

Oral Allergy Syndrome

Oral allergy syndrome is a medical condition in which the person affected suffers immediate allergic symptoms in the lips, mouth and throat, usually when they eat certain kinds of raw fruit, raw vegetables or nuts. These symptoms are most commonly itching or tingling, but swelling may also occur.

This factsheet aims to answer some of the questions which you and your family might have about living with oral allergy syndrome. Our aim is to provide information that will help you to avoid the foods that cause the problem and know how to treat an allergic reaction should it occur.

If you think you suffer from oral allergy syndrome, you should visit your GP for confirmation of the diagnosis. Most cases are mild but on rare occasions there is the potential for more serious food allergy and so your GP may recommend consultation with an allergy specialist.

Throughout the text you will see brief medical references given in brackets. More complete references are published towards the end of this fact sheet.

Other terms for oral allergy syndrome

The type of allergy described in this fact sheet is caused by a process known as “cross-reactivity” – where the proteins in certain foods are similar to those in pollens. Therefore this condition can also be known as ‘pollen food syndrome’ (Egger et al 2006, Ma et al 2003, Konstantinou et al 2008). In other cases the primary cause is a similarity between the proteins in foods and those in natural rubber latex. In those cases, the term used would be ‘latex food syndrome’.

The role of pollens and natural rubber latex will be explained in more detail later in this fact sheet.

Symptoms of oral allergy syndrome

Common symptoms, which usually come on immediately, include:

- Redness, swelling or itching of lips, tongue, inside of mouth, soft palate and ears
- Itching and swelling affecting the throat. This is unlikely to prove serious, but in rare cases where the breathing is affected, immediate medical treatment is required (see “Treating symptoms”)
- Some people might also experience symptoms in the oesophagus (gullet) or stomach, including pain, nausea and even vomiting
- Sneezing, runny nose, or eye symptoms including itching, redness, puffiness or watering

Most people who develop oral allergy syndrome will only experience mild to moderate symptoms (Skypala et al 2011). However some forms of allergy to fruits and vegetables can result in more serious symptoms (Fernández–Rivas et al 2006, Salcedo et al 2004). Therefore it is important to ensure you get medical advice about how to treat your allergy.

The role of pollen

As stated above, when pollen allergy is the primary cause of oral allergy syndrome, the condition is more correctly called 'pollen food syndrome'. The person is usually (but not always) a hay fever sufferer, and allergy tests are likely to be positive to one or more pollens. Because the proteins in these pollens are similar to those in certain raw fresh fruits, raw vegetables and nuts, the person's immune system mistakes the food for pollen. This is what causes the reaction to the food.

Symptoms usually only occur when the fruit or vegetable is eaten raw. This is because cooking changes the structure of the responsible protein, rendering it harmless. However a few people do react to one or more of their culprit foods even when they have been cooked.

Different types of pollen can cause pollen food syndrome, but the most common in the UK is silver birch pollen, which causes hay fever symptoms from the end of March until the end of May. About three quarters of people sensitised to silver birch pollen develop pollen food syndrome (Skypala et al 2011). Grass pollen can also be responsible. Many people may not realise they have the condition because in its mildest form they may only experience a minor sensation in the lips or tongue.

Experts believe it probable that people who are sensitised to **both** birch and grass pollens are more likely to develop pollen food syndrome (Asero et al 1996, Skypala et al 2011). They may also experience symptoms to a wider range of fresh fruits and raw vegetables than those who are sensitised to birch pollen alone.

Weed pollens such as *Artemisia* (mugwort, wormwood) and *Parietaria* (pellitory of the wall) can also be responsible for pollen food syndrome.

Which foods are involved?

The most common foods affecting people with pollen food syndrome are raw fruits (for example, apples, apricots, pears, cherries, kiwi, mango, plums, peaches, nectarines, tomatoes) and raw vegetables (for example, carrots, celery). A number of other plant foods may occasionally cause the condition including raw or stir fried legumes, such as mange tout, beansprouts, and raw peas. Soy milk can also cause reactions, which in some cases can be quite severe, although other forms of soy are usually tolerated (Berneder et al 2013). People have reported nose and eye symptoms and itchy hands when handling raw potatoes or raw parsnips.

The nuts usually involved in pollen food syndrome are hazelnut, almond and walnut. **However, it is important to distinguish between oral allergy syndrome caused by nuts and a nut allergy that is unrelated to pollen**

allergy as the latter may be more serious. If there is any doubt, the advice of an allergy specialist is most certainly needed.

Latex food syndrome

Another type of oral allergy syndrome affects some people who are allergic to latex. Latex allergy is caused by a reaction to proteins found in natural rubber latex and is more likely to occur in people who come into regular contact with latex such as healthcare workers and people undergoing multiple surgical procedures. Because some latex allergens are similar to the allergens in certain foods, people who are allergic to latex might also find they react to foods such as avocado, banana, kiwi, and chestnut. As stated above, the term for this condition is 'latex food syndrome'.

The symptoms can be similar as those described for pollen-related reactions.

How can I get a diagnosis?

It is important to see your GP as soon as possible if you have any symptoms of a food allergy. Although this fact sheet focuses on a particular type of food allergy that is often mild, a proper diagnosis is needed to determine whether your allergy could potentially be more severe. For example, a small number of cases of allergy to fruit and vegetables are unrelated to pollen allergy and so a proper assessment of risk is necessary.

