might include a lactulose breath test which, if positive with increased hydrogen and or methane gas, means the leaky gut is caused by too much fermentation by too many bacteria in the ileum and right colon—bacterial overgrowth.

If this proves to be the case, treatment could include:
• A short course of antibiotics accompanied by probiotics.
• After five to 10 days the antibiotics should be stopped, the probiotics continued.
• In addition, the patients should be treated with hydrochloric acid (HCl), digestive enzymes, glutamine, omega-3 oils, L-arginine, zinc, vitamin A and other nutrients for healing the intestinal lining.
• After several months, these reactive foods may be slowly and gradually re-introduced. This is very similar to how dermatologists and allergists perform desensitization with injections of mold, dusts, and other skin allergens to allow the patient’s immune system to once again tolerate the materials which caused the problem.

There are a few principles which may prevent these types of food sensitivities from occurring, namely a wider choice of unprocessed foods eaten only once every three to four days, and include the HOPE concept – High fiber, a balance of Omega oils, Probiotics, and Enzymes with meals.

The principles on how these allergic problems tie into the gut lining were demonstrated years ago with pediatric patients who were sensitive to wheat and dairy. A baseline intestinal permeability (IP) test was done and found to be normal. The children were then given small amounts of wheat and/or dairy and the IP test was repeated and found to be 100 times elevated. Next, the children were pretreated with a powerful antihistamine, sodium chromoglycate, and after a short period of time, they were rechallenged with the wheat/dairy combo, and the follow-up IP test was normal!

This strongly suggests that, in sensitized individuals, their histamine response is largely responsible for the increase in the IP which allows the food particles to reach the gut-associated lymphoid tissue (GALT) and create the antibodies, either IgE or IgG.

It has also been shown to be helpful to supply the brush border enzyme dipeptidyl peptidase IV (DPP4). This will help break down gluten proteins and decrease the likelihood of a gluten reaction. It may be that the loss of the normal brush border enzymes in the face of intestinal inflammation is an initiating factor in food allergies/sensitivities.
Immune System & Infections

I have seen dramatic improvement in many people with seasonal allergies when they cut dairy out of their diet. Dairy consumption increases mucus production in the body, worsening the allergic conditions.

It could also be that other foods to which you are sensitive are creating the allergic response that begins in the gut. Think of a skin allergy, which is easy to visualize. When the skin comes into contact with something that it is allergic to, it becomes red, irritated and swollen. A similar response occurs in the gut when there is a food sensitivity. Because you cannot see the inside of your intestines, and because the reaction may not feel the same as it does on the skin, you may not realize that you have a food sensitivity.

Unfortunately, traditional food allergy testing does not pick up early food sensitivities. This is critical because, by the time a full-blown allergy develops, there may be major damage to the digestive tract. Food sensitivity testing (see the Appendix) is a good way to determine if early stages of sensitivity are present.

Gluten sensitivity is major food culprit. Over half of Americans are actually sensitive to gluten. (See the Gluten Sensitivity section for more information on this condition.)

Candida overgrowth is another underlying feature of the allergic conditions, and is often present in conjunction with food sensitivities. Rule out Candida overgrowth when dealing with allergic conditions. (See the Candidiasis section for more information on this condition.)

**Rule Out:**

- Candida overgrowth (See the Candidiasis section.)

**Recommended Testing**

- Food sensitivity test (See the Appendix.)

**Diet**

- If Candida overgrowth is present, follow the Candida Diet. (See the Appendix.)
- Once food sensitivities are determined, follow the Fiber 35 Eating Plan found in the Appendix, but eliminate foods which trigger sensitivities.
- Reduce or eliminate meat and dairy, which can irritate the immune system.
- Avoid artificial flavors and colorings, which may cause allergic-type reactions.
- Do not smoke and avoid second-hand smoke, which irritates the airways.
- Bee pollen from local bees may be beneficial for those with pollen allergies.
- Limit sugar and simple carbohydrate (white flour, white rice, white pasta, etc.) intake, which may worsen allergy symptoms. Replace these carbs with complex carbohydrates—whole grains.

