

ORAL ALLERGY SYNDROME

What is Oral Allergy Syndrome (OAS)?

OAS is a non-life threatening allergic reaction consisting of itchy lips, mouth and throat immediately after eating certain raw (non-cooked or processed) fruits, vegetables and nuts. (It is not anaphylaxis, which consists of immediate life-threatening breathing problems, low blood pressure, hives, and severe tongue and throat swelling that affects breathing and speaking.)

Oral allergy syndrome occurs in some people with pollen allergies. It is caused by a cross reactivity of certain tree, grass and weed pollens and certain raw foods. OAS should not be confused with anaphylaxis (as described above); food intolerance, such as lactose intolerance, which is due to an enzymatic failure to convert lactose into glucose; or gluten/wheat intolerance. Oral allergy syndrome is not due to pesticides, chemicals, dyes, metals, or other substances.

Who is affected, and what pollens are involved?

Most people who have OAS also have hay fever. Older children and adults are the most likely to have this syndrome. You have a higher risk of this syndrome if you are allergic to the pollens of:

- Birch tree, Grass, and weeds such as ragweed, plantain and mugwort (sage)

These reactions can occur at any time of the year. However, symptoms may be worse during the pollen season. When a patient with OAS eats a fresh fruit or vegetable, the immune system sees the similarity between the pollen and the food proteins and causes an allergic reaction

The symptoms are not life threatening and normally appear within minutes of eating the offending food. Rapid onset of itching of the lips, mouth or throat are the most common symptoms of OAS. Other symptoms may include irritation of gums, eyes or nose. Very rarely, the syndrome can progress to more serious symptoms such as tongue or throat swelling, hives, shortness of breath, cough, wheeze, dizziness and low blood pressure. If any of these symptoms occur, the oral allergy syndrome has progressed to anaphylaxis. The food must be avoided and the patient needs to discuss this with his or her doctor and have an epinephrine autoinjector.

In most cases, OAS (itching limited to lips, mouth and throat) is mild and just an annoyance and does not require medical treatment. In general, it is best to follow the basic rule: If a food makes you uncomfortable, don't eat it. Often just peeling or cooking the food will reduce the effects (skin of fruit, especially apples, has high amounts of the allergenic protein and seems to me more of a problem than the flesh of the fruit). Canning and processing the food also will break down some of its proteins making it less reactive. Rarely, an antihistamine can relieve or prevent the symptoms. In adults and children with severe recurrent OAS, immunotherapy (allergy shots or drops) to the pollen has been useful. Anaphylaxis is rare but life threatening and requires emergent treatment with epinephrine as well as emergent follow up care.

Are all reactions to fruits and vegetables associated with OAS?

No. A variety of fruits, vegetables, and their juices (including orange, tomato, apple and grape) sometimes cause skin rashes and diarrhea. This is especially true in young children. Strawberries occasionally cause hives.

What foods are involved?

Foods associated with birch, ragweed, grass plantain, and mugwort (sage) pollen are listed on the next page. Most

reactions are caused by raw foods. This is because the proteins that cause allergies are usually destroyed by cooking (unlike in anaphylaxis where patients usually can react to the food whether it is raw or cooked). The main exceptions to this are celery and nuts, which may cause reactions even after being cooked. Some plant parts, such as skin, may be more allergenic than others. The allergic qualities of some fruits seem to decrease during storage.

Here is a list of foods that have been reported to cross-react with pollens. In addition, people with latex allergies may notice symptoms when they eat or drink certain foods. These are listed as well.

Birch

May be associated with a reaction to: apple, apricot, cherry, nectarine, pear, peach, plum, prune, kiwi, carrot, celery, potato, tomato, spinach, parsnip, green pepper, lentils, peas, beans, peanut, parsley, anise, dill, fennel, caraway, coriander, wheat, buckwheat, almond, hazelnut, and walnut.

Mugwort (sage)

May be associated with a reaction to: apple, kiwi, melon, watermelon, anise, coriander, cumin, fennel, parsley, celery, carrot, pepper, peanut, and sunflower.

Grass

May be associated with a reaction to cherry, peaches, kiwi, melon, orange, watermelon, celery, potato, tomato, and peanut.

Ragweed

May be associated with a reaction to: banana, cantaloupe, honeydew, watermelon, chamomille, cucumber, zucchini, sunflower seed, echinacea, and tomato.

Plantain

May be associated with a reaction to: melons.

Latex

May be associated with a reaction to: avocado, banana, chestnut, kiwi, apple, carrot, celery, papaya, potato, and tomato.

What can sensitive individuals do to avoid a reaction?

- If you get a rash, itching, or swelling when touching or peeling these foods, wear gloves. This will help prevent the foods touching your skin
- If you are hypersensitive to the foods listed above, try preparing them in a different way. People often find that they can consume these foods if they are well cooked (conventional or microwave) or canned or peeled. The exception is nuts and celery, which can cause symptoms whether raw or cooked.
- Allergy shots, drops or sublingual tablets can treat OAS in most, but not all, patients.
- If more severe, potentially life threatening symptoms develop, avoid the food and contact your doctor.