

Natural Rubber Latex Allergy

Advice provided by allergyuk.org



This Factsheet aims to provide awareness of natural rubber latex allergy. The different types of natural rubber latex allergy will be identified, as well as the symptoms that may be seen in each type. Sources of products containing latex will also be highlighted. To make this Factsheet easier to follow, natural rubber latex allergy will be shortened to latex allergy.

How common is natural rubber latex allergy?

Latex allergy is less common now than it was in the 1990s when natural latex allergy was a common cause of allergic reactions, affecting healthcare workers and other occupations where there was exposure to latex gloves and other products containing latex rubber, as part of the job. Since latex and powder free gloves and other latex free products are now widely available, the amount of people with latex allergy has been reduced.

What is natural rubber latex and how is it used?

Natural rubber latex is obtained from the tropical tree *Hevea brasiliensis*, and many of the proteins in it are found in other plants. Latex allergy (an immediate allergic reaction) is caused by the proteins in natural rubber. During the manufacturing process chemicals are added to the natural rubber to make products like rubber gloves. The chemicals may cause allergic contact dermatitis (a delayed allergic reaction).

Natural rubber latex can be found in many products in the home, work or

social environment. The table below provides examples of some products that are more likely to contain latex. However, this does not mean that all types will. This list is a summary and the key message is to check labels and packaging.

- Baby bottle teats, dummies
- Stationery including rubber bands or erasers
- Rubber gloves
- Contraception condoms and diaphragms
- Swim caps/ some goggle straps
- Rubber toys
- Hand held devices with buttons (remote controls)
- Shower curtains
- Elastic in clothing and underwear
- Rubber Balloons
- Protective rubber gloves used in the work place
- Latex bed sheets or pillows
- Hot water bottles
- Sports equipment
- Stress balls
- Other rubber mats

Allergic reactions to natural rubber latex

These can be both Immediate (IgE mediated) or delayed T cell mediated, and both involve the immune system. The severity of an allergic reaction and the type of symptoms seen will be different for each person. Factors that can affect the type or severity of a reaction include how the individual was exposed to the latex protein or chemical. Contact of natural rubber latex protein with mucous membranes, for example from a rubber glove used during a dental examination inside



For more help, contact the **Allergy UK helpline:**
Monday to Friday, 9am to 5pm
01322 619 898

info@allergyuk.org

Key facts

There are two types of rubber latex reactions. Type 1 Immediate reaction and Type 4 delayed reaction

If you have a latex allergy or contact allergy it is important that you communicate your allergy when you visit healthcare professionals

Natural rubber latex can be found in many products in the home, work or social environment





the mouth increases the potential risk of an allergic reaction since greater amounts of latex protein can be absorbed through the mucous membranes.

Different types of latex allergy

Type 1 Immediate reaction

- Immediate (occurs soon after exposure to the allergen latex)
- IgE mediated (from the immune system and involves the production of IgE antibodies)
- This type of reaction is caused by proteins in natural rubber latex
- This form of latex allergy has the potential to cause the most severe form of allergic reaction (anaphylaxis)

Symptoms of an immediate latex allergy

- Symptoms usually occur within thirty minutes of exposure and resolve within 24 hours
- Itching
- Hives or urticaria (red raised rash)
- Angio oedema (swelling often seen around the eyes /lips)
- Breathing problems such as cough, wheeze or difficulty in breathing as a result of breathing in latex protein that becomes airborne (from balloons and rubber gloves)

Type 4 delayed reaction

- Delayed reaction caused by chemicals/powder added to the natural rubber latex during manufacture
- T cell (white blood cell) mediated (from the immune system and involving an inflammatory response)

Symptoms of a delayed rubber chemical allergy

- Symptoms occur 48-72 hrs after exposure to the contact allergen (chemical) and persist for days
- Symptoms include itching and an allergic contact dermatitis, but will not result in anaphylaxis

Allergic Contact Dermatitis is less common than

irritant contact dermatitis. This type of allergy happens when a substance called an allergen comes into contact with the skin and causes symptoms in the area of skin with which it is in contact e.g. the hand and wrist area under a glove. It is possible that the hand can act as vehicle for the allergen, transferring it to other parts of the body, for example through rubbing your eyelids. An example of an allergen would be one of the chemicals contained in latex gloves. Symptoms may include;

- Itching
- Redness
- Swelling
- Weeping
- Oozing
- Blistering

Who is at risk of developing a natural rubber latex allergy?

The likelihood of developing a natural rubber latex allergy is increased if you have an existing allergic disease (asthma, eczema, hay fever or food allergy) or an immediate family history of one. Patients who have eczema on their hands where the protective function of the skin barrier is broken or cracked are at an increased risk of developing latex allergy and contact dermatitis. In addition, patients who undergo multiple surgical procedures are at a greater risk.

