

What is a food challenge?

- A food challenge means your child is given a food to eat in order to determine if they are allergic to the food.
- Food challenges usually occur in hospital, either on a ward or in the outpatients' clinic. Sometimes parents do these at home if the risk of a severe reaction is considered to be low.

Why can't you diagnose allergy on skin or blood tests without doing a challenge?

- It is possible that a skin test that is larger than a certain size or a blood test that is above a certain level may be able to predict that your child will react to that food if they eat it.
- However, at this time we do not know what size skin test reaction or blood test level to use to predict allergy 100% of the time. This is especially true for children who have not recently had an allergic reaction to the food being tested.
- Also, even if tests could predict that your child will have an allergic reaction based on skin or blood tests, they would still not be able to predict how severe that reaction will be.
- Many children who have a positive skin test or blood test for a food will not have any reaction if they eat that food.
- Sometimes a child will have a positive skin test for a food they have never eaten; this does not always mean they are allergic to the food.
- Many children have positive skin tests for foods they eat often and without a reaction.
- Some children develop hives if their skin comes into contact with a food but have no reaction if they eat it.
- A clear demonstration of an allergic reaction after eating a food is the only way to be completely sure about allergy.

How does a food challenge work?

- On the day of the food challenge your child will be admitted to the Day ward at hospital or be seen in the OPD.
- A blood test for food antibodies may be done if your doctor thinks it is necessary and one has not been done already.
- Emergency medications such as adrenaline are prepared beforehand in case your child has an allergic reaction during the challenge, which requires medication. Often no medication is necessary, even if they have a reaction, the reaction may settle down on its own.
- Your child will need to eat increasing amounts of the food being tested.
- This is often best achieved by mixing it with something they really like to eat e.g. custard, fruit puree or yogurt. It helps if you bring their favorite soft or liquid food with you.
- We usually begin with a very small (trace) amount of the food and increase the amount every 20 to 30 minutes or until a reaction occurs which requires that we stop the challenge.
- Should your child react in a way that is not severe e.g. hives only, the doctor may decide to continue the challenge with a larger amount of food to determine the effect of an accidental exposure to a larger amount outside of hospital.
- If your child manages to eat the final test amount of the food without a reaction, we will observe them for two hours more to minimize the risk of a 'delayed' reaction on the way home.

What will you learn from the food challenge?

- You will know if your child is allergic to the food at all.
- You will know how much of the food it takes to provoke an allergic reaction. But perhaps not how much is likely to give a severe reaction.
- You will have an indication of the expected severity of an allergic reaction if your child eats approximately the same amount of the food in the future.

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Why is this useful?

- If your child is shown not to be allergic during the challenge it will be a great relief for you and your family. Food allergies can be a source of much anxiety.
- By knowing if your child is allergic to trace amounts of a food, you will know whether you need to be concerned about accidental exposure to trace amounts that may be hidden in other foods.
- You will know whether it is necessary to avoid food products that for example have labeling that says 'may contain traces of nuts, peanut, egg, milk' etc.
- Future allergic reactions are not 100% predictable, but if your child has a minor reaction to a fairly large amount of the food, you may be reassured that if they are accidentally exposed to a trace amount, the reaction is very unlikely to be life threatening.
- This information is useful in deciding whether or not your child should carry an EpiPen (emergency adrenaline syringe) with them.

Can challenges be wrong?

- No test is completely foolproof. A child might later be OK even if they react severely during a challenge.
- Rarely, a more severe reaction can happen after a challenge that produces a mild reaction or a child who has no reaction during the challenge can react to the same food on a future occasion.
- The severity of an allergy or the amount of food that will provoke it may change over time.
- That is why it is important to know the amount of food your child is able to tolerate with either no reaction or only a mild reaction. Usually the total amount of food eaten during a challenge is similar to a usual helping size.
- The challenge can't predict what may happen if a larger amount of the food is eaten in the future.
- A challenge is nevertheless the most reliable test that we have at the present time.

Is it safe to do a challenge?

- If it is already known or strongly suspected that your child is at risk of a severe reaction from a small amount of food, a challenge would not be recommended.
- The challenge will be carried out gradually so that your child will not be given more food than necessary to get the desired information.
- The challenge will be performed under conditions that allow rapid treatment should that be necessary.

It is much safer to do a challenge in hospital than to have the food exposure occur accidentally at home or outside.

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