

Antibiotic Allergy Challenges Frequently Asked Questions (FAQ)

Q 1: What is an antibiotic allergy challenge?

When antibiotic allergy is uncertain, skin testing and/or a medically supervised antibiotic allergy challenge can be conducted to confirm or exclude antibiotic allergy.

An antibiotic allergy challenge is a procedure where doses of the suspected antibiotic are given, either as a single dose or as graded dosing, starting from a small dose and increasing the amount of drug in 2-3 steps. This procedure can take up to 3 hours, or longer if a reaction occurs. The challenge is conducted by a doctor or specialist nurse under medical supervision to observe for reactions, usually by a clinical immunology/allergy specialist, or other medical specialist.

Q 2: Why are antibiotic allergy challenges performed?

There is increasing evidence that most people who are labelled as allergic to antibiotics may not actually be allergic to the antibiotic. This can have a negative impact on people with unconfirmed allergy, as it may lead to treatment with less effective antibiotics that may have more side effects.

Antibiotic allergy challenges are therefore important, as they are used to confirm if a person with suspected antibiotic allergy is truly allergic. If a person is confirmed to have an antibiotic allergy, the challenge may also determine the type of reaction.

Q 3: What are the different types of reactions to antibiotics?

- **An allergic reaction to an antibiotic is called 'immediate'** when it occurs within one to six hours after taking a medication, or 'non-immediate' when the reaction occurs after 24 hours of starting a medication.
- **Mild or moderate allergic reactions** to an antibiotic can result in symptoms such as itchy rashes (hives) and swelling (angioedema). Rashes due to infection can be mistaken for an allergic reaction and sometimes the combination of a viral illness and antibiotic administration can cause a rash, whereas when the drug is used for its correct indication (a bacterial infection), there is no rash.
- **Severe non-immediate rashes** are associated with fever, flu-like or other systemic symptoms, and can be life-threatening. These are called severe cutaneous adverse reactions and require urgent specialist care.
- **Severe immediate allergic reactions (anaphylaxis)** to antibiotics affect breathing, the heart, and blood pressure. Anaphylaxis can be life threatening and requires urgent medical attention. Anaphylaxis due to antibiotic allergy is more likely when medication is given by an injection, than if it is taken orally.

Q 4: How do you prepare for an antibiotic allergy challenge?

It is important that the person being challenged:

- Is in good health for the antibiotic challenge to go ahead. If the person being challenged feels unwell prior to their appointment, contact the clinic to reschedule the challenge.
- Has not suffered from wheezing in the week prior to the challenge, if they have asthma. If in doubt, contact the clinic the day before the appointment to discuss this.
- Understands the antibiotic challenge process:
 - Most people will have the oral challenge, which means the antibiotic is given into the mouth to observe for reactions. This is usually done in 2-3 steps.
 - Skin testing may be performed in people with a history of an immediate reaction before they are challenged.
 - An intravenous (IV) challenge (through the vein) may also be performed in cases where the person has had a prior reaction to an IV antibiotic.

Q 5: Who requires skin testing before they can have an antibiotic allergy challenge?

People with a history of an immediate reaction to an antibiotic will usually have skin testing performed prior to the oral challenge:

- Skin testing is where a small amount of antibiotics is 'pricked' and then injected into the top layer of the skin on the forearm to observe for reactions.
- The oral challenge will only proceed if there is no reaction to the skin testing.

These tests occur under the supervision of medical staff who are trained in handling the unlikely event of a severe immediate allergic reaction (anaphylaxis).

Q 6: How are reactions managed during an antibiotic allergy challenge?

If a reaction occurs during the challenge, the doctor will be consulted and a decision on continuing or stopping the challenge will be discussed. One of the following outcomes will be determined:

- If reactions are transient (very mild), the challenge may continue.
- If reactions are mild, the challenge may stop or continue.
- If there is a severe, immediate allergic reaction (anaphylaxis), adrenaline (epinephrine) will be given and the person with anaphylaxis will stay in hospital to be monitored for a minimum of four hours.

After the antibiotic challenge the supervising doctor or nurse will give you information on what to do at home.

Note: If an antibiotic allergy challenge is performed in a controlled medical environment with medical and nursing staff experienced in treating anaphylaxis, the way an allergic reaction is treated in a hospital may vary from the instructions on the ASCIA Action Plan for Anaphylaxis. This is because hospital staff have ready access to blood pressure and oxygen checks, oxygen masks and other equipment.

It is important to follow instructions on the ASCIA Action Plan when not in a hospital setting.

Q 7: What happens if no reaction occurs in the antibiotic allergy challenge?

If a person does not have a reaction in the antibiotic allergy challenge, they may be advised to go home to complete a 3-5 day course of the antibiotic they are suspected to be allergic to, as sometimes delayed reactions can occur.

Q 8: What happens if a true antibiotic allergy is diagnosed?

If a true antibiotic allergy is diagnosed after a skin test or challenge:

- The antibiotic must be avoided.
- The antibiotic allergy needs to be recorded in hospital, GP and specialist records and where possible, uploaded to the person's My Health Record.
- A green ASCIA Action Plan for Drug (Medication) Allergy* and Drug Allergy Record should be completed by your doctor. These forms are available online at www.allergy.org.au/drug-allergy
- Carrying or wearing of medical identification should be considered.
- It is not usual to prescribe an adrenaline injector (such as EpiPen® or Anapen®) for a drug allergy.

* If a person already has a red ASCIA Action Plan for Anaphylaxis for other allergies, their antibiotic allergy can be added to that plan.

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