

Patient information

Allergen Challenge (or Provocation) Tests

Dermatology and Allergy Department

What is an allergen challenge test?

An allergen challenge test involves directly exposing you to a substance to try to find out whether you are allergic to it.

We usually use the term for situations where we are aiming to expose you to an amount of allergen (usually by swallowing it or being injected with it) which we would expect to cause symptoms if you are allergic to it. The whole point of a challenge test is to provoke symptoms if they can be provoked.

What substances can be tested in a challenge test?

Generally, anything someone might be allergic to. However, in practice, challenge tests are mainly used for foods and medicines.

There are some conditions which have to be satisfied for a challenge test to be considered:

- 1. There has to be a good reason to want to know whether or not you are allergic to the substance tested.**
 - There is no point in doing a challenge test if the result will not change anything.
 - The reason can be medical — e.g. a negative test can allow an important medication to be given.
 - The reason can be concerned with how a wrong diagnosis of allergy might affect your lifestyle or wellbeing — e.g. a negative test can mean you do not have to avoid a particular food and you do not need to worry about accidental exposure.
- 2. The expected benefits outweigh the risks.** There is always some risk in doing a challenge test — this is discussed below. You need to be happy that the challenge test is worth doing and the risk is worth taking.
- 3. There is no other test which can help to confirm or exclude the possible allergy.**
- 4. You are not known to have any condition which would make the procedure too risky.** Some medical conditions (e.g. asthma, chronic lung disease or cardiovascular (heart, circulation) disease) might make a challenge test more dangerous and this needs to be weighed up when deciding whether to go ahead with a challenge test.
- 5. You are not being treated with certain drugs** (e.g. beta-blockers or ACE inhibitors).

What are the risks of a challenge test?

Challenge tests are done carefully and gradually, starting with extremely small amounts of the test substance — in this way, we aim to diagnose an allergic response at a stage when only mild (but still recognisable) symptoms have occurred.

The discomforts associated with the food/drug challenge are generally no more than those encountered when eating the food or taking the drug. Symptoms usually are short-lived (less than two hours), and may include an itchy skin rash, nausea, abdominal discomfort, vomiting, swelling of lips or face, sneezing, or wheezing.

However, we can never absolutely guarantee a challenge test will not result in a severe, life-threatening reaction (anaphylaxis). This is a recognised risk but is extremely rare. Therefore, a challenge test should be seen as something which carries a low risk of severe harm.

The major risks include breathing difficulties and a drop in blood pressure. While a severe outcome such as death or severe permanent disability is theoretically possible, this has not occurred from medically supervised challenges at this centre.

The risk of a reaction is reduced by starting the challenge with very small amounts of food/drug, increased gradually and stopping the challenge at the first sign of a reaction. Medications, staff and equipment are immediately available to treat allergic reactions should they occur.

If you consent to a challenge test, you are accepting there is some risk involved and you are satisfied this is outweighed by the potential benefits.

How is the challenge test done?

Challenge tests are done in the allergy clinic. Testing can take several hours — it is worth bringing something to read. Once the test starts, you should not leave the clinic waiting area without first checking with the staff. After the last exposure, you need to wait behind for at least an hour, sometimes longer, to ensure all is well. If you decide you want to stop the test for any reason, you can do so at any time.

First, you will be asked to sign a form giving your informed consent to the test. Then we will record some basic observations – pulse, blood pressure and breathing test (peak flow reading).

We will only test with one substance at a time and you will be given increasing amounts of that substance until you develop convincing symptoms of an allergic response **or** you have reached a reasonable level of exposure without symptoms **or** you decide you want to stop (for whatever reason). If you do have an allergic reaction, we will treat it, and we will want you to stay in the clinic until we are happy it is safe to let you go.

It is worth being aware that, during allergen challenge tests, it is quite common for patients to experience non-specific symptoms (such as light-headedness, dizziness, faintness or strange sensations) which are not due to allergy.

These symptoms probably occur for psychological reasons – they tend to improve with reassurance and get better (rather than worse) as the challenge test proceeds. We do not stop the challenge test for symptoms like this, unless you want to stop.

What if I don't want a challenge test?

Having a challenge test is entirely voluntary. You might decide you do not want to have one. Some patients prefer simply to assume they are allergic to the substance in question and avoid it in future. Clearly, this avoids any risk associated with a challenge test but leaves some doubt about whether the allergy genuinely exists.

Getting ready for your challenge test

Please avoid taking any antihistamine medication for three days before the challenge test.

We advise you have someone to accompany you on the day of the test and you do not have to drive yourself home afterwards.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

If you have any concerns or queries please contact the Allergy Clinic:

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