

FOOD ALLERGY & INTOLERANCE

On the island of Ireland it is estimated that approximately 10 percent of the population suffer from a food allergy or a food intolerance (including coeliac condition), the effects of which range from mild discomfort to life threatening. This article is designed to create awareness and provide a practical guideline for caterers or retailers who are serving customers who may have a food allergy

Since the 1950s, the incidence of allergies in developed countries has shown a steady rise. This is particularly noticeable where food allergy is concerned. For example, peanut allergy - the most common food allergy to cause fatal or near fatal reactions - has trebled in the last twelve years affecting almost 2% of children at school entry level. In Ireland, it is estimated that up to 3% of the population have a food allergy. Approximately 5% of the adult population are lactose intolerant while approximately 1% have a coeliac condition.

EU legislation now recognises 14 foods as being responsible for the majority of allergic reactions in Europe. In Ireland, the primary causes of allergic and intolerant reactions to food are peanuts, fish, eggs, tree nuts & seeds, fruits & vegetables, milk and wheat.

If you work in the food industry, particularly in the catering sector, you need to know how you can control food allergens on your premises. This can be a matter of life or death.

Definition

A food allergy is an abnormal, exaggerated reaction (hypersensitivity) of the immune system to certain proteins in food.

These proteins are known as 'allergens'.

A food intolerance is also an adverse reaction to a protein or non-protein constituent of a food. However, the immune system is not involved.

Examples include lactose intolerance due to the absence of the enzyme lactase and migraine induced by red wine.

Therefore, while the use of the term 'allergens' to describe the causative agents that can trigger an allergic or intolerant reaction is not technically true, it is frequently used as a collective term in the literature and is used in this context in this article as well.



Gluten intolerance - also called coeliac disease - is an auto immune disease where the immune system attacks its own tissues.

However, it is not an allergy. The reaction is triggered by gluten which causes the lining of the gut to become damaged. The manufacture of totally gluten-free food is difficult.

Consequently, many foods currently on the market that address this particular nutritional requirement, although labelled "gluten-free", may actually contain low residual amounts of gluten. A higher standard for gluten-free foods has recently been introduced but it will exist beside the original 1988 standard until 1st January 2012.

Under the original standard, gluten-free foods must have less than 200 mg/kg (ppm) gluten. Foods manufactured under the 2009 standard can be called
(1) 'gluten-free' if they have less than 20 mg/kg gluten or
(2) 'very low gluten' if they have less than 100 mg/kg gluten.
From 1st January 2012 only the new standard is permitted.

Causes

It is not clear why someone develops an allergy or intolerance to food. People with conditions like asthma, eczema or hay fever, or families that have these conditions, seem to be more prone to developing allergies in general. Most food allergy fatalities have occurred in people with asthma. The prevalence of food allergies and intolerances, including coeliac condition, seems to vary between different populations and regions indicating a strong genetic influence.

Symptoms

The most common symptoms of an allergic reaction may include any combination of the following:-

- ❖ Coughing
- ❖ Dry itchy throat and tongue
- ❖ Wheezing and breathlessness
- ❖ Runny nose
- ❖ Itchy eyes
- ❖ Flushing of the skin
- ❖ Nettle rash (hives) anywhere on the body
- ❖ Swelling of lips and throat
- ❖ Changes in heart rate
- ❖ Feeling bloated
- ❖ Abdominal pain, nausea and vomiting

People with severe allergies can take a reaction which can be life threatening. This reaction is called **anaphylaxis** or "**anaphylactic shock**" which is characterised by:-

- a sense of impending doom
- a dramatic fall in blood pressure (hypotension)
- a swelling in the throat and mouth
- chest tightness, breathlessness from severe asthma
- collapse and unconsciousness

Sometimes it is difficult to know if a slight reaction like a rash will proceed to the more serious anaphylactic shock but urgent medical treatment is advised if the customer has difficulty in swallowing or breathing or if there is sudden weakness.

Food allergy is the most common cause of anaphylactic shock outside the hospital setting and an allergy to peanut is the most common food allergy to cause fatal or near fatal reactions.

Food intolerant reactions tend to be less severe than those experienced during an allergic reaction.

Symptoms are usually

gastrointestinal, including nausea and diarrhoea, but can also include those more usually associated with a food allergy such as flushing, headache, hives or wheezing.

Unlike a food allergic reaction where symptoms begin to manifest immediately, the symptoms of a food intolerant reaction usually take time to develop, although there are exceptions to this.

Avoidance and Treatment

There are no widely-available medical treatments to prevent someone taking an allergic/intolerant reaction. Treatment is provided after an allergic reaction has taken place either by the patient's use of antihistamines or, if the reaction is severe, by self medication with an adrenaline (epinephrine) auto-injector followed by hospital admission. Auto-injectors are marketed under the Epipen and Anapen brands.

A food intolerant reaction usually resolves with time once the offending food is removed from the diet. Avoidance is the key to controlling food allergy and intolerance and those at risk must avoid contact with the foods to which they are allergic / intolerant in any form.

Impact on quality of Life

The diagnosis of a food allergy or intolerance is very stressful for the person and their immediate family. Many life style changes have to be made, all to ensure that the patient's health is protected. What to eat, where to eat, how to cope at parties or at a new school or when going to college - these are all considerations that take on a heightened importance when a family member has a food allergy or intolerance, especially if the allergy is life-threatening.

