

# Peanut Allergies

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Imagine, a person having a potentially fatal allergic reaction whenever they have certain contact with peanuts. This is called a peanut allergy. For some, it may just be a scary fantasy, for others it's their livelihood. Peanut allergies are a serious medical issue and can be life threatening. Like all allergies, a peanut allergy is not something to take lightly. Tiny exposure to peanuts can trigger serious allergic reactions, such as anaphylaxis. Even though experts have found treatments like epinephrine injectors and possible cures like Palforzia, peanut allergies are still life threatening.



## What is a Food Allergy?

Food hypersensitivity or a food allergy is an immune reaction due to certain proteins in different foods. The immune system of a person who has a food allergy mistakes the protein of certain foods to be harmful. In rare cases a food allergy might develop in adult hood, although the majority of food allergies develop in childhood or infancy. While food allergies can be chronic, most children grow out of food allergies before adulthood.

## What is a Peanut Allergy?

Did you know that peanut allergies are one of the eight most common food allergies? In fact, twenty-five percent of children with food allergies, have a peanut allergy. Peanut allergies are not just common in children, but second most common in adults. Like a food allergy, a peanut allergy occurs when the immune system considers peanut proteins to be harmful.



## Causes and Symptoms

Even though peanut allergies have been known for decades, the cause is still unknown. However, research has concluded certain risk factors that increase the chances of having a peanut allergy. Since most peanut allergies occur in infancy and childhood, age is a risk factor. If having peanut allergies, nut allergies or other food allergies is common in a person's family, this can be another risk factor. Similar to how genes such as hair and eye color is passed down from

generation to generation, peanut allergies can also be passed down. If a relative has a peanut allergy, then another relative might also have a peanut allergy. Having another food or nut related allergy can also cause a peanut allergy. Did you know that forty percent of kids with a tree nut allergy also have a peanut allergy? This could be because the proteins in peanuts and tree nuts are similar, which can cause an allergic reaction. Another risk factor is eczema. Most babies who have eczema develop a peanut allergy. Some people may wonder about how a skin disease can cause a peanut allergy, this is because an open scratch in a child's skin can cause food allergens (including peanuts) to enter the body's immune system.

Peanut allergies are serious, so it's important to know the triggers of a peanut allergy and the symptoms of an allergic reaction. The biggest trigger of an allergic reaction is usually direct contact to peanuts, such as ingesting peanuts, or peanut related foods such as peanut butter. Aside from ingesting the allergen (peanuts), skin contact can also trigger an allergic reaction, as well as inhaling peanuts. For example, a person (who has a peanut allergy) is walking in a store which has a display of peanuts, the peanuts produce a scent which contains peanut proteins, which can be harmful to this person, since inhaling peanuts can cause a reaction. Skin contact can trigger anaphylaxis, but it might cause a less severe reaction such as, hives or a rash. When the infected area of skin comes in contact with the eyes, nose or mouth, this can trigger a very severe allergic reaction.

Another trigger is cross contamination. What if a person bought a pack of cookies? Normally a person would think it's fine to eat because it doesn't contain peanuts. Even though the cookies themselves don't contain peanuts, the cookie factory that produced them could also produce other peanut related items, such as peanut butter cookies. Cross contamination is the movement of dangerous bacteria from one place or person, to another. In this case, cross contamination could happen when the residue from a peanut related product contacts another product, such as a peanut-free pack of cookies. When this happens, the peanut-free cookies are now contaminated with residue from a peanut related product, which can cause an allergic reaction if a person with a nut allergy ingests or comes in contact with these cookies. A way to avoid cross contamination, is to read food labels. Companies are obligated to include on the product label about the allergens that the product contains. For example, the pack of cookies would have a label that states the cookies were processed in the same facility as other peanut-related items. This helps prevent cross contamination. Cross contamination doesn't just happen in cookie factories, it can happen in restaurants, drive-thrus, schools, even other people's houses!

Anaphylaxis occurs when a person has been exposed to peanuts and is having an allergic reaction. The signs of anaphylaxis are, weak pulse, reduced blood pressure, loss of consciousness, itchy eyes, confusion and swollen lips. Gastrointestinal symptoms such as, stomach cramps and vomiting, can occur with anaphylaxis. Anaphylaxis can happen within minutes or hours after a person is exposed to peanuts.