Certain jobs mean you are more likely to need to wear gloves which may contain natural rubber latex or be in contact with equipment containing natural rubber latex. These jobs include:

- Healthcare workers
- Hairdressers
- Food industry jobs
- Manufacturing jobs

Latex in healthcare

Latex is found in many products used in healthcare. These products are often for single patient use, for



example disposable gloves or equipment. The use and availability of powdered latex gloves has reduced due to an increased awareness of latex allergy. Now alternative materials are used, such as nitrile, to provide safe alternatives to those with a natural rubber latex allergy. Gloves containing powder (used as a lubricant) can be a problem for those with a latex allergy or asthma as it is possible for latex protein to become airborne when the gloves are removed, releasing particles into the air which can cause allergic symptoms.

If you have a latex allergy or contact allergy it is important that you communicate your allergy when you visit healthcare professionals (doctors, nurses, dentists) or other services that may use latex disposable gloves or products containing latex, for example hairdressers. Examples are provided in the list below of medical devices and equipment that may contain latex (this list is not exhaustive).

- Gloves used in healthcare for examination/procedures
- Wound dressing
- Disposable giving sets to administer fluids/blood/drugs
- Anaesthetics masks
- Stethoscopes
- Urinary Catheters
- Syringes
- Surgical masks
- Wound drains
- Tourniquets (used in blood taking)
- Electrode pads

Cross reactivity between latex and food

If you have a latex allergy you may have a cross reaction to certain fruits. The type of fruits that contain similar proteins to latex include avocado, banana, chestnut, kiwi, melon, plums, strawberries and tomatoes. It may be that you are able to continue

eating these foods with no symptoms however it is important to be aware of the possibility that, as part of this cross reactivity, you may develop an itchy and/or swollen mouth or throat.

What should I do if I suspect I have a latex allergy?

The diagnosis of a suspected natural rubber latex allergy or a form of contact allergy such as contact dermatitis starts with seeing a healthcare professional to discuss your symptoms. They will ask a series of questions that will help them understand whether latex allergy or contact allergy is the cause of your symptoms. It may be useful to keep a symptoms and contact diary and take pictures of any skin symptoms. These may help your GP in making the diagnosis.

Allergy Testing

Specific IgE blood tests (previously known as RAST tests) or skin prick tests are used to confirm or exclude the presence of IgE antibodies in the blood or skin and can be used to diagnose immediate (IgE) mediated allergy. This form of allergy testing is not useful in diagnosing for irritant or allergic contact dermatitis. Patch testing is used to confirm or exclude contact allergic dermatitis.

You may be referred to a skin specialist (dermatologist) for patch testing or a doctor specialising in allergy (allergist/immunologist) for skin prick or blood specific IgE testing, depending on the nature of your symptoms.

Living with a latex allergy

Once the diagnosis of allergy to natural rubber latex has been confirmed avoidance is the key to preventing exposure and further reactions. Letting other people know you have a latex allergy is important, including your employer, if you are at risk, through your job, of exposure to latex. You should also tell any Healthcare/beauty/hairdressing provider that they will need to avoid latex gloves and equipment containing latex. If you have been prescribed allergy medication it is important that you can recognise allergy signs and



symptoms and know how and when to use your medication and/or adrenaline auto injector device. If you do need to use emergency allergy medication (your adrenaline auto injector) then an ambulance should be called immediately to ensure that skilled medical help and access to any further medication is on its way.

Your doctor or allergy specialist will carry out an individual risk assessment to help decide on what medication, if any, is needed to manage your allergy. For mild to moderate reactions your doctor may advise using an antihistamine medication and will decide whether you should carry emergency medication (adrenaline) to treat a severe allergic reaction. If you are prescribed an adrenaline auto injector it is important that you are able to recognise the signs and symptoms of a severe allergic reaction. It is also important that you are shown how to use your adrenaline auto injector and have been given an allergy action plan (a detailed plan of the symptoms of an allergic reaction and medication needed).

Alternative choices of latex free products:

- There are several types of synthetic rubber materials used instead of natural rubber latex for protective gloves. PVC gloves are widely available and safe. If you have been advised to carry non-latex gloves for use in an emergency, it is sensible to carry a large size. Suitable gloves are Ansell Dermoprene, Elastryn, Johnson & Johnson Allergard, Neolon
- The female condom is made from polyurethane and is safe for you to use. A variety of non rubber (latex free) condoms are available and should be available from a pharmacy.
- Check before buying any article which could be rubber and whether it contains natural rubber latex. This is particularly important for articles which will be in contact with your body
- Erasers, swimming hats, goggles and flippers are all available in non-latex materials

Alternative choices of rubber chemical free products:

It is important to be aware that many of the rubber chemicals to which you may be allergic are found in synthetic rubber as well as natural rubber products. For domestic use PVC (vinyl) gloves are safe. With synthetic rubber products it is important to check with the manufacturer what has been used.

Did you find this helpful?

Please donate so that we can continue to help others

www.allergyuk.org/donate

Donate

Clinical contributions

Allergy UK Health Advisory Board

Dr Mark Wilkinson Consultant Dermatologist

Allergy UK Clinical Team

Holly Shaw, Nurse Advisor