



## Tips to Remember: Latex Allergy

Allergy to proteins in natural rubber latex became a significant concern by the late 1980s. Fortunately however, the epidemic of new cases of latex allergy appears to have crested in the 1990s. Latex allergy appears to have originated from an increased use of latex gloves over the past decade due to infection precaution policies that have been instituted at health care facilities, and changes in processes used to manufacture latex products.

### What is latex?

Latex is a milky fluid produced by rubber trees (*Hevea brasiliensis*). Using different methods, latex can be processed into a variety of products, such as gloves and balloons. During manufacturing, chemicals are added to increase the speed of curing (vulcanization) and to protect the rubber from oxygen in the air.

Products made from blends of natural rubber latex and other compounds are very common. In those with latex allergy, allergic reactions are most often triggered by dipped latex products. Products that commonly cause reactions can include gloves, balloons and condoms.

In rare instances, people who are allergic to latex may also react to rubber bands, erasers, rubber parts of toys, various rubber components in medical devices, rubber elastic in clothes, or feeding nipples and pacifiers. Products molded from hard, crepe rubber, such as soles of shoes, are unlikely to cause reactions. Almost all latex paints are not a problem since they do not contain natural rubber latex.

### Types of allergic reactions

There are two types of allergic reactions to latex. The first is delayed-type contact dermatitis, a poison ivy-like rash that appears 12-36 hours after contact with a latex product. This most commonly appears on the hands of people who wear latex gloves, but it may occur on other parts of the body following contact with rubber products. The prevalence of this form of latex allergy does not seem to be increasing. Contact dermatitis is usually the result of sensitization to chemicals that are added during rubber processing. While very irritating, this form of allergy is not life-threatening.

Immediate, or IgE antibody-mediated allergic reactions, are potentially the most serious form of allergic reactions to latex. Like other common forms of allergy, these reactions occur in people who have previously been exposed to latex and have become sensitized (latex-specific IgE antibody positive). With re-exposure, symptoms such as itching, redness, swelling, sneezing, and wheezing may occur. Rarely, a person will experience life-threatening symptoms. This severe allergic reaction is called anaphylaxis, and is characterized by symptoms such as shock,

severe trouble breathing or loss of blood pressure. If not immediately treated, it can be fatal.

The severity of the immediate reaction depends upon the person's degree of sensitivity and the amount of latex allergen to which the person is exposed. The greatest danger of severe reactions occurs when latex comes into contact with moist areas of the body or internal surfaces during surgery, because more of the allergen can rapidly be absorbed into the body.

Latex can also become airborne and cause respiratory symptoms. For example, latex proteins can adhere to the cornstarch powder used in latex gloves. As powdered latex gloves are used, the starch particles and latex allergens become airborne, where they can be inhaled or come into contact with the nose or eyes and cause symptoms. High concentrations of this allergenic powder have been measured in intensive care units and operating rooms. The use of non-powdered latex gloves, or synthetic (vinyl, nitrile) gloves reduces the risk of these reactions. The capacity of latex products-especially gloves-to cause allergic reactions varies enormously by brand and by production lot.

## Prevalence

Certain groups of individuals who are frequently exposed to latex are at high risk for developing immediate allergic reactions. Individuals with spina bifida (a congenital problem in the development of the back) and those with congenital urinary tract problems who need multiple surgeries seem to have a risk of nearly 50%. Health care workers and others whose jobs require wearing latex gloves or working around them have a risk of about 10%. Others who may be at increased risk are those who have had many medical or surgical procedures, resulting in repeated exposure to latex gloves. Rubber industry workers also are at increased risk. Even in normal adults, the risk of sensitization to latex may be as high as 6%.

People with latex allergy may also experience an allergic reaction to some foods that contain some of the same allergenic proteins as those in latex. This reaction, called cross-reactivity, can be triggered by bananas, avocados, kiwi fruit, and European chestnuts.

## Evaluation and treatment

The first step in treating latex allergy is awareness of the problem. Visit your allergist/immunologist if you think you may have symptoms of latex allergy. After taking a detailed history and examining you, your doctor will decide whether additional diagnostic tests for latex allergy are needed. If you are allergic to latex, you should avoid contact with natural rubber latex products as much as possible. Inform your family, health care professionals, employer and school personnel about your allergy. Discuss with your physician whether you should wear a special bracelet or necklace that notifies others of your allergy. Your doctor will also determine whether you should carry injectable adrenalin (epinephrine) to provide immediate, emergency treatment in case you experience a severe allergic reaction.

If you have reactions to latex, see an allergist/immunologist. The 1990 Americans with Disabilities Act (ADA) covers people with severe allergies to substances such as latex. If you are otherwise qualified but can no longer work with latex in a job setting because of your allergy, work with your employer to determine other options and make reasonable accommodations. If you are allergic and need to wear gloves, or are in contact with persons wearing gloves, there are several options.

You may try substituting synthetic (vinyl or nitrile) gloves for latex gloves, although they may not work as well in some situations. These work in nearly all situations where latex gloves work, including surgery, but in some cases, they are more expensive. For individuals with contact dermatitis reactions to latex, latex gloves made without additional chemicals may work.

If you have significant latex allergy respiratory symptoms from inhaling latex particles, you need to avoid areas where powdered gloves are used frequently. Ideally, all high glove use areas should use powder-free gloves to avoid allergic reactions. Using latex condoms can be a severe problem for some latex-allergic people. One option is natural skin condoms. These do not contain latex and can prevent pregnancy, but they do not protect against viruses like HIV, which cause AIDS, or some other sexually-transmitted diseases (STDs). Synthetic rubber condoms, created to prevent both pregnancy and STDs, are now available.

Manufacturers are currently working to produce latex products that contain less latex allergen. As these products become more available, the risk of reactions in people sensitive to latex, as well as the risk of more people developing latex allergy, should decrease.

Your allergist/immunologist can provide you with more information on latex allergy.

***Tips to Remember are created by the Public Education Committee of the American Academy of Allergy, Asthma and Immunology. This brochure was updated in 2003.***

\*The content of this brochure is for informational purposes only. It is not intended to replace evaluation by a physician. If you have questions or medical concerns, please contact your allergist/immunologist.

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