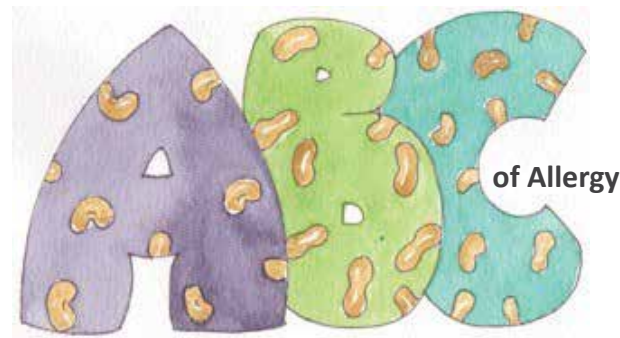




PEANUT ALLERGY

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Dr Do-a-lot's student presents short notes on peanut allergy

A peanut (*Arachis hypogaea*) is a groundnut and is part of the legume family that includes garden peas, lentils and soya beans. It is not a tree nut such as almonds, walnuts, cashews, hazel nuts and Brazil nuts, and it is also not related to coconuts or pine nuts, which are seeds. Most people who are allergic to tree nuts or peanuts can eat seeds; however, people with peanut allergy have about a 25 per cent chance of developing allergy to sesame seeds.



A peanut is a groundnut



Peanut allergic individuals are at increased risk of developing allergies to other foods

Interestingly, people who are allergic to peanuts are not commonly allergic to other legumes, but have a high chance of developing an allergy to tree nuts even though there is no direct genetic relationship between peanuts and tree nuts. Approximately 30 to 40 per cent of people with peanut allergy are also allergic to tree nuts. They are also at increased risk of developing allergies to other foods.

The peanut problem

Despite their powerful nutritional potential, peanuts can be a problem. Peanut allergy is an important food allergy, and is one of the most common allergies in children and adults and the incidence is rising. It is an important cause of anaphylaxis, and the most common cause of food-induced anaphylaxis. A mere trace of peanut protein can elicit a reaction; even inhaled peanut protein particles can cause anaphylaxis in exquisitely sensitised individuals. Peanuts and

peanut products are ubiquitous and difficult to avoid.



Incidence

In the past few decades the incidence of food allergy as well as other atopic conditions such as asthma, eczema and allergic rhinitis has increased. In the past ten years in the United States and the United Kingdom, peanut allergy has become more than twice as common with up to 3 per cent of children affected, and it is becoming an increasing problem in developing countries. Peanut allergy tends to develop early in life and in about four out of five cases it persists into adulthood, with only about 20 per cent of cases developing tolerance. Studies have shown that children who are consistently fed peanut in the first year of life (between four to 11 months) are less likely to develop peanut allergy than those that have it excluded from their diets. The protection against the development of peanut allergy is generally sustained after 12 months, even if peanut is avoided after the first year. In the case of high-risk infants, however, the introduction of peanut into the diet should be undertaken with caution and following the advice of an allergy specialist.



Peanut products are ubiquitous

Symptoms and signs

The type of allergic reaction seen in peanut allergy is typically the result of an immunoglobulin E-mediated reaction that usually occurs within minutes to hours of ingestion or inhalation of the allergenic protein. In most cases the presentation is mild, with symptoms that may include pruritus, flushing, urticaria, perioral tingling,



Severe cases of peanut allergy may result in anaphylaxis

nausea, vomiting, rhinorrhoea or eczema. Severe cases may result in anaphylaxis, where the respiratory and cardiovascular systems are involved, and the outcome may be fatal.

Diagnosis

A comprehensive history is important. A food diary may be helpful. Diagnostic tests include skin-prick tests and specific immunoglobulin E blood tests. Skin-prick tests should be performed only where there is no history of anaphylaxis to the allergen being tested. Elimination diets may aid diagnosis. Food-challenge tests, under controlled conditions with adequate staff and resuscitation equipment, are performed when test results are inconclusive. Component testing may be helpful in assessing the likelihood of a systemic reaction to peanut. If a patient tests positive to the peanut protein (f13), then component testing may be requested where individual components of the protein are tested. Patients who test positive to Ara H 1, 2 and 3 components are more likely to develop anaphylaxis to peanut than those who test negative to Ara H 1, 2 and 3, but positive to the Ara H 8 component.

Management

There is no cure for peanut allergy; avoidance of peanuts is therefore the cornerstone of management. This is a burdensome task for patients and their families as peanut is found in many foods and products including biscuits, cakes, ice cream, preserves, cereals, dips, sauces, desserts, sweets, vegetarian foods, Asian foods, Mexican foods and oils. Peanuts and tree nuts often come into contact with one another during processing so it may be prudent to avoid all nuts when peanut allergic.



Peanuts are found in many foods and are often a hidden ingredient

Cosmetics and skin creams containing 'arachis oil' should be avoided. Refined peanut oil is generally considered safe as the processing method eliminates the proteins from the oil, however, cold-pressed and unrefined oils are not safe. The relentless effort involved in avoiding peanut and the consequences of exposure impact heavily on the quality of life of patients and those close to them. Even the most fastidious peanut avoider may become inadvertently exposed to the protein. It is therefore important that patients are able to recognise the signs of a reaction early and that they are able to respond appropriately, depending on the severity of the symptoms.



People who are allergic to peanuts should carry an adrenaline auto-injector. They should know when and how to use it and always have it with them. They should also wear a 'MedicAlert' bracelet or medallion and carry a written allergy-management plan. Family, staff, teachers and colleagues should be informed of the plan. Education regarding the reading of food and ingredient labels is important. In addition, the assistance of a dietitian is invaluable in the management of patients with food allergies.

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