X-Plain ™
Latex Allergies
Reference Summary

The number of patients who experience serious allergic reactions to latex has increased dramatically in recent years.

Allergic reactions to latex can vary from mild to life threatening. Your doctor may determine that you have latex allergy, or that you are at risk of developing latex allergy.

This reference summary will help you develop a better understanding of latex allergy, how to recognize its symptoms, and how to prevent it.

Allergies

The body's immune system is equipped to fight substances that can harm the body, such as viruses or bacteria.

Some substances that enter the body are harmless, so the body ignores them.

Allergens are harmless substances, but they can cause allergic reactions in some people.

Pollen, house dust mites, mold, animal dander, and latex are examples of allergens.

When a patient has an allergy to an allergen, the body mistakes the allergen for a harmful substance.

This causes the cells to release substances, such as histamine.

The release of histamine and other chemicals causes the body to experience an allergic reaction.

An allergic reaction may cause a runny nose, sneezing, itching, swelling, asthma, or anaphylaxis.

You must have repeated exposure to the allergen before you develop sensitivity to it.

Latex Allergy and Other Reactions to Latex

Natural rubber latex is a milky fluid produced by the *Hevea braziliensis* tree, found in Africa and Southeast Asia.

During the processing procedure, chemicals are added to the natural latex so that it may be shaped into the desired product, such as gloves or balloons.

Three types of reactions can occur in people exposed to products containing latex.

These are:

- Irritant contact dermatitis
- Allergic contact dermatitis
- Latex Allergy

Irritant contact dermatitis is not an allergy, but it is the most common reaction to latex. It is most likely due to sweating or rubbing under the gloves or from soap and detergents left on the hands.

Symptoms of irritant contact dermatitis include red, dry, cracking hands and a rash after wearing latex gloves.

You can reduce the irritant dermatitis by using non-petroleum based moisturizing creams and lotions, topical barrier products, or cotton glove liners.

Allergic contact dermatitis is another type of reaction to latex. It is a reaction to the chemicals added to the latex during processing.

These chemicals can cause a skin rash that usually develops 24 to 48 hours after contact and may produce oozing skin blisters.

The rash usually shows up on parts of the skin that have been touched by latex, but in some people, it may spread to other areas.

Washing your hands after contact with latex will help to prevent allergic contact dermatitis.

Latex allergy occurs when the body's immune system reacts to proteins found in natural rubber latex.

In people with latex allergy, exposure to latex may cause immediate reactions, such as itching, redness, swelling, sneezing, and wheezing.

Rarely, latex exposure may result in anaphylaxis. Anaphylaxis may be life threatening.

It includes symptoms such as severe trouble breathing or a drop in blood pressure.

Latex can also become airborne and cause respiratory symptoms.

Latex allergens may adhere to the cornstarch powder used on gloves. As gloves are used, the cornstarch particles and latex allergens become airborne, where they may be inhaled or come into contact with the nose or eyes and cause symptoms of an allergic reaction.

This is important because it means that patients who are allergic to latex may experience symptoms of an allergic reaction just by being in a room where latex gloves are used or have been used.

The patient does not need to personally touch the latex gloves or compounds.

Symptoms of Latex Allergy

In most cases, latex allergy develops after repeated exposure to latex.

Reactions upon exposure to the latex allergens are generally acute and may mimic hay fever or asthma,

with symptoms such as nasal congestion, hives, or difficulty breathing.

The most severe cases can result in anaphylaxis, a potentially fatal reaction that affects many parts of the body at once.

Symptoms usually occur immediately following contact with latex. They progress rapidly and may include a dangerous drop in blood pressure, flushed skin, and difficulty breathing.

Symptoms of anaphylaxis also include swelling of the throat, tongue, or nose, or loss of consciousness.

Tell your doctor about any changes in symptoms due to latex exposure.

Causes of Latex Allergy

The reasons why some people are allergic to latex, while others are not, are not clear. However, the potential to develop allergies is thought to be hereditary.

With the increased use of latex gloves over the past decade and changes in the manufacturing of latex products, the incidence of latex allergy has increased.

