



Did you Know?



ORAL ALLERGY SYNDROME

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Did you know... that a large number of your hayfever patients may have a condition known as oral allergy syndrome? In this article we explore what causes oral allergy syndrome, why it occurs, the symptoms that patients may suffer and how to manage the problem.



Oral allergy syndrome is a collection of symptoms including itching and swelling of the lips, tongue and palate, which occurs immediately after eating certain fruits and vegetables. Symptoms are caused by the allergic antibody immunoglobulin E (IgE) mistakenly reacting to a food (eg apple) that resembles, at a molecular structural level, an inhaled allergen (eg birch pollen) that the individual is sensitive to. It is rather like having two different pieces of a jigsaw puzzle fitting into the same place. This is known as cross-reactivity.

Oral allergy syndrome usually involves oral symptoms, and only rarely does it involve more severe reactions.

The commonest cause of oral allergy syndrome is the cross-reaction between birch pollen and stoned fruits. Birch pollen is a common cause of springtime hayfever and approximately 70% of patients with birch pollen allergy also suffer from oral allergy syndrome. Other examples of cross-reacting airborne and food allergens associated with oral allergy syndrome are shown in Table 1, although this is not an exhaustive list.

“The commonest cause of oral allergy syndrome is the cross-reaction between birch pollen and stoned fruits. Birch pollen is a common cause of springtime hayfever and approximately 70% of patients with birch pollen allergy also suffer from oral allergy syndrome”

Did You Know?



Table 1. Allergens and associated foods that may cross-react

Birch	Grass	Mugwort	Latex
Apple	Kiwi	Carrot	Chestnut
Plum	Flour	Celery	Banana
Cherry	Potato	Spices	Kiwi
Peach	Tomato	Melon	Avocado pear
Pear	Apple	Chamomile	Melon
Hazelnut	Melon	Aniseed	Weeping fig
Almond	Onion		Tomato
Carrots	Rice		Papaya
Potato peel	Pear		Mango
Celery			
Tomato			

Oral allergy symptoms are not commonly associated with anaphylaxis, but patients with a history of throat swelling, chest tightness or systemic allergic symptoms may require an EpiPen and should be referred to an allergy specialist for assessment.

more information

- Asero R, Massironi F, Velati C. Detection of prognostic factors for oral allergy syndrome in patients with birch pollen hypersensitivity. *J Allergy Clin Immunol* 1996; **97** (2): 611-616.
- Ballmer-Weber BK, Vieths S, *et al.* Celery allergy confirmed by double-blind, placebo-controlled food challenge: a clinical study of 32 subjects with a history of adverse reactions to celery root. *Journal Allergy and Clinical Immunology* 2000; **106** (2): 373-378.

DIAGNOSING ORAL ALLERGY SYNDROME

It is obviously essential to ask appropriate questions when taking a patient's history. Questions such as, 'Do you get hayfever between February and May?', 'Do your lips tingle or itch when you eat any fruits or vegetables, and, if so, which ones?' Can you eat these foods without any problems when they are cooked?' The heat of cooking denatures (destroys) a protein, profilin, that is present in pollen and certain fresh fruits and vegetables. This denaturing changes the shape of the allergen so the antibody (IgE) no longer recognises it.

Sensitivity to aeroallergens such as birch pollen can be confirmed by objective tests such as serum-specific IgE tests or skin prick tests. However, tests for the majority of fruit and vegetables are not available; in this case a prick-prick test can be used. This test involves skin prick testing with the fresh food instead of an allergen solution and carries a small but significant risk of anaphylaxis. For this reason, prick-prick tests should only be performed in specialist centres with full resuscitation facilities available.

Just as not all patients with birch allergy have oral allergy syndrome, there are some patients with oral allergy syndrome (and a positive birch pollen skin prick test/IgE test) who do not get symptoms of rhinitis.

EFFECTIVE MANAGEMENT

Management of oral allergy syndrome is based on allergen avoidance and education. It is usually possible to avoid offending foods, but patients can be reassured that symptoms often only occur after eating the raw food and that cooking the foods may allow them to eat these foods without experiencing symptoms. However, this rule does not apply to nuts, as heating does not destroy nut allergens.

Symptoms usually resolve without treatment, although a single dose of a non-sedating antihistamine may be effective for irritating or severe symptoms.