**Lifestyle**

- For people with inhalant allergies, reduce exposure to common household allergens like dust, mold and animal dander.
- Remove carpets and use HEPA filters.
- Choose allergen-free bedding and limit pet’s access to sleeping areas.
- Enclose mattress in an airtight plastic cover.
- Nasal irrigation, using a neti pot, is a great way to prevent nasal congestion. Nasal irrigation is best used during acute phases of illness, or periodically.

**Complementary Mind/Body Therapies**

- Stress can be a major component of this disease, so find ways to reduce it with therapies such as meditation, yoga, deep breathing, massage, biofeedback, or music therapy.
- Acupuncture may be helpful for people with allergies.
- Reflexology massage is beneficial for allergic rhinitis.

Brenda’s Bottom Line
### Critical Phase

Daily maintenance recommendations should also be taken during this phase unless otherwise indicated.

<table>
<thead>
<tr>
<th>Nutraceuticals</th>
<th>Dosage</th>
<th>Benefit</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Immunity Formula</td>
<td>Use as directed</td>
<td>Stimulates immune system, reduces inflammation and relieves allergy symptoms.</td>
<td>Should contain Saccharomyces boulardii, EpiCor and larch arabinogalactan.</td>
</tr>
<tr>
<td>N-acetyl-cysteine (NAC)</td>
<td>600 mg daily</td>
<td>Increases glutathione, the body’s most potent antioxidant, decreases inflammation.</td>
<td>Take with vitamin C to aid absorption.</td>
</tr>
<tr>
<td>Candida Cleanse</td>
<td>See Appendix</td>
<td>Helps to eradicate Candida overgrowth.</td>
<td>Look for ingredients such as uva ursi, caprylic acid, undecylenic acid, barberry, garlic, neem, grapefruit and olive leaf extracts.</td>
</tr>
<tr>
<td>L-Glutamine Powder with Gamma Oryzanol</td>
<td>5 grams (5000 mg) daily on empty stomach with water</td>
<td>Helps repair the intestinal lining and reduce inflammation.</td>
<td>Best if taken in loose powder form for contact with esophageal lining.</td>
</tr>
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### Helpful

<table>
<thead>
<tr>
<th>Nutraceuticals</th>
<th>Dosage</th>
<th>Benefit</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multivitamin/mineral Formula</td>
<td>High potency</td>
<td>To correct any insufficiencies that may affect immunity.</td>
<td>Be sure vitamins are in their natural forms.</td>
</tr>
<tr>
<td>Herbal Allergy Formula</td>
<td>Use as directed</td>
<td>To reduce allergy symptoms.</td>
<td>Herbs helpful for allergies include butterbur, stinging nettle, green tea extract and grapeseed extract.</td>
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### Daily Maintenance

<table>
<thead>
<tr>
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<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omega Oils</td>
<td>Use as directed</td>
<td>Provides anti-inflammatory GLA and other EFAs (essential fatty acids).</td>
<td>Look for a mix of fish oil, pomegranate oil, borage oil, and sea buckthorne oil (omega 3,5,6,7,9).</td>
</tr>
<tr>
<td>Digestive Enzyme with HCl</td>
<td>1-2 capsules with every meal</td>
<td>Helps break down food into non-allergenic nutrients.</td>
<td>Do not use HCl if ulcer or stomach irritation is present. Switch to enzyme without HCl.</td>
</tr>
<tr>
<td>Fiber</td>
<td>4-5 grams twice daily as part of a 35 gram per day fiber diet</td>
<td>Helps maintain healthy digestion, important for the proper assimilation of nutrients.</td>
<td>Use a combination soluble/insoluble fiber supplement.</td>
</tr>
<tr>
<td>Probiotics</td>
<td>30 - 80 billion culture count twice daily</td>
<td>Stimulates immune system, reduces inflammation and protects digestive lining.</td>
<td>Look for high amount of bifidobacteria, the main beneficial bacteria in colon.</td>
</tr>
<tr>
<td>Vitamin D₃</td>
<td>1000-5000 iu daily</td>
<td>Anti-inflammatory. Most people are low or deficient.</td>
<td>Blood levels should be between 50 and 70 ng/mL.</td>
</tr>
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See further explanation of supplements in the Appendix