## **Treatments**

Did you know the treatment for an allergic reaction depends on the severity of the reaction? Mild reactions, such as hives, itchiness, sneezing, or stomach cramps can be treated with an antihistamine. Antihistamine medicine includes, Claritin a non-drowsy loratadine, and

Benadryl a drowsy diphenhydramine. During an allergic reaction, activity of chemical histamine is blocked when antihistamine medicine is taken. Histamine is a chemical located in many of the body's cells. When the immune system comes in contact with the person's allergen (for example, peanuts), the immune system signals some of the body's cells to produce histamine. Allergy symptoms, such as, trouble breathing, and itchy eyes is caused by histamine.

While unfortunate, allergic reactions can be more severe and cost a person their life. Luckily, an epinephrine injection is a treatment for more severe allergic reactions. In fact, an epinephrine injection can also be used for mild reactions, too. Actually, most doctors prefer their patients to use an epinephrine injection anytime they have an allergic reaction. Different brands have created epinephrine auto-injectors. EpiPen® and EpiPen Jr® is an example of a trusted epinephrine auto-injectors. EpiPen Jr® delivers a smaller dose of 0.15 milligrams of epinephrine, and is typically used for younger children weighing at about 33 and 66 pounds. Unlike EpiPen Jr®, EpiPen® provides a larger dose of 0.3 milligrams and is recommended for older children and adults.

While using Antihistamine medicines and epinephrine auto-injectors is great for treating allergic reactions, oral immunotherapy can reduce anaphylaxis when exposed to a food allergy. The goal of oral immunotherapy (OIT), is to desensitize or reduce the severity of allergic reactions, by increasing the exposure to the allergen. For instance, a person with a peanut allergy would get increasing doses of the allergen (peanuts) over certain periods of time, such as weeks or months. At first the doses will be small and may not trigger a reaction, eventually, the doses will increase. Normally, the doses will be given in an allergist's care, so the person can be monitored and given the proper treatment incase the doses due cause a reaction. Did you know the success rate of OIT for peanut allergies is eighty-three percent?

Recently, the Allergenic Products Advisory Committee of the Food and Drug Administration (FDA), approved Palforzia. Palforzia is a regulated oral immunotherapy (OIT), which is expected to minimize the severity of allergic reactions, as well as anaphylaxis, in kids ages four to seventeen. Manufactured from peanuts, Palforzia is packaged in color coded capsules for Initial Dose Escalation and Up-Dosing. Inside the capsule, is a powder that can mixed in with semisolid food, such as yogurt or pudding. Initial Dose Escalation, Up-Dosing, and Maintenance are the three phases of Palforzia. The Initial Dose Escalation is taken once a day, while Up-Dosing, is eleven increasing doses and happens over the course of several months. Patients who are in the Initial Dose escalation and Up- Dosing phases, are very high risk of anaphylaxis. If a patient can consume the first dose of Up-Dosing without any reactions, then the patient can continue the dosing at home. One the patient completes all of the Up-Dosing levels, the daily Maintenance dose starts. Allergic reactions can be caused because of Palforzia, so the patient may either stop Palforzia or change the dosing schedule. Although, OIT and Palforzia works, experts still recommend people with peanut allergies to read food labels, ask about the ingredients when eating fast food, and any other precautions to avoid peanuts.

In conclusion, peanut allergies are serious and can be life threatening. Although the actual cause of peanut allergies is uncertain, risk factors such as, age and genetics can play a role. When exposed to peanuts, anaphylactic symptoms can occur, including trouble breathing, vomiting and swollen lips. Since allergic reaction can be so severe, treatments have been tailored to suit the different severities, such as antihistamine, which is used in mild reactions and epinephrine,



Talk to others,  
read food labels,  
it can save  
someone's life.

which is suitable for more severe reactions. Experts understand the deadliness of peanut allergies, so they crafted the FDA approved Palforzia, a form of immunotherapy that lessens severity of peanut allergies. Even though information has been learned and treatments have been created, it doesn't change the fact that peanut allergies are serious and can cost a person their life. Whenever a person is somewhere or enjoying time with friends, it's important to think about the situation, and if anyone has a peanut allergy. Simple things, like checking labels for traces of peanuts, noticing signs of an allergic reaction, can help save a person's life, and it can mean the world to them.

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