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).

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...
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)
- Angioedema (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
If you have any comments about this factsheet, contact Allergy UK on factsheets@allergyuk.org

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