

# MEDfacts

An Educational Health Series From National Jewish Health®



## Allergies to Latex

### Facts About Allergies

The tendency to develop allergies may be inherited. If you have allergic tendencies and are exposed to certain things in your environment (allergens), you may develop allergies to some of those things. Examples of allergy symptoms include itchy eyes, runny nose, asthma symptoms, eczema and rash. The timing of the allergic response may be immediate or delayed. Allergy testing may be recommended to help identify your allergies.

### What is a Latex Allergy?

Latex – a kind of natural rubber made from the sap of a tree - can be found in many items. It is found in bicycle and wheelchair tires, toys, some balloons, examining gloves, household gloves, surgical tubing, rubber bands and condoms. When someone is allergic to latex, that person is actually allergic to one or more proteins (allergens) found in the sap from the rubber tree. Interestingly, these proteins – or ones very similar to them – can be found in banana, kiwi, avocado, potato, strawberries, peaches and chestnuts, since people who are allergic to latex often have cross-reactions to these foods.

### What Are the Symptoms of Latex Allergy?

Latex allergy can present a wide range of symptoms from hives (contact urticaria); itchy, watery eyes (conjunctivitis); sneezing, runny nose (rhinitis); to wheezing, shortness of breath, chest tightness (asthma symptoms); and in severe cases, anaphylaxis including severe asthma symptoms, swelling of the throat, fall of blood pressure, loss of consciousness, and rarely death.

### Who Gets Allergies to Latex?

Genetics and the environment both play a role in developing a latex allergy. To develop an allergy, you must have the 'right genes' that cause the immune system to overreact and create IgE antibodies against latex. Furthermore, you must be exposed to latex in the environment at least twice (but usually multiple times) before you become allergic. The immune system must first

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become sensitized to latex (at least once but usually numerous times) before it can mount an allergic response to latex (second exposure). Many individuals have years of exposure before developing latex allergy but there is no question that the more exposure to latex a person has the more likely they are to develop latex allergy (if they are genetically predisposed to being latex allergic).

There are groups of people who are more likely to develop a latex allergy than others. Since the amount of exposure to latex is a key factor in developing a latex allergy, healthcare workers, and patients (especially children) who undergo multiple surgeries are at risk. Children with spina bifida are the most likely group to develop a latex allergy.

There is a genetic link to allergies. Therefore, people who have other allergic conditions such as allergy-induced asthma; eczema (atopic dermatitis); hives (chronic urticaria) and food are at increased risk for developing an allergy to latex. People who have experienced a reaction after eating banana, kiwi, avocado, potato, strawberries, peaches or chestnuts may also have increased risk for latex allergy.

### How is Latex Allergy Diagnosed?

Every diagnosis begins with a detailed medical history. The doctor will ask lots of questions about the nature of the reaction, where and when it occurs, etc. Since allergy may be genetic, expect some questions about other family members who may be allergic.

Once the detailed medical history is taken, skin or blood tests may be performed. Skin tests are far more common and accurate than blood tests. The doctor will make a diagnosis based on the test results, and the medical history.

### Environmental Control

Once an allergy has been identified, the next step is to decrease or eliminate exposure to the allergen. This is called environmental control. The only 'cure' for allergy is to avoid the allergen.

For healthcare workers who must wear protective gloves and work with latex tubing and other rubber products, avoiding latex can be difficult. Indeed, many highly skilled medical professionals have had to change careers because of a severe latex allergy. However, most healthcare professionals can choose to wear alternative products such as nitrile examining gloves instead of latex. Coworkers should also wear nitrile gloves, or at least a non-powdered latex glove. If this is not possible, reassignment to an area where powdered latex gloves are not used is appropriate.

The prevalence of latex allergy has been on the rise since the implementation of universal precautions in the 1980's. Powdered latex gloves are especially problematic because latex sticks to the powder and becomes airborne when these gloves are put on, taken off, or 'snapped'. Managers of clinical healthcare settings should consider using only non-latex gloves, or at least powder-free latex gloves.

For non-healthcare professionals, it is important that all allergic conditions are communicated to the medical staff whenever undergoing a checkup or medical procedure. This is especially important in the case of surgery.

Here are a few suggestions to help avoid and manage an allergy to latex:

- Avoid airborne latex such as that from powdered latex gloves.
- It is a good idea to buy your own non-latex gloves to bring with you to any medical appointment just in case your caregiver doesn't have them.
- Check labeling on products you buy. 'Hypoallergenic' does not necessarily mean 'no latex'.
- Make sure you tell your doctors about your latex allergy.
- Wear a med-alert bracelet or necklace describing your allergy just in case you ever need emergency care.
- Carry an injectable epinephrine pen in case of an anaphylactic reaction.

### What is the Treatment for Latex Allergy?

The best way to treat latex allergy is to avoid latex. There is no cure for allergy and continued exposure to latex may make the condition worse. Antihistamines may be used to control some symptoms, but they also may help mask allergic reactions to small amounts of latex in the environment. Remember, continued exposure to latex may make this condition worse.

Latex is a complex biological compound and the specific proteins within latex that cause allergic reactions have not been fully identified and characterized and may vary from individual to individual. Therefore, there is no standardized extract and immunotherapy (allergy shots) is not currently a treatment option.

### Role of National Jewish Health

Board certified allergists and occupational medicine specialists at National Jewish Health evaluate and treat a number of allergic and occupational related allergic conditions. Our clinical work begins by trying to rule out latex allergy by performing a number of tests. Skin patch tests and RAST blood tests are used with an extract from latex gloves to assess this type of allergic reaction.

To assess for latex asthma and other severe reactions, we perform blinded latex inhalation challenge tests using powdered latex gloves and non-latex control gloves on separate days. We are one of the few centers in the United States that perform these tests and we have extensive experience. With our protocol of incremental graduated exposure intervals we have not had any severe reactions. Often individuals with latex asthma have had major changes in their lives and we often recommend psychosocial counseling to address adjustment to illness issues.

Our occupational environmental physicians work with patients and their employers to develop practical approaches to protecting the patient and other employees.

National Jewish uses only non-powdered latex gloves in all clinical areas to avoid any

exposure to airborne latex by patients or clinicians. Non-latex gloves are used in areas where latex-allergic patients are evaluated and treated.

### Latex Allergy Research

Our current research focus in the area of latex allergy involves improving the precision of our diagnostic methods through the use of specific inhalation challenges, and studying changes in certain biomarkers before and after controlled exposures. We are also examining the effect of co-exposure to certain chemicals often present in the hospital environment. Other studies are focused on air monitoring for latex protein allergen levels. Board-certified allergists at National Jewish pioneered many of the diagnostic tests and treatments for allergic conditions.

Note: This information is provided to you as an educational service of LUNG LINE® (1-800-222-LUNG). It is not meant to be a substitute for consulting with your own physician.

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