



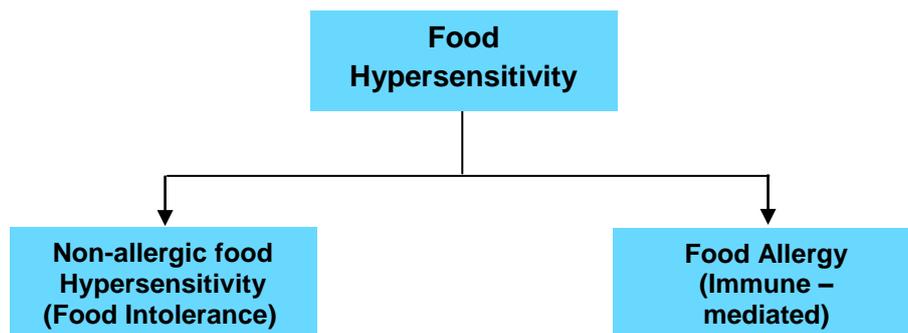
PATIENT INFORMATION BROCHURE

FOOD ALLERGY

DEFINITION AND CLASSIFICATION

- *Food hypersensitivity* is the non-specific term which refers to any adverse (untoward) reaction to food or food additives.
- *Food allergy* is a type of food hypersensitivity in which the body's immune (defence) system is directly involved and overreacts to a particular protein in that food.
- There are several types of hypersensitivity reactions to food which are *non-allergic*,
- Some of the symptoms of *food intolerance* and food allergy are similar, but the differences between the two are very important.
- Food allergy reactions can be life-threatening, in some cases even in response to tiny amounts of the food, so people with this type of allergy must be very careful to avoid their food triggers.
- Food intolerances are not life threatening and the person may often tolerate small amounts of the triggering food, and have symptoms only on intake of larger amounts.
- Another interesting cause of a non-allergic reaction is psychological reactions to foods in people who are convinced that they cannot tolerate a certain food.

CLASSIFICATION OF ADVERSE REACTIONS TO FOOD



HOW COMMON IS TRUE FOOD ALLERGY?

- True food allergy is less common than is popularly believed.
- Although up to 20-30% of people believe at some stage of their lives that they have a food allergy, it is estimated that only between 2% and 5% of the general population suffers from a definite food allergy.
- Food allergy can strike children and adults alike.
- While many children outgrow a food allergy, it is also possible for adults to develop allergies to particular foods.
- Food allergy tends to be more common in children (up to 10%) than adults, and several food allergies such as milk and egg allergy tend to be outgrown. In selected groups, such as children with eczema, the prevalence of food allergy may be as high as 30-40%.

WHAT ARE THE SYMPTOMS OF FOOD ALLERGY?

- There are 2 main groups of food allergies, IgE-mediated (immediate type) food allergies, and non-IgE mediated (delayed type) food allergies.
- These types of allergies present quite differently as they have very different underlying mechanisms.
- IgE-mediated allergies are most commonly to milk, hen's egg, peanut and other nuts, fish, shellfish, soya and wheat.
- Non IgE-mediated allergies are most commonly to cow's milk and soya, but can occur to many other solid foods.

IgE-mediated (immediate type) food allergy

- IgE-mediated food allergies are the most common type and present as "classical" food allergies with reactions typically within minutes to 2 hours of intake of the offending food.
- Different people need different amounts and forms of the food for symptoms to occur, for example in a milder allergy a person may need to eat a reasonable portion size before they have symptoms; in a severe allergy they may just need a tiny amount.
- Some people even react to the food in contact with the skin, e.g. after being kissed by someone who has just eaten the food, and some people react if the food particles are in the surrounding air, e.g. if someone is cooking using that food.

Systems which can be involved in IgE mediated allergy include:

- *The skin:* e.g. hives (“urticaria”), itchy red rash, flushing, swelling of the deeper layers of the skin such as around the eyes (“angioedema”).
- *The gut:* swelling of the lips or tongue, vomiting, diarrhoea, abdominal cramps.
- *The airway:* sniffing and sneezing, swelling of the upper airway causing croup-like symptoms, spasm of the lower airways causing wheeze/asthma attack, difficulties in breathing.
- *The eyes:* swelling, watering, itching.
- *The circulatory (cardiovascular) system:* quick heartbeat, low blood pressure, fainting, collapse.
- *The central nervous system:* anxiety, children can become withdrawn, feeling of “doom” .
- Although such symptoms typically occur soon after the food is eaten, there may also be some delayed reactions 6-12 hours later.
- When the circulatory system is involved or the airway is significantly involved, the allergic reaction is severe, known as anaphylaxis (pronounced an-a-fi-LAK-sis). This can occur very quickly and is a medical emergency.

Non-IgE (delayed type) food allergy

- In this type of food allergy, symptoms occur hours to days after eating the offending food, and therefore it is often more difficult to recognise or associate with a certain food. Symptoms commonly involve the digestive tract, causing symptoms such as diarrhoea, colicky pain, severe reflux, vomiting, and blood in the stool or slow growth. Non digestive symptoms may include asthma and eczema. Remember that only a small proportion of eczema is caused directly by food allergy.
- The effect of delayed type food allergy on the central nervous system (CNS) is a controversial area. CNS disorders which have been linked to food allergy include migraine, the allergic tension-fatigue syndrome and hyperactivity. Several foods have been shown to trigger migraine: chocolate, red wine, yeast extracts, hard cheeses, milk and eggs. These effects are more likely to be intolerances.

