

Flu Shot - Should my asthmatic child get one?

Fall 2006

By Nathan Spence, BA, and Richard W. Honsinger, MD, MACP, FAAAAI

Yes! Although the flu shot is not 100 % effective against infection, it drastically reduces the chance of getting influenza. Yet existing myths and misinformation about vaccination prevent many people with asthma from receiving their vaccine annually. Two of the most common myths are:

Myth #1: I do not need to get a flu shot because I am not at high risk for influenza.

Fact: The Centers for Disease Control and Prevention (CDC) recommends an annual flu shot for people at high risk for developing serious complications from influenza, including those with chronic lung conditions such as asthma. High-risk groups should be vaccinated beginning in October.

Myth #2: I will get the flu from the vaccine.

Fact: Despite what some people believe, it is not possible for you to get the flu from a flu shot. The vaccine is made from inactivated, "killed" strains of the virus, which means the vaccine is not infectious.

Influenza, commonly known as "the flu," will infect as many as 1 in 5 people in the United States in the coming flu season. An estimated 377,000 hospitalizations and 51,000 influenza-associated deaths will occur as a result. And while the influenza vaccine has been shown to prevent infection, it is still underutilized in those most vulnerable to severe life-threatening complications.

Of 153 US children who died during the 2003-2004 influenza season, 47% had been healthy and 33% had an underlying medical condition that increases the risk of influenza-related complications. Most of the children who died had been inadequately vaccinated.

Influenza is a contagious disease that is spread when an infected person coughs, or sneezes, sending virus into the air to be inhaled by others in the surrounding environment. The virus enters the nose, throat, or lungs and begins to multiply, causing symptoms of infection. Manifestations of uncomplicated influenza include fever, headache, fatigue, sore throat, dry cough, muscle aches, and rhinitis. In addition, children may experience nausea, vomiting, and earache. Serious complications may ensue, especially in those with asthma who are more susceptible to pneumonia and other chronic lung problems. Therefore, routine influenza vaccination is imperative for your asthmatic child's health.

Immunization can be given in two forms: the nasal spray and the shot. The nasal spray is a live, attenuated virus and is for use ONLY in healthy people between the ages of 5 and 49 years. **Anyone with a chronic medical condition, including an asthmatic child (> 6 months), must be immunized with the shot.** The shot is inactivated (killed) virus administered intramuscularly. It contains three influenza viruses. The three vaccine strains – one A (H3N2) virus, one A (H1N1) virus, and one B virus - are representative of the influenza vaccine strains predicted by experts to be most prevalent for that year. The vaccine does not cover the Influenza A (H5N1) virus, also known as the avian (bird) flu. However, the bird flu does not infect humans easily, and if someone is infected it is difficult for them to transmit it to someone else. Although one shot annually suffices for most, children under age 9 should receive two injections, one month apart if they have not had previous vaccination. Even if you have had influenza, you should take the vaccine to prevent infection with the other two strains

It is recommended that you talk with your doctor if your child had a severe reaction to a flu vaccination in the past, or if your child has had the rare Guillain-Barre Syndrome. Viruses for the flu shot are grown in eggs. Therefore, if your child has ever had a severe allergic reaction to eggs (i.e., hives or asthma), you will want to consult an allergist before vaccination.



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Accidental peanut exposure less likely than previously reported

Unintentional exposure to peanut occurs at a lower frequency than previously reported, however most reactions are managed inappropriately, according to a new study in the August 2006 issue of the *Journal of Allergy and Clinical Immunology* (JACI).

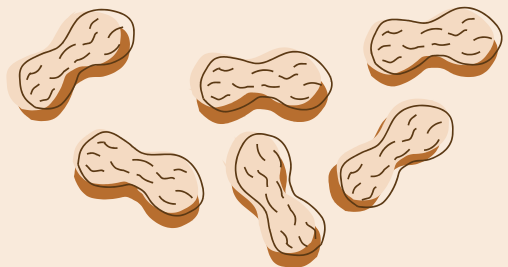
Accidental exposure to peanut has been reported to occur frequently and has been difficult to avoid because of its widespread use, manufacturing and labeling errors, utensil contamination and label misinterpretation.

Joyce W. Yu, MD, FRCPC, and colleagues aimed to determine the current frequency of accidental exposures occurring in peanut allergic children in Quebec and to identify factors associated with exposure. They found:

- Thirty-five accidental exposures to peanut occurred in 29 children over a period of 244 patient-years, yielding an annual incidence rate of 14.3%.

- 57% of accidental exposures were at least of moderate severity. Of these, only 20% were appropriately treated with epinephrine, and 14 of 20 (70%) were not managed by a physician.

These findings suggest that enhanced awareness, access to safer environments and good food manufacturing practices may have contributed to a lower incidence of inadvertent peanut exposure, but further reduction and better education on allergy management is still needed.



Safe alternative to injection immunotherapy for seasonal allergy sufferers

Grass allergen tablets are highly effective in grass pollen-induced rhinoconjunctivitis. This tablet represents a safe alternative to injection immunotherapy and is suitable for home use, according to a new study featured in the August 2006 issue of the *Journal of Allergy and Clinical Immunology* (JACI).