Some GPs have a clear understanding of allergy, but allergy is a specialist subject so it is likely your doctor will need to refer you to an allergy clinic. Your GP can locate an allergy clinic in your area by visiting the website of the British Society for Allergy and Clinical Immunology (www.bsaci.org).

Once you get a referral, the consultant will discuss your symptoms with you in detail as well as your medical history. The results of skin prick tests and blood tests will also help the specialist form a clear picture, although these are only partially helpful. They do not indicate the severity of your allergy.

Note that the presence of asthma – especially when poorly-controlled – has been shown to be a major risk factor for the occurrence of more severe allergic reactions.

Treating symptoms

The first line of defence is avoidance of the particular raw fruits, vegetables or nuts causing symptoms.

However mistakes can be made and you will need to know how to treat a reaction, should it occur. In many cases of oral allergy syndrome, the symptoms last no longer than an hour or so and rinsing the mouth with water might be all that is needed. However, if symptoms persist then you might require an antihistamine. These precautions are enough for most people with oral allergy syndrome but you must see your doctor to get advice in your own particular case.

Very occasionally, investigations might indicate that a severe reaction is a possibility and in these cases your doctor might consider it advisable for you to carry injectable adrenaline (also called epinephrine).

The adrenaline injectors currently prescribed in the UK are Emerade®, EpiPen® and Jext®. These injectors are easy to use and designed for self-administration. Your injector should be available at all times – with no exceptions. You must always dial 999 and go to hospital after adrenaline is administered in case of a secondary reaction.

If you are prescribed an adrenaline injector, you will need to know how and when to use it. Ask your GP or allergist for advice. You can also find help on the website relevant to the injector you carry (see below).

Emergency treatment of anaphylaxis – which injectors are available in the UK?

Pre-loaded adrenaline injection devices – Emerade®, EpiPen® or Jext® – are available on prescription for those thought to be at risk of a severe reaction.

Emerade® is the most recent single use adrenaline auto-injector to become available. It has a needle guard to protect against needle stick injury. Visit www.emerade.co.uk

EpiPen® has a spring-loaded concealed needle. The built-in needle protection keeps the needle covered during and after use. Visit www.epipen.co.uk.

Jext® has a locking needle shield which engages after use, designed to protect against needle injury. Visit www.jext.co.uk.

Avoiding the problem foods

Once you are sure that a particular food is causing symptoms (and especially if tests confirm the allergy) it is important to exclude it in future. Importantly, if there are any concerns at all about symptoms when they occur, immediate medical assistance should be sought.

Unless you are advised otherwise, only the foods that have caused symptoms need to be avoided. However, symptoms to other fruit or vegetables might develop in the future, so if you want to try a fruit or vegetable for the first time, it is best to be cautious. Some experts advise that you could rub your lip with a small amount of the food and chew a small portion and spit it out. Wait for 15 minutes to see if any symptoms develop (Skypala et al 2011).

Although pollen food syndrome can be mild, more severe reactions might occur if large quantities of the problem foods are rapidly consumed. For example a fruit smoothie or fresh vegetable juice can contain a lot of the allergens which cause the reaction, so these should be avoided.

Reactions to nuts can also vary. Many people with pollen-food symptoms to raw nuts can tolerate roasted nuts, or nuts inside foods such as chocolate bars (Skypala 2009). People who have pollen-food symptoms to nuts do not usually need to avoid foods carrying a warning that they may contain traces of nuts, but you should double-check on this with your doctor. Some people with pollen food syndrome are more sensitive to nuts and get symptoms with both raw and roasted nuts – everyone is different and again you should discuss your case with your doctor.

Is it possible to grow out of oral allergy syndrome?

This is not known at the present time. As far as we know, there has been no research published in this area.

Some key points

Living with a food allergy can be daunting but by remembering certain rules, people affected can get on with their lives.

- The key message is to get a proper diagnosis and expert medical advice by visiting your GP. Your GP may recommend consultation with an allergy specialist
- If you have been advised to carry an antihistamine, always have it with you and use it when required
- If you are prescribed an adrenaline injector, learn how and when to use it. Always carry it with you
- If you have asthma, ensure it is well managed

References

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Reviewers

The content of this Factsheet has been Peer Reviewed by **Dr Michael Radcliffe**, Consultant in Allergy Medicine, University College London Hospitals NHS Foundation Trust; and **Dr Isabel Skypala**, Clinical Lead for Food Allergy, Royal Brompton and Harefield NHS Foundation Trust.

Disclosures

Dr Skypala was a co-author of two of the studies listed above. Both of our reviewers are medical advisers to the Anaphylaxis Campaign.

Disclaimer – The information provided in this Factsheet is given in good faith. Every effort has been 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 the Anaphylaxis Campaign: Supporting people with severe allergies

The Anaphylaxis Campaign is the only UK wide charity to exclusively meet the needs of the growing numbers of people at risk from severe allergic reactions (anaphylaxis) by providing information and support relating to foods and other triggers such as latex, drugs and insect stings. Our focus is on medical facts, food labelling, risk reduction and allergen management. The Campaign offers tailored services for individual, clinical professional and corporate members.

Visit our website www.anaphylaxis.org.uk and follow us on Twitter [@Anaphylaxiscoms](https://twitter.com/Anaphylaxiscoms).