

FACTSHEET

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Fruit and vegetable allergy

What is fruit and vegetable allergy?

Fruit and vegetable allergy is a reaction that occurs soon after contact to fruit and vegetables. These reactions usually occur within minutes after contact, but sometimes can take up to 1-2 hours. The reactions occur against proteins that are in a number of different fruits or vegetables. The Rosaceae (apple, pear, cherry, peach, and plum) and Cucurbitaceae (cucumber, melon, watermelon, zucchini, pumpkin) plant groups and kiwi fruit are particularly likely to cause allergies. In some cases, the proteins are also found in pollens of these plant groups leading to symptoms of pollen and food allergy (The Pollen-Food Allergy syndrome).

What are profilins?

Profilins are a type of plant protein that is known to cause allergy. They are proteins that affect cell shape and function and have been identified in trees, grass and weed pollens as well as many fruits and vegetables. Fruit and vegetable allergies are often due to an allergy to Profilins. Allergies to melon, watermelon, citrus fruits, tomato, and banana or a combination of these suggest an allergy to Profilins.

How common is fruit and vegetable allergy?

Approximately 3% of teenagers have fruit or vegetable allergy. It is less common in young children. Sometimes symptoms occur only in the teenage years after developing hay fever. Some young children do however have allergy to banana, kiwi fruit and avocado, and more rarely to other fruits and vegetables.

What are the symptoms of fruit and vegetable allergy?

Allergic reactions can range from mild to severe.

Mild to moderate reactions include the following:

- hives or welts,
- swelling of the lips, face or eyes,
- tingling of the mouth,
- abdominal pain or vomiting.

Severe reactions (anaphylaxis) include the following:

- difficulty/noisy breathing,
- swelling of the tongue,
- swelling or tightness in the throat,
- difficulty talking and or hoarse voice,
- wheeze or persistent cough,
- persistent dizziness or collapse, pale and floppy (in young children).

It is rare (but possible) for severe symptoms to occur alone without hives and/or vomiting.

Apart from the above, a common set of symptoms associated with eating certain fruits and vegetables is known as **oral allergy syndrome**.

What is the oral allergy syndrome (OAS)?

OAS is also called Pollen Food Syndrome (PFS). This is where symptoms of itch, tingling, swelling of lips, palate (roof of your mouth), and tongue occur after contact to the food. The symptoms usually occur within minutes after contact, and are more likely to occur with fresh food rather than cooked food. These symptoms can occur at any time of the year but are often worse in the

pollen season. OAS usually occurs in older children and adults, and is often life-long. It is rare to have serious allergic reactions in OAS, but some foods which commonly cause OAS can also cause normal food allergy and can cause anaphylaxis

How is fruit and vegetable allergy diagnosed?

In most cases the clue to fruit or vegetable allergy is the start of symptoms soon after eating the food. The presence allergy IgE antibodies can be confirmed by an allergy skin prick test. The results of this test should be discussed with your doctor. These tests are usually not required for diagnosing OAS.

Can there be a link with latex allergy?

Yes. Some people with latex allergy also have allergy to fruits and other plant products (banana, avocado, chestnut, papaya). Around 40 % of patients with known latex allergy have allergic symptoms after eating fruits (papaya, avocado, banana, chestnut, passionfruit, fig, melon, mango, kiwi, pineapple, peach and tomato). These foods do not have to be avoided routinely, unless they cause problems. In some people, allergy to pollen, fruits (often peach) and latex occurs together.

Can my child be allergic to Kiwi fruit?

Yes. In school age children, kiwi fruit causes about 10% of all the food allergic reactions. Kiwifruit allergy is increasing among children. Skin prick tests can be done with raw kiwifruit and are positive in all kiwi fruit allergic children. In contrast, skin tests with commercial allergen extracts may be positive in only a quarter of the allergic children. Some children react to eating raw but not cooked kiwi fruit.

Can my child be allergic to potatoes?

Children can have an acute attack of hives after eating potatoes or if they have eczema, it can get worse. Children with eczema may have hives after they touch raw potato, but they can usually eat cooked potato with no reactions. Reactions rarely occur to cooked potatoes. In allergic children, tolerance usually develops by the age of 5. Allergy skin tests to potato are usually positive in potato-allergic children.

Can anaphylaxis occur to fruit and vegetables?

Yes but anaphylaxis to fruit or vegetable allergens is quite uncommon when compared with nuts, egg and milk. Kiwi fruit is the fruit most likely to cause more severe reactions.

What are legumes?

Legumes are the edible seeds of plants. Peanut, soybean, fresh or dried bean seeds, pea, green beans and lentils

belong to a plant family called *Leguminosae*. In most cases, children are only allergic to one type of legume. However, a small number of allergic children (about 5%) will react to more than one legume. Legumes are also a cause of the oral allergy syndrome. Most patients with legume allergy can eat all types of fruit and vegetables. In some children with peanut allergy, an allergy to lupin beans can also be present.

So what fruits and vegetables should I not give my allergic child?

Only avoid the ones that your child has had had an obvious reaction to. Some parents without reason avoid a wide range of fruits and vegetables, thinking that this is protecting their child. It is best to encourage your child to eat a wide range of fruits and vegetables so they enjoy food and to help give them a healthy diet.

Should I delay introducing fruit and vegetables into my baby's diet?

No. Research suggests that the early introduction of daily fresh fruit or vegetables might decrease the risk of asthma. There is also no evidence that early introduction increases the risk of developing fruit and vegetable allergy.

Can my child grow out of fruit and vegetable allergy?

Fruit and vegetable allergy, particularly in the form of the oral allergy syndrome is more common in teenagers and young adults than in young children and is likely to persist into adult life. One exception is potato allergy in young children, which usually improves with time.

Where can I find more information on the Internet?

- The Australian Society of Clinical Immunology and Allergy (ASCI) website contains useful information on food allergy written by Australian specialists (www.allergy.org.au).
- The patient support group Anaphylaxis Australia offers valuable updates and tips for dealing with food allergies (www.allergyfacts.org.au).