A food allergy is a hypersensitivity reaction that involves the immune system (see what is an allergy). Although up to 20-30% of people believe they have a food allergy, studies show that between 2% and 5% of people suffer from a definite food allergy.

There are 2 main groups of food allergies, the more common “typical” immediate type (IgE-mediated) food allergies, and the rarer “delayed type (non-IgE mediated) food allergies. These types of allergies present quite differently as they have very different underlying mechanisms.

**Immediate type (IgE-mediated) food allergy** is the most common type of food allergy. Reactions occur within minutes to 2 hours of eating the food. Immediate type food allergy causes the typical “immediate allergy reaction”, ranging from mild skin reactions to severe, life threatening (anaphylactic) reactions. (See food allergy pamphlet)

**Delayed type (Non IgE mediated) food allergy** is less common than immediate type food allergy. It occurs hours to days after eating the offending food and is often more difficult to recognize. (See delayed food allergy pamphlet).

**HOW IS FOOD ALLERGY DIAGNOSED?**

- The first step is for the doctor to hear all the details about what was eaten and exactly what reactions occurred. This will help indicate whether the reaction was an allergy or not and if it was an allergy, what kind of reaction it was and whether it was mild or severe.
- For immediate reactions a blood test and/or skin prick tests can be done to show the presence of the IgE antibodies. If these tests are negative an immediate type allergy is almost always ruled out. A “positive” result supports, but does not prove an immediate type food allergy, unless the values are very high.
- Skin prick tests are done by placing a few drops of food on the skin and making a prick through the droplet (see skin prick testing).
- In cases which are uncertain, the allergist may recommend a supervised food challenge to test for food allergy.

http://www.allergyfoundation.co.za
FOOD CHALLENGE TESTS

WHAT IS A FOOD CHALLENGE?

A food challenge entails giving initially tiny, then increasing amounts of food to the person in a controlled setting. We bring the child in to hospital or clinic for the day and give them small amounts of the food to which they had a positive allergy test or previously been allergic to, to see if there is any reaction. This is done in a very controlled way and the doctors and nurses will be there with you and your child to watch them closely. That way we can notice reactions early and treat them if needed.

If the child has no reactions to a very tiny amount of the food, then we will give them a little more, step by step, until we reach the top dose. The top dose will be similar to a normal “portion” of the food, for example one cupful of milk. In between each dose we will gently examine the child to look for any reactions, and also measure the temperature, pulse rate, heart rate, blood pressure and oxygen levels.

If the person eats the top dose without a reaction, the challenge has been passed and the person can eat the food regularly from now on. (Strangely this is called a “negative” challenge). The nurse will also phone you at home after 2 days to make sure everything is alright and to ask if the child’s eczema has got any worse.

If there are any reactions along the way, we will stop the food challenge and treat the child if necessary. This is failing the challenge; the person is allergic and should continue to avoid the food. (This is called a “positive” challenge).

How long will the challenge take?

- You and your child will need to be in hospital for at least a whole morning. Giving the doses of food takes up to 2 hours because we leave a 20 minute gap between each dose.

- After the challenge, we will keep an eye on the child for at least 2 hours if there has been no reaction. This is to be safe that the child remains well and that there are no “late reactions.” If there has been a reaction, we will keep an eye on your child for 2 hours or longer until we are happy that all is well. Sometimes, if children have a bad reaction, we may decide to keep them in hospital overnight. This is very rare.
Will a challenge hurt my child?

- The actual food challenge is not painful in any way. Some children may be a bit frightened of having their temperature and pulse etc taken but it is not sore.
- In a few children who are at higher risk of a reaction, especially those with asthma, we may consider putting a drip up before the challenge.
- If children have a reaction during the challenge, the doctors and nurses will be right there to treat the child as quickly as possible. Most reactions are mild, such as rashes, and the child may need to take some antihistamine syrup. A few children will have more severe reactions, and these children may need an injection or even a drip. We do not expect this in many children at all because we start off with such small doses of food and watch the children so carefully.

What do you need to do before a challenge?

- Your child will need to be off some of their regular medications for up to a week before the challenge. Your nurse will give you details of these.
- If your child has been unwell in the 2 weeks before the challenge, please let the nurse know a few days before the challenge so that we can decide whether we need to postpone the challenge. The nurse will also phone you 2 days before the challenge to make sure all is well.
- Before a challenge starts, we ask a few questions to make sure all is well, have a quick look at the child and take their observations such as temperature and pulse.
- On the morning of the challenge, your child can have their regular milk and/or a light breakfast between 6 and 7 am. After that they should not eat or drink anything (except a few sips of water) before the challenge.
- We may ask you to bring along some of the child’s favourite food or regular milk so that we can mix the test food into it for the child to eat.
- Please dress the child in comfortable clothes that are easy to lift up for examining the child, and a spare set of clothes.
- Bring along any favourite toys/dummies/blankets. It is a long morning for the children and we would like to make it as nice as possible for them!
FOOD
CHALLENGE
TESTS

Elimination – challenge testing

- For delayed type allergies there are not currently any validated laboratory tests. The usual blood and skin tests are not reliable in excluding a delayed type reaction. In this case the proof of a specific food causing symptoms relies on stopping to eat that food item for a few weeks ... if symptoms go away it is then critical to “re-challenge” the person with the food to prove that symptoms come back. (see delayed food allergy pamphlet)

- An “elimination-challenge” test is NOT the same as a food challenge test done for immediate type reactions. Because there is no risk of an immediate severe reaction, it can be just reintroduction of a normal portion of the food, and does not need to be done under special conditions.

A medical specialist with a special interest and skill in allergy might be able to help. See the list of health professionals with skills in allergy on the AFSA website.