



What Is Oral Allergy Syndrome?

THE INCREASED PREVALENCE OF food allergies has been well-recognized in recent years, and the criteria for their diagnosis systematically established. Regardless of the food allergy, treatment consists of strict avoidance of foods and beverages that contain that allergen, including those that may contain trace amounts as indicated on the food label.^{1,2}

The definition of a food allergy, according to the National Institute of Allergy and Infectious Diseases' Expert Panel, is "an adverse health effect arising from a specific immune response that occurs reproducibly on exposure to a given food."^{1,2} The response triggered by the body's immune system involves a cascade of reactions, although the symptoms and organs involved can vary greatly and differ among individuals.³

In the case of oral allergy syndrome (OAS), the definition at this time remains inconclusive,^{4,5} as do its diagnostic criteria.^{4,6} OAS has been described as "pollen-associated food allergy syndrome,"¹ "birch pollen-related food allergy,"⁷ or "pollen-food allergy syndrome,"^{4,8} yet also compared and contrasted to "latex-fruit syndrome"^{6,8} and "pollen-food syndrome."^{5,9} Some experts suggest that OAS may be a collection of symptoms resulting from pollen-food syndrome or another food allergy.^{4,5,9}

Symptoms of OAS are usually limited to the oropharyngeal area and occur shortly after ingesting a raw fruit or vegetable.^{1,4,6-9} However, other foods have been implicated, such as legumes and nuts, and symptoms may persist beyond the oral cavity.⁴⁻⁸ Itching, tingling, and/or swelling of the lips, tongue, palate, or throat are typical,^{1,4-8} and, although considered rare, severe reactions have also been reported, including anaphylaxis.⁴⁻⁸

The incidence of OAS has been identified in individuals who suffer from hay fever or other seasonal airborne allergies,^{1,4-8} so its onset may not occur until adolescence or adulthood.^{6,9,10} A reaction can result at any time of year, but the incidence and severity may be greater during pollen allergy seasons.^{4,6,7} Geographical differences have also been noted to contribute to OAS, as certain grasses and weeds are more prevalent in different areas of the world, as well as the foods consumed.^{5,6,8}

The pollen proteins responsible for inducing an immunoglobulin E-mediated reaction in OAS are considered to be structurally similar to proteins in some foods.^{4,6-9} Therefore, the initial inhaled allergen conditions the body for the subsequent allergic reaction that occurs upon exposure to the related food. For instance, an allergy to grass may result in an allergic reaction following the intake of one or all of these foods in their raw form: melon, orange, and tomato.^{5,6,8,10} Not everyone who becomes sensitized to pollen will develop this cross-reaction to foods.⁶⁻⁸ Fruits such as apples, peaches, and cherries, and vegetables such as celery, carrots, and tomatoes, are some of the foods associated with OAS. Walnuts and hazelnuts have also been implicated, and examples of pollens include birch, ragweed, and various grasses.^{4,6,8,10}

Because many of the ingested proteins linked to OAS are vulnerable to digestive enzymes and gastric secretions and become denatured following heat exposure, most patients have tolerated cooked forms of these foods.^{4-6,8-10} A few foods, most notably nuts, may be the exception based on their protein's stability during the digestive process.⁴⁻⁷ When systemic reactions occur, strict avoidance of all forms of the foods implicated is recommended.^{4,5}

Currently, the literature suggests that many individuals with seasonal allergies may present with characteristics of OAS but lack a formal diagnosis.⁴⁻⁶ The use of a food diary can be especially helpful in this regard,^{6,8} as well as referral to an allergy specialist.⁶ Symptoms are usually managed with antihistamines^{1,6} and the nutrition prescription involves the

avoidance of the raw form of foods known to cause a reaction.^{8,10} Registered dietitian nutritionists, as part of the multidisciplinary team, can help patients identify foods that are safe for consumption, as well as ways to prepare them.² As recommended in the treatment of other food allergies, an individualized nutrition intervention will help minimize the risk for allergen exposure and ensure nutrient adequacy for patients with OAS.

References

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