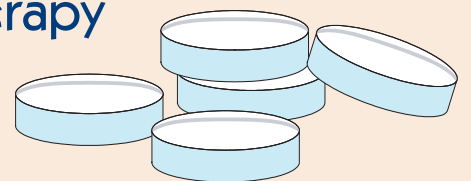


Ronald Dahl, MD, and researchers studied the efficacy of a rapidly dissolving grass allergen tablet compared to a placebo in 634 patients with seasonal rhinoconjunctivitis. Subjects commenced treatment at least 16 weeks before the grass pollen season, and treatment was continued throughout the entire season.

Researchers found:

- The primary efficacy analysis showed a reduction of 30% in rhinoconjunctivitis symptom score and a reduction of 38% in rhinoconjunctivitis medication score compared with placebo.
- Side effects mainly comprised mild itching and swelling in the mouth that was in general well-tolerated and led to treatment withdrawal in less than 4% of participants. There were no serious local side effects and no severe systemic adverse events.

These findings suggest that sublingual immunotherapy with grass allergen tablets is effective in grass pollen-induced rhinoconjunctivitis. The tablet is well tolerated with minor local side effects. The grass allergen tablet represents a safe alternative to injection immunotherapy suitable for home use.



Food allergies and reactions

By Clifford W. Bassett, MD, FAAAAI



Food allergies can be a pervasive, potentially life-threatening problem affecting up to 11 million Americans. About 8% of the children in the United States (2 million children) are estimated to be affected by allergic sensitivities to foods. Among infants and toddlers, 6% to 8% may experience food allergic reactions, a higher prevalence than physicians previously thought. The presence of food allergies

seems to be higher in the first several years of life. A child with allergies, such as eczema and/or seasonal allergies is more likely to have food allergic sensitivities.

The actual incidence of food allergies is much less common among adults (2.5%), especially when compared to surveys that estimate at least 20 to 30 % of adults believe they have a food allergy.

Physiology of a food allergy reaction

In a food-allergic reaction, an individual's immune system overreacts to specific food proteins that ordinarily do not create a problem. During the allergic reaction, chemicals including "histamine," are released that trigger allergic symptoms that can affect the eyes, nose and throat, as well as the skin and the lungs.

Many food allergens may still cause an allergic reaction even after they are cooked. Even a trace amount of a food can cause a reaction in some very sensitive individuals. There is a broad range of allergy symptoms experienced by both adults and children with food allergies, which can develop within minutes up to several hours after ingestion, that include itchiness of the mouth, facial and tongue swelling, hives, difficulty breathing, abdominal pain and vomiting and in extreme cases, a drop in blood pressure (anaphylactic shock).

In the United States, the most likely common allergens in adults and children are: cow's milk, eggs, peanuts, wheat, soy, fish, shellfish and nuts.



Emerging trends in the prevalence of food allergy

Over the past decade we have seen a rise worldwide in more frequently consumed foods such as sesame, poppy seed, cottonseed, sunflower, cilantro and other spices, cereal grains, dry beans, peas, lentil, chickpeas.

Diagnosis of a food allergy

An allergist/immunologist will determine whether a food allergy exists after taking a thorough history, examination and utilization of food allergy tests. When allergy skin testing is performed, and if a probable allergy to a specific food exists, a small wheal (a raised bump) will develop at the test site. Your doctor may also order a blood test (RAST or CAP RAST) to evaluate if food allergies are present. If the diagnosis is still not certain, a supervised food challenge may be needed to determine whether you actually have a true food allergy.



Prevention and treatment of an allergic reaction

The most important steps for treating a reaction are to understand and recognize early symptoms, react immediately and follow your doctor's instructions for treatment. You also need to be prepared for emergencies that may occur both at home and away from home, including understanding the need for and correct usage of injectable epinephrine, as well as having antihistamines on hand. Epinephrine helps to reverse an anaphylactic reaction once in progress.

However, in spite of your best efforts at avoidance, reactions may occur. The best possible treatment is successful prevention and education for food allergy sufferers, as well as school and work personnel, coaches and family members. Many patients who self-diagnose a food allergy never seek medical attention from an allergist/immunologist, who may institute allergen avoidance strategies and provide food allergic individuals with proper treatment tools for severe reactions.

Cross reactivity and oral allergy syndrome

With some foods, an allergy to one food may render sensitivity to other foods in the same food classification. For some people, seasonal allergy symptoms may be made worse by consuming fresh fruits due to "oral allergy syndrome." The most frequent symptoms include itchiness, swelling and hives affecting the mouth, face/lip and throat, and is generally avoided by the cooking of the suspect fruits/vegetables. Most affected persons do not generally have progressive or life-threatening reactions as the symptoms are generally localized to the mouth and related structures.