The introduction of universal precautions in healthcare settings, including the widespread use of latex gloves to prevent the spread of AIDS and Hepatitis B, is believed to be the primary cause of the increased number of healthcare workers with latex allergy.

People at High Risk of Latex Allergy

Certain groups of individuals are at high risk for developing immediate allergic reactions from latex:

Individuals with spina bifida (a congenital problem with the development of the back), healthcare workers (physicians and nurses), people who have had frequent surgeries, rubber industry workers, or patients with congenital urinary tract problems are considered to have an increased risk to develop latex allergy.

People with a history of allergies to certain foods, such as chestnuts, avocados, bananas, passion fruit, or kiwi, may be at a higher risk of developing latex allergy.

This is because these foods contain some of the same allergens as those in latex.

Treatment and Prevention

There are a variety of medications available to treat the symptoms of latex allergy once it develops.

However, because there is no cure for latex allergy, AVOIDANCE of known latex allergens is the best method of established treatment thus far.

Latex is found in as many as 40,000 consumer products. There are two types of latex products. Hardened rubber used in athletic shoes, tires, and rubber balls rarely causes problems for those with latex allergy, except the most sensitive patients.

The second type of latex is dipped latex, used in “stretchy” products, such as balloons, condoms, and rubber gloves and bands. (A more extensive list of latex-containing products is attached at the end of this summary).

Dipped latex products commonly cause allergic reactions.

Most latex paints are not a problem, since they do not contain natural latex.

Synthetic rubber has not been shown to cause allergic reactions in people who are allergic to natural latex.

Latex is a common component of many medical supplies, including disposable gloves, oral and nasal airways, tourniquets, injection ports, syringes, stethoscopes, catheters, and dental dams.

The capacity of latex products, especially gloves, to cause allergic reactions varies, depending on the brand and production methods.

The greatest danger of severe reactions occurs when latex contacts moist, mucosal areas of the body, such as the mouth, vagina, or rectum, because more of the latex allergen can be rapidly absorbed into the body.

The use of non-powdered gloves reduces the risks of allergic reactions, since the latex particles will not become airborne.

Avoiding Latex Products

If you are allergic to latex, but you need to wear gloves or are in contact with persons wearing gloves, there are several options to help you avoid experiencing an adverse reaction to latex.

Avoid contact with latex gloves or other latex-containing products.

Tell your dentist, doctors, and nurses that you have latex allergy.

For activities that are not likely to involve contact with infectious agent, you may use vinyl or other products that do not contain latex.

Although adequate for many situations, vinyl gloves may not work well in some situations. Vinyl is not the best protection against the transmission of hepatitis or HIV (AIDS).

Synthetic gloves work in nearly all situations where latex gloves are used, including surgery, but they are more expensive. Care should be exercised in the choice of substitutes, since not all synthetic or non-latex products are equally impermeable to blood-borne pathogens.

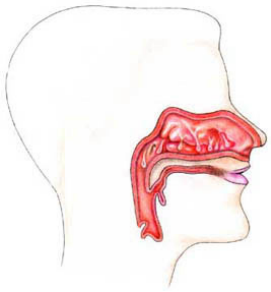
For individuals with allergic contact dermatitis, latex gloves made with different chemicals may work well.

Skin patch tests are available to determine if you have allergic contact dermatitis to specific chemicals added to latex products during the manufacturing process.

The term “hypo-allergenic”, which is used on some packaging labels, often indicates that there are reduced amounts of the chemicals that are normally used to process latex. This label does not suggest the absence of latex.

Avoid areas where you may inhale powder from latex gloves worn by other workers.

Only low allergen, non-powdered latex gloves should be used by all hospital personnel who handle blood-borne pathogens.



Tell your employer and your healthcare providers (dentists, physicians, and nurses) that you have latex allergy. You should wear a Medic-Alert bracelet, stating that you have latex allergy.

Using condoms has been difficult for some persons who are allergic to latex. Natural skin condoms, which are made of animal natural products, and condoms made of polyurethane, a type of plastic, do not contain latex. However, they may not be as effective as latex condoms in preventing pregnancy and do not protect against viruses like HIV. The pores in natural skin condoms are too big; viruses can escape through them.

