



Food Allergy

Specialist Group

Pollen Food Syndrome

(also known as Oral Allergy Syndrome)



Patient Name: **Date:**



Pollen Food Syndrome

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Introduction

Oral Allergy Syndrome (OAS) is an umbrella term for reactions to foods caused by an allergy to pollen or latex. Proteins in pollen and latex are similar to those found in certain foods and the body can mistakenly react to both. This is known as a cross-reaction.

The most common type of OAS occur in people who are allergic to pollen and react when eating certain foods. This is also known as pollen-food syndrome (PFS). People who have PFS often have seasonal hay fever caused by tree and/or grass pollen. Symptoms occur when the body mistakes food proteins (certain raw fruits, vegetables or nuts) for pollen proteins. Some people only react to one food; others can react to many different foods.

PFS is more likely to develop in teenagers and young adults, but can also affect younger children and older adults. Not everyone who has PFS has hay fever symptoms, as people can be sensitised to pollen without reacting to it.

Another cross-reaction occurs between natural rubber latex and plant foods. Latex food allergy requires different advice to PFS and therefore is not covered in this diet sheet.

Symptoms

The most common symptoms of PFS are tingling or itching of the lips, gums, tongue or soft palate. Some people also experience itching of the ears or throat. Swelling can also occur of the lips, tongue or throat and it can sometimes feel as if there is something stuck in the throat. Other symptoms can include blocked nose, sneeze, wheeze, nausea and vomiting.

Symptoms usually occur after the food is eaten, often within 5 minutes of biting or chewing the food. Usually the foods are raw fruits or vegetables. Occasionally cooked nuts, steamed or stir-fried crunchy vegetables, raw fruit smoothies and new potatoes with their skins on can also cause a reaction.

Diagnosis

If you are allergic to tree, grass or weed pollen, and have typical symptoms to PFS foods then you may have PFS. A skin prick test (SPT) will help to establish which pollens are causing a problem and confirm reactions to foods. The best method is to have the SPT with the raw food, rather than with 'reagents' (commercially manufactured allergen solutions). This is because the proteins which cross-react with the pollens may be destroyed when reagents are made.

However, SPT's should only be performed to those foods which cause symptoms as many foods will show up as a positive. This is due to the cross-reactions, even if they do not cause symptoms. A positive SPT is only important if you also have symptoms to that food. Don't cut out all foods which test positive unless you react to them. There are new molecular allergy tests which can be helpful in the diagnosis of PFS, especially for tree nuts and peanuts.

Once you have a diagnosis, you may find more foods cause symptoms. You may wish to be cautious when trying new raw fruits or vegetables. If you want to find out whether a new food will cause a reaction you can use the method below. However, if your reactions include swelling of the mouth/throat or wheeze, if you also have asthma, or if you normally react to nuts, do not self-test, discuss the best way forward with your Doctor or Dietitian.

1. Touch the outside of your lip with the raw fruit or vegetable and wait for 10 minutes.
2. If you do not have any symptoms, chew a small piece of raw food for one minute and spit it out. Wait for 15 minutes.
3. If you still have no symptoms, chew and swallow three small mouthfuls of the fruit or vegetable. If this does not cause problems you are probably safe to eat that food.

Labelling

From the following list of foods, current European Union (E.U.) labelling laws only require that celery, peanuts, tree nuts, soy and wheat be listed on a label. This law applies to all E.U. countries. This means many common PFS foods will not be listed. It is usually not a problem if the food is cooked, but care needs to be taken when eating raw fruit dishes, especially where concentrated amounts of fruits are used, for example in fresh fruit smoothies.

Foods and Pollens Involved in PFS



People with hay fever may be affected by one or more pollens which vary depending on the country they live in. Timothy grass and silver birch tree pollen are the most common causes of hay fever in the U.K. People allergic to tree pollen often have hay fever from February/March to May. Those with grass pollen have symptoms from May to August. Occasionally, a weed called mugwort can cause hay fever in late summer.

PFS is more common in people sensitised to tree pollen; 50-75% of people allergic to birch trees may develop PFS; those who also have a grass pollen allergy are more likely to be affected. The following table shows the most common cross-reactions between pollens and plant foods, though any raw fruit, vegetable or nut can be linked to PFS. Note that an allergy to a pollen does not mean that all of the foods listed need to be avoided. Only avoid those foods which cause definite symptoms.

Fruits and vegetables – Usually these only cause PFS symptoms if eaten raw and can usually be eaten if well cooked. Peeling potatoes and root vegetables can trigger symptoms of itchy hands but can also cause eye irritation and sneezing.

Tree nuts - Raw nuts are especially troublesome, particularly if eaten straight from the shell. However, unlike fruits and vegetables, cooked nuts can also cause symptoms in some people.

Legumes - raw and roasted peanuts, soy milk/desserts, tofu and raw mange-tout can all cause reactions. Unless you are vegetarian, it is best to avoid soy milk/desserts, but soy flour, soy sauce and soy in foods is usually fine.

 Pollen	 Food
Birch	Apple, apricot, bean sprouts, carrot, celery, cherry, coriander, kiwi, mange tout, nectarine, parsley, peach, pear, peppers, plum, potato, strawberry, soya, tomato, almond, brazil nut, hazelnut, walnut.
Grass	Kiwi, melon, orange, peanut, potato, swiss chard, tomato, watermelon, wheat.
Mugwort	Aniseed, celery, celery salt, carrot, coriander, fennel, mustard, parsley, spices, sunflower seed, honey.

Management

Foods that cause PFS symptoms should be avoided in their raw form. You should try the same food cooked or canned, as heat often destroys the allergens. Sometimes peeling, pureeing or microwaving for 60 seconds or less can be enough to allow you to eat the food. If you can eat it when cooked or canned, there is no need to avoid it in that form. Nor do you need to avoid similar foods unless they cause symptoms. Please discuss this with your Dietitian or Doctor if you are unsure which foods you should be avoiding.

Different varieties of fruits may be more or less troublesome. For example, Granny Smith and Golden Delicious apples are more likely to cause symptoms than other varieties such as Pink Lady or Cox Orange Pippin. Some people who get symptoms to tomatoes can eat the larger but not cherry-type varieties. However, this is very individual and you should try any new food with caution using the guidance given.

You do not need to avoid nuts unless you react to them. The most common nuts involved in PFS are hazelnuts, almonds, walnuts and brazil nuts. If you have symptoms to raw tree nuts or peanuts, you may still react to roasted nuts. Some people with PFS who react to certain nuts may tolerate foods which state may contain traces of nuts; you should check with your Doctor and Dietitian about the level of avoidance you need to follow.

Most reactions are not life-threatening, although sometimes reactions to nuts and soy milk can be severe. Antihistamines are very helpful in relieving PFS symptoms, so it is a good idea to keep some in your purse or wallet. If your reactions are severe, you may have been prescribed an adrenaline auto-injector pen, which you must always carry with you. If you have asthma, make sure it is well controlled and use your inhaler if foods make you wheezy.

Notes:

Dietitian: **Date:****Contact Number:**

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