Sulfonamide Antibiotic Allergy Frequently Asked Questions

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This document uses spelling according to the Australian Therapeutic Goods Administration (TGA) approved terminology for medicines (1999) in which the terms sulfur, sulfite, sulfate, and sulfonamide replace sulphur, sulphite, sulphate, and sulphonamide.

Q 1: What is a sulfonamide antibiotic allergy?

Sulfonamide antibiotics can cause allergic reactions that range from a mild to severe blistering rash, and can cause severe allergic reactions (anaphylaxis). Sulfonamide antibiotics that are available on prescription include:

- **Sulfamethoxazole**, an antibiotic that is used in combination with trimethoprim (Bactrim, Resprim, or Septrin).
- Less commonly used sulfonamide antibiotics such as **sulfadiazine** (tablets, injections, or creams), **sulfadoxine** (for malaria), and **sulfacetamide** (eye drops).
- **Sulfasalazine** (Salazopyrin, Pyralin), which is a combination of **sulfapyridine** (a sulfonamide antibiotic) and a salicylate that is used in inflammatory bowel disease or arthritis.

People who are allergic to one sulfonamide antibiotic are at risk of reacting to other sulfonamide antibiotics. Sulfonamide antibiotic allergy is not always lifelong.

If you have had an allergic reaction to a combination antibiotic (such as Bactrim, Resprim, or Septrin), there is no way of knowing whether the allergy was to sulfamethoxazole or to trimethoprim. Trimethoprim (Alprim, Triprim) and sulfonamide antibiotics should both be avoided unless it is confirmed that you are not allergic to trimethoprim.

Some people who have had an allergic reaction to a sulfonamide antibiotic are labelled as sulfur allergic or allergic to sulfur, sulphur, or sulfa. This wording should not be used since it is unclear and can cause confusion. Some people wrongly assume that they will be allergic to non-antibiotic sulfonamides or to other sulfur containing medicines or sulfite preservatives.

Q 2: What else contains sulfur?

Sulfur is an element which occurs throughout the human body, and it is not possible to be allergic to sulfur itself. Allergic reactions to sulfonamide antibiotics do not increase the likelihood of allergy to sulfur powder, sulfite preservatives, sulfates (in medicines, or soaps and shampoos), or non-antibiotic sulfonamide medicines.

Elemental sulfur powder is commonly used in gardening, and while irritation may occur from skin contact or inhalation, allergy has not been described.

Sulfates are in some injectable drugs as sulfate compounds, such as heparin sulfate, dextran sulfate, morphine sulfate. The sulfates in soaps (such as sodium lauryl sulfate) are strong detergents and can irritate the skin or eyes. However, sulfate itself does not cause allergic reactions.

Sulfite preservatives are commonly known as sulfur dioxide and metabisulfites, with preservative numbers 220-228. Sulfites can be used to preserve flavour and colour within food, inhibit bacterial growth, stop fresh food from spoiling, and help preserve medication. Sulfites are most often found in wine, dried fruit, and dried vegetables. Sometimes they are used in sausages and salads. They can also occur naturally in low concentrations. Sulfites can cause adverse reactions which are like allergy but do not involve the immune system and are therefore called intolerances. The most common reactions are asthma symptoms (in people with underlying asthma), and rhinitis (hay fever-like) reactions. Occasionally urticaria (hives) may occur, and very rarely anaphylaxis.

There is no relationship between sulfite sensitivity and sulfonamide antibiotic allergy.

Non-antibiotic sulfonamide medicines such as some fluid, diabetes, and arthritis medicines contain sulfonamide components. These are not similar enough to sulfonamide antibiotics and therefore do not need to be avoided in people who are allergic to sulfonamide medications as the allergy rarely cross-reacts.

Q 3: How is sulfonamide allergy diagnosed?

Skin and challenge testing may be carried out under the supervision of a clinical immunology or allergy specialist. These tests may help confirm if it is a trimethoprim allergy or a sulfamethoxazole allergy in people who have reacted to Bactrim, Septrim, or Resprim. Skin tests have not been validated and need to be interpreted with caution.

Q 4: How is sulfonamide antibiotic allergy managed?

People who have had an allergic reaction to one sulfonamide antibiotic are usually advised to avoid all sulfonamide antibiotics. People who have had anaphylaxis to sulfonamide antibiotics may be advised to carry medical identification.

Desensitisation is a procedure done by a clinical immunology/allergy specialist to induce temporary tolerance to sulfonamides in people with confirmed sulfonamide allergy. Desensitisation may be carried out especially when a sulfonamide antibiotic is the only suitable drug to use.

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