As a food service provider, you can help the allergic/intolerant customer by having an understanding of their problem and helping them to choose food that is safe.

Foods that can trigger an allergic reaction

A customer can be allergic or intolerant to, and wish to avoid, any food.

In the EU, there are 14 major allergens of concern which must be identified on the label when used as a deliberate ingredient in any prepacked food product. The 14 major allergens are detailed below, along with information on foods in which they are commonly found.

Of these, the following feature most commonly in causing allergic reactions, groundnuts (peanuts), tree nuts (eg. almonds, walnuts, cashews, Brazils), sesame (eg. seeds, paste and oil), fish, shellfish, dairy products and eggs.

In Ireland, certain fruits and vegetables have caused allergic reactions in susceptible individuals but these do not appear on the EU list.

This is because the listed allergens are the most prevalent on an EU-wide basis.

Note, certain foods such as milk and wheat are associated with both allergy and intolerance.

Avoiding foods like peanuts, nuts, seeds, milk and eggs in packets, bottles or in jars is relatively easy. It is more difficult where they could be hidden in a multi-ingredient food. For example, peanut traces can occur in a wide range of foods, cosmetics and even in medicines where the ingredient labelled arachis oil is, in fact, peanut oil. Gluten containing wheat is used in many baked goods and fish protein is a hidden ingredient in Worcester sauce.

Identification of major allergens

Fortunately, information is available to help caterers identify foods which contain major allergens.

EU legislation (Directive 2000/13/EC as amended) requires the labelling of 14 major allergens if they are deliberate ingredients in pre-packed foods that are delivered to the 'ultimate consumer' and supplied to restaurants, hospitals, canteens and other mass caterers.

For allergens which are not subject to the allergen labelling requirements, the label should still give an indication if the allergen is present as a deliberate ingredient, eg. Kiwi fruit.

The 14 major allergens subject to EU labelling requirements are described below.

Of these, peanuts, fish, shellfish, egg, tree nuts, milk and gluten are most relevant for the peoples on the island of Ireland:-

Foods that trigger an allergic reaction

Allergen: **Peanuts**



Peanuts can trigger **severe reactions including** anaphylaxis.

Other names for peanuts include groundnuts, earth nuts, goobers, goober peas, ground peas, pindas, monkey nuts and Chinese nuts.

Peanut is also used to produce oil and flour.

Refined **peanut oil** is unlikely to cause a reaction but unrefined peanut oils are unsuitable for anyone with a peanut allergy.

Found in:

Breakfast cereals, cakes, biscuits, pastries, breads, cereal bars, mixed nuts.

Chinese, Thai or Indonesian dishes including curries.

The ethnic cuisines may also use unrefined peanut oil.

Chilli, satay or pesto sauce; lasagne; mixed salads, salad dips and dressings; desserts including ice cream; peanut butter and nut spreads; vegetarian products; confectionery and nougat products; fruit yoghurts; hydrolysed vegetable protein; sausages and stuffing; boullion and Worcester sauce.

Allergen: **Fish**



Fish can trigger severe reactions including anaphylaxis.

Some people can react to the vapours during the cooking of fish.

Some people who are allergic to one species of fish have been advised to avoid all species of fish because the allergic proteins are similar.

There is a risk of cross contamination during harvesting and processing.

Found in:

Anchovies are a common ingredient of sauces like Worcester sauce, Caesar salad, salad dressings and pizza toppings.

Fish is often used in soups and stocks, pastes, stir-fry mixes and oriental sauces.

Surimi is a white fish-based food that mimics more expensive crab, lobster and other crustaceans and shellfish.

Allergen: **Shellfish**



Shellfish can trigger severe reactions including anaphylaxis.

People who react to one type of shellfish may react to other types and very sensitive people can react to the vapours during the cooking of shellfish

Shellfish includes:

- ❖ Crustaceans - eg. crab, lobster, prawn, shrimp, langoustine and crayfish
- ❖ Molluscs - eg. mussels, scallops, oysters, clams, snails, periwinkles, whelks, squid and octopus

Found in:

Shellfish may be served on their own or as a hidden ingredient in dishes like fish pie or seafood chowder. They may be present in soups, stocks and highly processed foods.

Allergen: **EGGS**



Allergic reactions to egg and egg products can range from slight to very severe including anaphylaxis. This applies to Eggs from all species including duck, goose, turkey and quail as well as hens. The main proteins causing reactions are in the egg white.

Also derived from egg are:-

- ❖ Albumen
- ❖ Lecithin-emulsifier (E322)
- ❖ Lysozyme

Egg allergy in children is very common but by the age of three about 50% will have grown out of it.

Found in:

Eggs are used as ingredients in many foods such as baked goods including bread and cakes, meat products, fresh pasta dishes, sweets and ice creams.

Egg also performs specific functions, eg. as binders to stick down the ends of spring rolls, to glaze pastry and to bind the meat in burgers.

Disclaimer: This guidance is provided in good faith and outlines the general principles of good food allergen management.

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The food business should ensure that it complies in full with the legislative requirements for the manufacture, preparation and sale of safe food. Sole responsibility for the safety of supplied food rests with the proprietor.