

Patient information

Pollen food syndrome (PSF) (or oral allergy syndrome)

What is pollen food syndrome?

- Pollen Food Syndrome (PFS) – formerly called Oral Allergy Syndrome – is an allergic reaction to certain fruits, vegetables and nuts caused by cross-reactivity between these food types and certain pollens. The syndrome usually occurs in people with pollen allergy. The immune system mistakes the food proteins for the pollen proteins and causes an allergic reaction.
- The allergic reaction to these foods can occur anytime during the year when eating the foods but can be worse during the pollen season when the person has hay fever symptoms.
- The proteins in fruits and vegetables causing PFS are easily broken down either with cooking or processing or when in contact with the acid in the stomach. The result of this is that:
 - Most people with PFS can tolerate stewed or canned fruit or vegetables and fruit juices (but not freshly squeezed juices/smoothies), and occasionally peeled fruit or vegetables as the peel may contain more protein than the pulp.
 - Proteins are changed by stomach acid and thus lose their allergic potential, so symptoms are generally limited to the mouth and throat.

Symptoms of PFS

- PFS is far more common in adults than children, usually presenting in children in their teenage years. Whilst it is far more common in people with hay fever, it can occur without hay fever symptoms.

- Most people with PFS are sensitive to one or two foods, although some may find they develop problems with a number of foods (see list below).
- Symptoms usually start within seconds or minutes of the food touching the mouth or throat. Affected people experience symptoms such as itching, burning, tingling and occasionally swelling of the lips, mouth, tongue and throat where the fresh fruit or vegetable touched. Symptoms usually last a matter of seconds or minutes, and rarely progress to anything more serious.

Diagnosis of PFS

- The condition is suspected where a person presents with mouth and throat symptoms when eating fresh fruit or vegetables, and no symptoms when the food is cooked. Affected individuals usually, but not always, have a background allergic history of hay fever.
- The allergy can be confirmed by either allergy skin prick tests or blood tests.
- The commercial skin prick test solutions frequently test negative despite documented allergy symptoms. This may be due to degradation of the commercial allergen solutions.
- Fresh fruit and vegetables used for prick-prick testing are a better option and allow for a greater range of fruit and vegetables to be tested.
- An allergy blood test that can test for parts or components of the allergens in fruits, vegetables and nuts is now available to test more specifically for the cause of clinical reactions. These are called Component Resolved Diagnostic tests.

Living with Pollen Food Syndrome

- Avoid foods causing symptoms.
- As raw fruit and vegetables cause the reactions, affected people can eat the food if it is cooked, canned, micro waved or baked. So, someone allergic to raw apples, for example, can eat applesauce, apple jelly, apple juice, apple pie and dried apples.
- Nuts usually cause general allergic or anaphylactic reactions. They can occasionally cause PFS. This needs to be confirmed in an allergy clinic.
- Vitamin C supplements are recommended where fruits and vegetables are severely restricted.

Foods that may cause reactions in people with pollen allergies

Alder pollen	Birch pollen	Grass pollen	Mugwort pollen	Ragweed pollen
<ul style="list-style-type: none"> • Apple • Almond • Celery • Cherries • Hazel nut • Melon • Pear • Peach • Parsley 	<ul style="list-style-type: none"> • Apple • Apricot • Almond • Carrot • Celery • Cherries • Fennel • Hazelnut • Kiwi • Nectarine • Parsley • Peach • Pear • Plum • Prune • Walnut 	<ul style="list-style-type: none"> • Melon • Orange • Peanut • Potato • Tomato 	<ul style="list-style-type: none"> • Apple • Carrot • Celery • Coriander • Fennel • Honey • Parsley • Peppers • Spices • Sunflower 	<ul style="list-style-type: none"> • Avocado • Banana • Cantaloupe • Courgette • Cucumber • Camomile and dandelion tea • Honey dew • Melon • Parsnip • Potato • Soybean • Watermelon

References

www.allergies.about.com

www.chkd.org

www.bsaci.org

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