Food allergy and intolerance

There are different types of adverse reactions to food, which can result in a wide range of symptoms. Currently there is considerable confusion, particularly amongst the public, about the terminology used to describe adverse reactions to food. **Food intolerance** is used in this report as a general umbrella term, which refers to non-psychological, reproducible unpleasant reactions to a specific food or ingredient. **Food allergy** is a specific type of food intolerance, where there is evidence of an abnormal immunological reaction.

The current estimates for the prevalence of food intolerance and food allergy are much lower than are perceived by the public. In adults, food intolerance occurs in around 1-2% of the population and only a small proportion of this number are truly allergic to food. In children, the incidence of food intolerance is estimated as being 5-7%, though most outgrow this by school age. The prevalence of IgE-mediated food allergy in children is thought to be about 1-2%.

It is important to recognise that, in babies and young children, development of specific antibodies to environmental allergens, especially those encountered in early life, is a normal physiological response via which tolerance to the environment is developed.

Coeliac disease is the main form of wheat intolerance and is estimated to have a prevalence (including undiagnosed cases) of 0.3% (one person in 300). Sometimes referred to as gluten sensitive enteropathy, coeliac disease is a bowel disease that occurs only when gluten (a protein) is present in the diet. Gluten is found in wheat, rye, barley and possibly oats. The resulting damage caused by gluten to the gut mucosa leads to a reduced capacity to take up nutrients provided by foods and, hence, leads to diarrhoea and malnutrition. To avoid long-term complications of the disease, strict life-long adherence to a gluten-free diet is necessary.

Lactose intolerance is the most commonly diagnosed adverse reaction to cows’ milk among adults and adolescents. Before it can be absorbed by the body, lactose (milk sugar) needs to be broken down by the enzyme lactase, into its constituent sugars. When levels of this enzyme are low, large quantities of dietary lactose pass undigested into the large intestine and this can sometimes give rise to flatulence, bloating, abdominal pain and diarrhoea. Inability to digest lactose is usually inherited and thus racially distributed. Lactase deficiency (a low lactase level) is present in about 5% of white British people and a larger proportion of those from some ethnic minorities. Having reduced levels of lactase does not necessarily imply that lactose cannot be digested. Lactose intolerance tends to be dose-related and some people are more sensitive than others, consequently only about a third of the people with lactase deficiency are actually lactose intolerant. Patients with severe lactose intolerance can usually eat yogurt, hard cheeses and lactose-reduced milk and all are encouraged to eat these as a source of calcium and other nutrients.

The prevalence of peanut allergy is not known. Some studies suggest that 0.5% (one person in 200) might be affected to some degree. The most common mild symptoms of peanut allergy include tingling of the mouth and lips, facial swelling, nausea, colicky pain and feelings of tightness in the throat. Urticaria or nettle rash is also very common. A small number of people suffer severe reactions within minutes of exposure which can include swelling of the airways and obstruction of breathing (anaphylactic shock), a sudden drop in blood pressure, collapse and unconsciousness. Studies have suggested that infants can become sensitised to peanuts through breastfeeding, via skin lesions (via some skin ointments and oils used for atopic children), or via the respiratory system following exposure to peanut allergen (e.g. derived from some milk formulas and nipple creams) or via small amounts of allergen present in the air. There is also some evidence that sensitisation can occur in utero. Long-term management of peanut allergy consists of a careful and complete avoidance of all sources of peanuts. Contrary to many other food allergies, it is rare to grow out of peanut allergy.
It is important to recognise that if food allergy is suspected, expert advice from a General Practitioner should be sought. Food allergy can be detected by skin tests using an extract containing the appropriate allergen or by laboratory tests such as the radioallergosorbent test (commonly known as RAST). The general use of these tests in the diagnosis of food allergy is controversial due to difficulties in obtaining pure food proteins for testing and frequent false positive responses. Confirmation of the existence of an allergy can be made by the use of exclusion diets but these should only be attempted under medical supervision.

If food allergy (or intolerance) is diagnosed, the advice of a State Registered Dietitian on dietary modification is recommended, particularly with children. In general, the mainstay of dietary treatment is the avoidance of the particular food or food ingredient involved; the need for stringency depends on the severity of the reaction. It is important that foods are not unnecessarily excluded from the diet, particularly where children are concerned, as this may lead to sub optimal nutritional status.

The food industry has begun the process of improving the labelling of food ingredients in order to help allergy sufferers, although there is still some way to go to meet the needs of the public and the regulatory authorities in the UK and Europe.

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