Cross reactivity syndrome

- Being allergic to a food may also result in being allergic/reacting to a similar protein found in something else. For example, people who are tree pollen allergic may develop reactions to certain fruits or nuts.

- This is known as cross-reactivity. Cross-reactivity happens when the immune system thinks one protein is closely related to another.
- When foods are involved it is called oral allergy syndrome (OAS).

HOW IS FOOD ALLERGY DIAGNOSED?

- Diagnosing food allergy rests on careful evaluation of the patient together with test results.
- Taking a good history may reveal reproducible symptoms involved in eating certain food types. This is usually more obvious in the immediate reactions than in delayed type reactions.
- In immediate type allergies skin prick tests and/or blood tests (which detect IgE antibodies to various foods in the blood) are useful. Remember that a positive skin or blood test does not necessarily mean the person is allergic.
- If the diagnosis remains uncertain, or to test whether someone has outgrown their food allergy, an oral food challenge may be necessary. In an oral food challenge, initially tiny then increasing amounts of the food in question are given under close supervision to check for reactions.
- Laboratory tests are less useful for the delayed type allergies. For such allergies, the final mainstay of diagnosis remains the demonstration of relief of symptoms on removal of a given food item for a few weeks, and recurrence of symptoms on its re-introduction (elimination-challenge testing). A dietician trained in allergies will need to be involved. In a few cases, a biopsy specimen of the gut may be required.

There is no role for alternative allergy tests offered to the public by complementary practitioners, such as Vega testing, pulse testing and kinesiology. They have no evidence base and may lead to incorrect diagnosis and unnecessary food avoidance.

HOW IS FOOD ALLERGY TREATED?

- At the moment, there is no “cure” for food allergies. Avoidance of the offending food(s) is the mainstay of treatment. The patient needs to be educated about food labelling and hidden sources of the food.
- At the same time it is essential to provide a balanced diet which contains enough protein, calories, minerals and vitamins. Close co-operation between the patient, the doctor and a qualified dietician is important to ensure this.

- For immediate-type reactions the patient needs to be educated on how to recognise and treat an allergic reaction, in case they accidentally eat the food they are allergic to. This requires an emergency action plan and emergency treatment.
- For milder reactions, an antihistamine is given.
- For more severe reactions involving the airway or circulatory system, a dose of adrenaline may be needed and can be life-saving. The doctor will select whether or not the patient needs an adrenaline pen to keep at home/school if they are at risk of severe reactions.
- For delayed type reactions, strict avoidance of offending foods is the key to successful treatment. If the recommended diet is not providing adequate symptom relief, medication may have to be added to the treatment in certain cases. The doctor will usually decide on the appropriate medication, depending on the patient's symptoms and underlying condition.
- There are some experimental treatments for food allergy such as oral tolerance induction (oral immunotherapy) and anti-IgE antibodies, which are still very much at the research stage. Such treatment options are not routinely available in South Africa and internationally are still restricted mainly to the research setting.

WHAT IS THE LONG TERM OUTCOME OF FOOD ALLERGIES?

- Many food allergies are outgrown, for example cow's milk, soya, egg and wheat allergies are outgrown in the majority of cases by late childhood.
- There are some exceptions of adults who remain allergic to such foods. On the other hand, seafood and nut allergies are outgrown in only a minimum (20% or fewer) of people, hence these are usually allergies for life.
- It is important for the allergic patient to be monitored regularly by a doctor who has specialist training in allergies, in order to determine whether they are adhering to the recommended diet, whether accidental reactions are being treated appropriately, and whether there are signs that the allergy may be outgrown. The doctor will determine whether a controlled food challenge may be indicated to check whether the allergy has been outgrown.

NON ALLERGIC FOOD INTOLERANCES

- There are different types of non-immune reactions to food.
- Some people with food intolerance will tolerate small amounts of a certain food, only to become symptomatic if they have too much of it, for example wheat in people with irritable bowel syndrome.
- The most obvious example of a non-immune food reaction is simple toxicity or food poisoning by contaminated food.
- Some people who lack the enzymes necessary to digest certain foods. A common example is lactose intolerance. This is due to the lack of the enzyme “lactase,” which is essential for the digestion of the milk sugar lactose. Such a deficiency may be inherited or occur temporarily after a bad bout of gastroenteritis. A deficiency of the lactase enzyme leads to cramping and diarrhoea after the intake of dairy products.
- A further example of non-allergic food intolerance is the reaction caused by naturally occurring chemicals in food, or by food additives (chemical reaction). These reactions are similar to true allergic responses and may be mistakenly labelled as food allergy. Food additives include a variety of substances, such as preservatives, flavouring agents, colouring agents, etc. Well-known examples are tartrazine, monosodium glutamate (MSG), sulphur dioxide and benzoates.