Ingestion of "cross-reactive" proteins present in some foods including peach, apple, pear, cherry, carrot, hazelnut, cherries, carrots, kiwi, hazelnut, almonds among others, will cause itchiness of the mouth and throat in people with allergies to birch tree pollens. Ingestion of other foods/supplements such as banana, cucumber, melon, zucchini, sunflower seeds, chamomile tea and even Echinacea will cause a similar reaction in individuals with ragweed allergies.

If you have some of the oral allergy type complaints see an allergist for appropriate evaluation including diagnostic allergy tests to determine if you must avoid these foods which may provoke these "oral reactions," especially during the spring, summer and fall allergy seasons in your area.

What's new in food allergy research?

- The American Academy of Pediatrics' has recent recommendations for preventing or delaying the onset of food allergies in infants/children from allergic families. A brochure is now available through the Food Allergy and Anaphylaxis Network for expectant and nursing mothers.
- For further information, go online to the American Academy of Allergy, Asthma and Immunology Web site, www.aaaai.org.

When are infections too frequent?

By Marlene Peng, MD and Michael C. Zacharisen, MD, FAAAAI

Infections, particularly viral infections, are common throughout childhood into adulthood. Any parent with a child in daycare or school anticipates colds, ear infections and diarrheal illnesses during the year. In patients with allergies, sinus infections can be frequent. Some people feel they are always at the doctor's office for yet another infection or an infection that just won't go away. So, when are these infections so frequent that your doctor should suspect an immune deficiency?

A child less than two years old may normally have six to eight colds a year, with similar numbers for ear infections and vomiting/diarrheal illnesses. At the extreme end, a child with a normal immune system may have up to twelve of these infections a year. Factors that increase the frequency of infections include daycare attendance, exposure to cigarette smoke, allergies and malnutrition. Although children with normal immune systems have colds and ear infections, those with an immune problem have multiple, serious, difficult to treat, or unusual infections.

An immune deficiency is due to defects in the body's ability to fight infections. Immune deficiencies may be primary or secondary. Primary means that there is an inherited problem with the immune system. Frequently, these are diagnosed in infancy or childhood. Because primary immune deficiencies are inherited, it is important to know whether other family members have problems with infections or have an already diagnosed disease. Secondary means that someone has another disease, such as cancer or infection including HIV, which causes the immune system to fail. Immune deficiencies, whether they are primary or secondary, often present in similar ways.

The most common manifestation of an immune problem is decreased resistance to infections. This means that repeated infections occur, or they are more severe and cause unexpected complications. For example, respiratory infections tend to occur more frequently. Those with more than eight ear infections, two serious sinus infections, or two episodes of pneumonia per year should be investigated for an immune deficiency. Another type of infection that can be more frequent is thrush. This is a yeast infection in the mouth that is common in normal infants. If thrush is persistent after 1 year of age, there may be an immune problem.

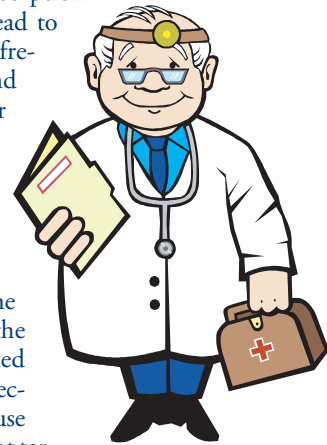


Serious infections are ones that affect bone, joint, brain, blood and liver. Deep skin boils can also be a symptom of an immune problem. These usually require intravenous antibiotics and hospitalization. Recurrence of these, lack of improvement with treatment, or the infection progressing may indicate an immune defect. Infections in the gut also occur frequently in those with an immune deficiency and

cause problems with food and nutrition absorption and even disease of the liver. These can lead to chronic diarrhea and vomiting. Often the frequency of infections – serious or not – and constant losses in the gut can lead to poor weight gain and slow development in a child.

Occasionally, it is not the frequency of infection that leads to an immune deficiency diagnosis, but the type of infection itself. Some bacteria and fungi are normally found within humans, but when there is a problem with the immune system, these microbes can infect the body. These characteristic infections are called opportunistic infections. Sometimes, an infection that normally causes mild disease will cause severe problems if the immune system cannot target it. For example, children who are infected with chicken pox or infectious mononucleosis generally have a mild illness that resolves without problems. In those with an immune defect, these viruses can be fatal.

Immune deficiencies are not common, but they can be serious. It is important to recognize when infections are suspicious so that your physician can order the appropriate tests. The circumstances that are concerning include having someone in the family with an immune problem; more than the usual number of infections; and serious or unusual infections.



10 Warning Signs of Primary Immunodeficiency

1. Eight or more new ear infections within a year.
2. Two or more serious sinus infections within a year.
3. Two or more months on antibiotics with little effect.
4. Two or more pneumonias within a year.
5. Failure of an infant to gain weight or grow normally.
6. Recurrent deep abscesses in the skin or organs.
7. Persistent thrush in mouth or on skin, after age one.
8. Need for intravenous antibiotics to clear infections.
9. Two or more deep-seated infections such as meningitis (brain), osteomyelitis (bone), cellulitis (skin), or sepsis (blood).
10. A family history of primary immunodeficiency.

*Courtesy of The Jeffrey Modell Foundation

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