Medication

There are several medications available to treat the symptoms of latex allergy once it develops. However, because there is not a cure at present, the best treatment is avoidance.

Your doctor may ask you to carry a medication called epinephrine. Epinephrine is essential in treating a severe allergic reaction. In case of an emergency, a self-injection of epinephrine may be needed.

Remember to carry epinephrine with you wherever you go. If signs of an allergic reaction are not relieved immediately, seek emergency medical attention by calling 911.

Your allergy specialist may provide specific information on how to manage your

latex allergy.

Summary

Some people may be at increased risk of serious allergic reactions to latex.

Although there are medications available to treat the symptoms of latex allergy, the best treatment for individuals who are allergic to latex is avoidance.

By developing a better understanding of latex allergy and learning to recognize its symptoms, you will be able to better manage the harmful effects of latex allergens and assist in preventing allergic reactions from occurring.

Products Containing Latex

A wide variety of products contain latex: medical supplies, personal protective equipment, and numerous household objects. Most people who encounter latex products through their general use in society have no health problems from the use of these products. Workers who repeatedly use latex products are the focus of this alert. The following are examples of products that may contain latex:

Emergency Equipment

- Blood pressure cuffs
- Stethoscopes
- Disposable gloves
- Oral and nasal airways
- Endotracheal tubes
- Tourniquets
- Intravenous tubing
- Syringes
- Electrode pads

Personal Protective Equipment

- Gloves
- Surgical masks
- Goggles
- Respirators
- Rubber aprons

Office Supplies

- Rubber bands
- Erasers

Hospital Supplies

- Anesthesia masks
- Catheters
- Wound drains
- Injection ports
- Rubber tops of multidose vials
- Dental dams

Household Objects

- Automobile tires
- Motorcycle and bicycle handgrips
- Carpeting
- Swimming goggles
- Racquet handles
- Shoe soles
- Expandable fabric (waistbands)
- Dishwashing gloves
- Hot water bottles
- Condoms
- Diaphragms
- Balloons
- Pacifiers
- Baby bottle nipples

Latex Precautions Product List for Healthcare Workers

Product Containing Latex*	Latex-free or Alternative Product
Ace Bandage, brown	Ace bandage, white cotton
Airway, nasal	Airway, oral
Ambu bag	Pre-wash, multiple times
Anesthesia bag	Pre-wash, multiple times. Kept in anesthesia workroom
Antiembolism stockings, TED	Kendall SCD with stockinette
Band-Aids	2 x 2 with silk tape
Bite block	Plastic oral airway; padded tongue blade
Blood pressure cuff, tubing, and bladder	Pre-wash, multiple times
Catheters: Coude, Fogarty, Foley, Malecot, Nephrostomy, Red Rubber	Use silastic catheters only. Do not inject through ports.
Chest drainage systems, tubing	Cover tubing with stockinette or avoid skin contact
Coban; Esmark bandages	Ace bandage, white cotton; silk tape
Gloves, surgical	Neolon (if double gloving, both must be Neolon)
Gloves, exam	Vinyl exam gloves
IV bag (injection port)	Do not withdraw or inject through ports
IV tubing (injection ports)	Use stopcocks; do not inject through ports
Levine tubes	Salem sump
Magnetic pad, instrumag	No alternative available- omit
Medications, multidose vials	Consult Pharmacy for latex-free alternatives; use ampules when possible; do not inject or withdraw through latex stoppers
Mouth gags	Silastic mouth gag
Penrose drain	Neolon glove; Blood pressure cuff for starting IV
Rubber bands	Vessel loops
Rubber dams	Neolon glove (cut piece)
Rubber shods	Metal clamps; Fogarty inserts; Silastic tubing
Syringes, single use	Terumo syringes
Tape, adhesive	Silk tape; J&J waterproof; Microfoam; Blenderm tape
Tourniquets	Use blood pressure cuff to start IV

* Products by some manufacturers contain latex. This list is not all-inclusive and is subject to change.