

Pollen Food Syndrome

Leaflet for GPs in the UK

Pollen Food Syndrome

Pollen food syndrome (PFS) is a common, IgE-mediated food allergy, characterised by immediate mild oro-pharyngeal symptoms after the consumption of raw plant foods due to cross reactions between pollen antibodies and unstable plant food allergens. The main pollens involved in the UK are tree pollens, principally birch tree pollen, but also hazel and alder. This condition usually affects adolescents or adults, but can occur in children of any age, and is especially prevalent in people who suffer from spring or summertime hay fever. The diagnosis and management of PFS can often be wholly managed in Primary Care but differentiating between PFS and an allergy to tree nuts/peanuts can be difficult, so reactions to the latter usually require onward referral to Secondary Care.

Clinical History

A thorough clinical history alone can be diagnostic. The history taking should include questions regarding:

- Reported symptoms – PFS is characterised by mild immediate itching and/or swelling of the oropharynx, which responds to antihistamine but may resolve without any treatment
- Food triggers – PFS involves symptoms only to raw (uncooked) plant foods, with cooked or processed foods usually tolerated. The most common food triggers include:
 - apples, cherries, plums, peaches, kiwifruit, pear, carrot, celery, or tomato
 - hazelnuts, almonds, walnuts, or peanuts
 - soya milk, soya protein powder or edamame beans
 - peeling potatoes or other root vegetables - causes itchy hands
- History of allergic rhinitis – PFS is most common in people reporting hay fever in springtime, but often also experience symptoms in the summer or autumn.

Next Steps

If the symptom history and food triggers are consistent with PFS, and reactions are only to fruits or vegetables, then there is no need for allergy tests or onward referral to secondary care. These patients should be:

- Advised to avoid only those raw foods which have already provoked symptoms
- Provided with patient information leaflets on PFS
- Referred to a community dietitian if many fruits or vegetables trigger reactions, or the diet is already compromised due to other dietary restrictions
- Treated optimally for co-morbidities such as rhinitis, asthma and eczema.

When to Refer to a Secondary Care Allergy service

- Those reporting any symptoms to tree nuts or peanuts whether mild, moderate or severe, OR if systemic or severe reactions to soya milk and/or raw/cooked fruits/vegetables have been experienced, should be referred to secondary care
- If there is uncertainty regarding whether the reported symptoms merit onward referral, or if any specific blood tests should be undertaken, the advice and guidance service provided by the local allergy service should be utilised.

When making a referral please consider the following:

- Providing details on triggers, symptom type, time to onset and whether triggers include both cooked and raw foods will help the specialist allergy service risk assess the patient
- Those reporting severe reactions, especially if they also have asthma, will need to be prescribed adrenaline auto-injectors (AAI), and trained to understand how and when to use them, so that they are safety netted prior to being seen in secondary care
- Most people with PFS do not need AAI, so the continued need for an adrenaline autoinjector will be reassessed by the Allergy Service following the referral
- Once the referral has been accepted, the patient should be advised that they will be contacted by the allergy service regarding any instructions preparatory to allergy testing, such as discontinuation of antihistamine.

Figure 1 Algorithm for the diagnosis of Pollen Food Syndrome

Using the clinical history to determine when a diagnosis of Pollen Food Syndrome and when a referral to secondary care is indicated.



