## Lowering risk of food allergies

Nearly 32 million Americans suffer from food allergies, resulting in about one in ten adults and one in every thirteen children having food allergies. There is no cure or definite way to prevent food allergies. However, methods of early introductions for certain potentially allergenic foods (with approval from pediatrician) around 6 months of age may be effective at reducing the risk of developing food allergies. Most research with early allergen exposure has been done with peanuts due to the alarming rate of peanut or tree nut allergies in children. Children with peanut or tree nut allergy tripled from 1997 to 2008 while overall food allergies in children increased 50\% from 1997-2011.

Food allergies occur when there is a negative immune response to an ingested protein. When an allergen is eaten by someone who is allergic to it, the body responds by attacking the protein. This attack can result in mild symptoms such as itchy throat and hives or more severe symptoms including throat swelling, difficulty breathing or anaphylaxis, which can cause death. An allergic reaction occurs every time an allergen is eaten, and symptoms usually occur immediately, but symptoms may not show up for a couple of hours.

The "big 8 " allergens in the United States are; milk, eggs, peanuts, tree nuts, fish, crustacean shellfish, wheat, and soy. These foods represent $90 \%$ of food allergies in the U.S. and must be clearly labeled on food packaging. Although sesame is not currently categorized as a major allergen, there has been a significant increase in allergic reactions to sesame and legislation has been proposed for it to also be included in those ingredients that must be listed on food labels.

The best way to diagnose a food allergy is through an oral food challenge, which involves someone eating the allergen in order to monitor the response. This has to be done under strict supervision where the dose of the allergen can be gradually increased. This is the most reliable method but not common because it can be costly, time consuming, and dangerous. More common types of diagnosis methods include skin prick tests and serum IgE tests. IgE are antibodies produced by the immune system when an allergy occurs.

