

What is Food Intolerance?

In food allergy, an abnormal immune system response results in the body making antibodies to 'fight off' a food. Food allergy, either IgE antibody mediated or delayed non-IgE mediated allergy are reactions caused by the immune system, which affects approximately 1% of adults and 5-9% of children in the UK.

However, some people suffer symptoms after eating certain foods even when they are not producing antibodies against them. A variety of different mechanisms can cause foods to affect people in this way. These non-immune reactions are known as food intolerances.

FOOD INTOLERANCE is much more common than food allergy and is **not caused by the immune system**. The onset of symptoms is usually slower, and may be delayed by many hours after eating the offending food. The symptoms may also last for several hours, even into the next day and sometimes longer. Intolerance to several foods or a group of foods is not uncommon, and it can be much more difficult to decide whether food intolerance is the cause of chronic illness, and which foods or substances may be responsible.

With food intolerance, some people can tolerate a reasonable amount of the food, but if they eat too much (or too often) they get symptoms because their body cannot tolerate unlimited amounts.

The symptoms caused by food intolerance are varied. They usually cause gastrointestinal symptoms such as bloating, diarrhoea, nausea, vomiting, irritable bowel and can include skin rashes and sometimes fatigue, joint pains, dark circles under the eyes, night sweats and other chronic conditions.

Food intolerance can have a number of different causes:

Enzyme defects

Enzymes are required to help with the breakdown of natural substances found in certain foods. If these enzymes are missing, or in short supply, then eating the food can cause symptoms because part of the content of the food cannot be properly dealt with by the body.

In lactose intolerance, for example, the body may lack the enzyme (lactase) that breaks down lactose (milk sugar) into smaller sugars ready for absorption from the gut. Lactose is too large to be absorbed across the gut wall undigested, and its presence in the gut causes gut spasm, pain, bloating, diarrhoea and 'failure to thrive'. Incidentally, these same symptoms can occur in milk allergy, when the body has made antibodies to milk protein, which causes an immune reaction when you drink milk. Hence, you cannot always distinguish allergy from intolerance by symptoms alone without expert help.



Most foods require some enzyme activity in their digestion, and enzyme deficiencies can be an important factor in food intolerance.

Pharmacological

Some foods contain naturally occurring chemicals that have an effect on the body, such as caffeine in coffee, tea, and chocolate, or amines in certain cheeses. Some people seem to be more affected than others by these natural substances in the food, causing symptoms which would not occur in other people unless they ate far larger quantities of the food.

Toxic

A number of foods contain naturally occurring substances that can exert a toxic effect, causing symptoms of vomiting and diarrhoea. In cases such as kidney beans or chick peas that are undercooked, there are aflatoxins, which cause these symptoms. If they are cooked fully the toxins are not present. This is very confusing to someone who seems to tolerate a food sometimes but not others.

Histamine in foods

Some foods contain histamine naturally, and others (such as certain fish that are not fresh or have not been stored properly) can develop a build-up of histamine (in fish, called histadine) in their flesh as they age. In certain people, this histamine occurring naturally in the food can cause symptoms when the food is eaten; typically, rashes, stomach pains, diarrhoea and vomiting and in some cases symptoms that can mimic anaphylaxis.

Salicylates in foods

Many foods naturally contain salicylates, and our tolerance to this can vary. The vast majority of people can eat salicylate-containing foods with no problems, but other people may suffer symptoms if they eat too many foods, which when combined contain a large amount. These salicylate-intolerant people will get better if they eat a diet of low and moderate salicylate foods and avoid those with the highest levels.

Additives in foods

A wide variety of natural and artificial additives are used in colouring, preserving and processing foods. Some people can suffer symptoms provoked by hypersensitivity to food additives.

How is food intolerance recognised?

Certain features such as the pattern and type of symptoms can help to distinguish food intolerance reactions from those that might be a result of food allergy, or some quite different cause unrelated to food. By keeping

an accurate and detailed diary of both foods eaten and symptoms, it is possible to highlight the foods that may be causing a problem. Even if the culprits are not clear, it gives a useful starting point on which to base exclusion and reintroduction diets. A dietitian can help you manage these diets, which can ultimately give a clear diagnosis.

Other than some tests that are available for lactose intolerance, but rarely needed, there are no validated tests for food intolerances. The diagnosis is usually made by removing the suspected food from the diet (an exclusion diet) and seeing if symptoms improve. Making major changes to your diet should be discussed with a health care professional, and ideally a dietitian should be involved.



Symptoms are not immediate

The time relationship between eating the food and getting symptoms depends on many factors. If the food is only eaten very occasionally, symptom onset after digestion ranges from almost immediate to several hours, up to two days. However, this is different when the food is being consumed regularly, when each 'reaction' will run into the next, leading to the development of chronic, almost continual, symptoms with no clear immediate reaction each time the food is eaten. When this happens it can be more difficult to identify culprit foods but is still readily done, and often with remarkable results.

Symptoms are usually multiple

In food intolerance, a wide range of symptoms may occur and multiple symptoms are usual, and can be general and non-specific, which can make diagnosis tricky. This highlights the need for attention to detail and the need to record everything fully in a [food and symptom diary](#).

Elimination followed by reintroduction

Embarking on a diet, which excludes certain foods to help find out what is causing symptoms, is known as an exclusion diet. Certain foods are excluded for a set period of time to see if the symptoms improve or resolve. This is followed by a reintroduction phase of the diet so that a clear diagnosis can be obtained. The initial period of exclusion will usually be for two weeks and up to six weeks depending on frequency of the symptoms. During this time, it is important to replace foods with other foods of similar nutritional value. A dietitian can help with this and supervise the exclusion diet. Embarking on such diets requires a lot of dedication and planning but the results can be life changing. Choosing the right time for you and your family is essential – avoiding starting the diet during holidays or major celebrations is recommended as sticking to the diet will become more difficult.

It is essential that during this exclusion phase the diet is adhered to 100% and restarted if any mistakes are made so that the results are as accurate as possible.

Exclusion diets may avoid one food or several foods, or may start with a few foods diet where only select foods are allowed and a list is given to be followed closely for an initial set time period. These diets can lack essential nutrients, so it is vital they are supervised by a dietitian.



Prolonged elimination builds tolerance

Weeks or months of elimination of the reactive food may well lead to reintroduction of the food without reaction. This is known as tolerance, and its maintenance depends on establishing the threshold of both frequency and quantity for that person - in other words, eating the food occasionally may be tolerated, but reintroducing it in large quantities or on a very regular basis (e.g. every day) might lead to symptoms recurring. This is purely individual so working this out and not restricting the diet more than is necessary is a major consideration.

Other factors

In a few people, underlying conditions can either cause symptoms or make food intolerances worse. In these cases, treatment for the underlying condition should be a priority in order to allow symptoms to improve. You should always seek advice via your GP rather than attempting to diagnose or treat these problems yourself. Excluding other possible diagnoses first is imperative.

Summary

Food intolerance can be caused by many factors but is treatable once the culprit foods are identified. After excluding other possible causes, a structured and supervised reintroduction should commence.

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