

Allergy to Lipid Transfer Proteins (LTP Syndrome)

Lipid Transfer Proteins (LTPs) are found in plants and foods that contain plants. Lipid Transfer Protein Syndrome is an allergy affecting people who have become sensitised to LTPs. They may thus react to vegetables, fruits, nuts or cereals. It is not known how many people have this allergy. The condition is more common in adults and is thought to be quite rare in children.

In many cases a reaction only occurs if there is an additional co-factor such as exercise, stress, drinking alcohol or having taken an NSAID (aspirin, ibuprofen or similar) within the last few hours.

Symptoms of LTP allergy

Reactions to LTPs can occur after eating raw or cooked food. They usually start within 30 minutes of eating and can include tingling and swelling of the lips, mouth, face and eyes, hives (nettle rash), stomach ache, nausea, vomiting and, occasionally anaphylaxis (the term for a severe, potentially life-threatening allergic reaction).

Anaphylaxis can involve many different symptoms including difficulty breathing, a hoarse voice, chest tightness, a feeling of impending doom, faintness or collapse. Please see our [fact sheet on anaphylaxis](#) for more information about this.

Whilst food allergy symptoms usually happen immediately after the food is eaten, they can sometimes be delayed by minutes or hours depending on whether a co-factor is involved.

Exercise and other co-factors

As stated above, people who are sensitised to LTPs may find they only have a reaction, or it is more severe, if the food involved has been eaten at the same time as, or within an hour or two of, exercise, drinking alcohol or taking a non-steroidal analgesic (such as aspirin and ibuprofen). Stress may be another relevant co-factor.

Foods involved in LTP allergy

Most LTPs are in the peel and pips of plant foods. The following foods are likely to contain higher levels of LTP allergen:

- Foods made using whole unpeeled fruits or vegetable.
- Concentrated, processed, preserved or fermented fruits, vegetables or cereals.
- Dried fruit peel.

Each person with LTP allergy is an individual and only needs to avoid those foods which cause symptoms. Not all LTP-containing foods will cause a problem for them. Unfortunately the amount of LTP in foods may vary so it is hard to predict when a reaction may occur. Common foods involved in LTP allergy in the UK include hazelnuts, almonds, walnuts, apples, dried fruit, lettuce, tomatoes and foods containing concentrated forms of tomato such as pizza.

Keeping safe with LTP allergy

The key message for people who know or believe they are allergic to a food is: See your GP as soon as possible. You may be referred to an allergy clinic.

The uncertainty about which foods might cause a reaction can make management of LTP allergy through food avoidance difficult. Therefore people with LTP allergy should always carry prescribed medication. An inhaler should be carried if asthma is also a problem.

People who are at risk of severe reactions are usually prescribed adrenaline auto-injectors (AAIs), which must be carried at all times. Anaphylaxis requires immediate medical attention. Once adrenaline has been administered, an ambulance must be called as further treatment in hospital may be necessary. Please see our fact sheet on adrenaline for more information about this.

Feedback

Please help us to improve our information resources by sending us your feedback at: -

<https://www.anaphylaxis.org.uk/information-resources-feedback/>

Sources

All the information we produce is evidence-based or follows expert opinion and is checked by our clinical and research reviewers. If you wish to know the sources we used in producing any of our information products, please contact info@anaphylaxis.org.uk and we will gladly supply details.

Reviewers

The text of this article has been peer-reviewed by Dr Isabel Skypala, Clinical Lead for Food Allergy, Royal Brompton and Harefield NHS Foundation Trust; and Dr Paul Williams, Consultant Clinical Immunologist, Department of Immunology, University Hospital of Wales.

Disclosures

Dr Skypala is a co-author of the 2019 paper, “Lipid Transfer Protein allergy in the United Kingdom: Characterization and comparison with a matched Italian cohort.”

Disclaimer

The information provided in this article is given in good faith. Every effort is taken to ensure accuracy. All patients are different, and specific cases need specific advice. There is no substitute for good medical advice provided by a medical professional.

About Anaphylaxis UK

Anaphylaxis UK is the only UK-wide charity solely focused on supporting people at risk of serious, life-threatening allergic reactions. We provide information and support to people living with allergies through our free national helpline and local support groups. We also campaign and fundraise to achieve our ultimate aim, to create a safer environment for all people at risk of serious allergies. Visit our website www.anaphylaxis.org.uk and follow us to keep up-to-date with our latest news. We're on Facebook @anaphylaxixUK, LinkedIn, Instagram @anaphylaxisUK, Twitter @AnaphylaxisUK and YouTube.