

Allergy to vegetables

A large number of vegetables have been reported to cause allergic reactions. If you know or believe you are allergic to any vegetable, or vegetables, this article may help you understand your allergy.

In this article we have concentrated on vegetables that are most common in the diets of people living in the UK; however we realise that there are other vegetables that may not be mentioned in this article but can still trigger allergic reactions.

What is a food allergy?

Food allergy occurs when a person's immune system reacts inappropriately to a food. The first stage of the process is called sensitisation – when the immune system's "memory" registers the food as a threat. Antibodies to that food are produced, and at a subsequent encounter, these antibodies connect with the food's proteins and trigger the release of certain substances in the body, such as histamine. This results in an allergic reaction.

Varieties of vegetables that trigger allergies

Any vegetable has the potential to cause an allergic reaction, although some vegetables are more common causes of allergy than others.

Vegetables that have been reported to have caused allergic reactions include the following:

Aubergine, beetroot, cabbage, carrot, celery, cucumber, garlic, lettuce, mushroom, onion, peppers, sweetcorn and potato (recently we were made aware of potato starch being used as an anti-caking agent in a pizza). This is not a complete list.

What are the symptoms?

If you have had adverse reactions to a vegetable, or vegetables, you probably fit into one of the following categories:

1. Pollen food syndrome

Pollen food syndrome usually occurs in people who are already allergic to pollens and suffer from hay fever, although the hay fever symptoms can be very mild. People with pollen food syndrome experience allergic symptoms when they eat certain vegetables or fruits. This is due to the similarities between the proteins found in pollen and those present in the vegetables and fruits. Usually reactions occur only when the vegetables are eaten raw, not cooked. Symptoms are usually mild and may respond to antihistamines but it is important to consult your doctor to confirm that this is the right treatment.

Symptoms of pollen food syndrome usually include:

- Redness, mild swelling or itching of the lips, tongue, inside of the mouth, soft palate and ears
- Itching and mild swelling affecting the throat.
- Occasionally, people might also experience symptoms in the oesophagus (gullet) or stomach, causing abdominal pain, nausea and even vomiting.
- Sneezing, runny nose, or eye symptoms can also occur.
- Rarely, more severe symptoms such as difficulty in swallowing and/or breathing can occur. This is known as anaphylaxis. In such cases, immediate medical help is needed.

Some medical professionals refer to pollen food syndrome as oral allergy syndrome, although strictly speaking the two are not the same. When the term oral allergy syndrome was first used in 1987 it had no connection with pollen allergy but referred to any allergic symptoms in the mouth that often preceded more serious symptoms. Anaphylaxis UK prefers the term pollen food syndrome when referring to those allergy symptoms to food that are linked to pollen allergy, are limited to the mouth and throat, and are usually mild. Many people with allergy to vegetables are in this category.

Read more about pollen food syndrome on our website.

2. More serious allergy symptoms

Some people with allergy to vegetables suffer more serious symptoms unrelated to pollen. For these people there may even be a risk of a life-threatening allergic reaction (anaphylaxis). The medical expert who reviewed this article says there is clear evidence that people in the UK with severe allergy to vegetables are in a minority, and that most are in category 1 above (pollen food syndrome). However there is very little research to confirm this.



A brighter future for people with serious allergies

Symptoms of anaphylaxis may include wheezing; a swelling of the throat that is serious enough to restrict breathing; and even a fall in blood pressure that can lead to collapse. Accompanying symptoms may include widespread flushing of the skin, nettle rash (otherwise known as hives or urticaria), swelling of the skin (known as angioedema) anywhere on the body, swelling of the lips, or abdominal pain, nausea and vomiting.

If you are at risk of anaphylaxis, self-injectable adrenaline (EpiPen, Emerade or Jext) will be prescribed as well as an antihistamine.

3. Allergy to Lipid Transfer Proteins

Lipid Transfer Proteins (LTPs) are proteins found in plants. Lipid Transfer Protein Syndrome is an allergy affecting people who have become sensitised to LTPs and may react to vegetables, fruits, nuts and/or cereals. Symptoms can be serious.

Read more about Lipid Transfer Protein Syndrome on our website.

4. Food intolerance

Another possibility is that you have a food intolerance rather than a true allergy. Whereas food allergy is a reaction of the immune system, food intolerance may have a different cause. A much wider range of symptoms can occur and multiple symptoms are usual. There may be migraine and unexplained fatigue, abdominal pain, bloating and frequent diarrhoea, unexplained muscle and joint pains or unexplained nasal congestion and discharge.

5. Sensitivity to chemicals

Another possibility is that you are sensitive to naturally-occurring chemicals found in many foods.

For example, salicylates are found in the skins of some vegetables and fruits. Salicylates can cause wheezing or other symptoms such as nettle rash. This is not a true allergy. Other foods containing salicylates include tea, spices, honey, ginger and some drinks. They are also found in aspirin.

Vaso-active amines are also naturally occurring chemicals found in some fruit and vegetables and other foods. In sensitive people, they can cause headaches, rashes, flushing, itching, swelling, runny or blocked nose, irregular heartbeat, diarrhoea, nausea, vomiting or abdominal pain. These are not allergic symptoms.

The key message

Medical advice is required in all cases where a vegetable causes symptoms. This will determine whether your allergy is of the pollen food type (and probably mild); in the more serious allergy category (anaphylaxis); or has a non-allergic cause (such as food intolerance or sensitivity to salicylates or vaso-active amines). The rest of this article will focus on true allergies.

Getting a diagnosis

If you suspect you have a food allergy, it is important to see your GP as soon as possible. Some GPs have a clear understanding of allergy, but allergy is a specialist subject and your doctor may need to refer you to an allergy clinic. Anyone who has suffered anaphylaxis should certainly be referred.

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. Skin prick tests and blood tests may help form an accurate picture. When doubt remains, the consultant may recommend a “food challenge” – where the patient eats a small amount of the suspect food, increasing the dose gradually, to test whether or not a reaction occurs. This must only be done by an experienced consultant in a medical setting.

The presence of asthma – especially when poorly-controlled – is known to be a major risk factor for the occurrence of more severe allergic reactions.

If symptoms occur only in the mouth, the likelihood is that your allergy will remain mild but medical advice on this must be sought.

Allergy to fruit

A large number of fruits have been reported to cause allergic reactions. Read our separate article on fruit allergies.

<https://www.anaphylaxis.org.uk/fact-sheet/allergy-to-fruit/>

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.

Reviewer

This article has been peer-reviewed by Dr Patrick Yong, Consultant Immunologist, Frimley Park Hospital, Frimley, Surrey.

Disclosures

Our reviewer reports no conflicts of interest in relation to this article.

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 @anaphylaxisUK, LinkedIn, Instagram @anaphylaxisUK, Twitter @AnaphylaxisUK and YouTube.