

## 1. Calcium supplement in a child

*A dietician emails you for advice on choice of calcium supplement in a child with allergy to oranges and lactose intolerance.*

Suggested questions to ask include:

**(a) What is the nature of the allergy?**

This is an open question designed to gather information on how the allergy presents. The answer determines how important it is for the child to avoid the excipients. Sometimes a parent might use vague statements to describe an allergy such as “he didn’t get on with them” or “they upset him”. Although this evidence is important in helping you choose the right product for the child, it may make you doubt the existence of true allergy. Calcium itself can cause diarrhoea so it may be necessary to remind the dietician of this if the “allergy” is GI upset.

If the suspected reaction was an allergy (e.g. rash or bronchospasm) then clearly it is important to avoid further exposure. If possible, check that the timing of previous exposure suggested that oranges were responsible and that there isn’t another more obvious cause. Be aware that occasionally patients may claim an allergy to an excipient in a medicine while continuing to receive it, perhaps unknowingly, in much bigger quantities from other sources without problems.

**(b) Is the allergic reaction to oranges, or to artificial orange flavours as well?**

The two are different. Orange flavours are synthetic and may not necessarily provoke the same reaction as whole oranges which contain a wide range of other chemicals. Orange flavours are used in pharmaceuticals, foods, and confectionary.

**(c) Have any calcium supplements already been tried, and what happened?**

This not only saves you time by confirming which one(s) the patient does not tolerate, but also provides some evidence that the reaction is real.

**(d) What dose of calcium is required and in what form?**

The dose may determine which formulations are worth checking for orange flavours and lactose. If it is a small dose, then the suitable calcium preparations available will be limited. Likewise, if an oral syrup or a soluble tablet is required there are not many brands to choose from.

Suggested sources:

- You would start with SmPCs via the emc or MHRA site and maybe ring manufacturers’ medical information departments if you couldn’t find an SmPC.

## 2. Changing formulation associated with rash

*A registrar on your ward asks about her patient who has developed a rash after swapping from cefaclor suspension to cefaclor capsules. She asks for your opinion on whether the cefaclor capsules could be the cause of the rash.*

Suggested questions to ask include:

**(a) Has the patient any known hypersensitivity to other drugs, excipients or foods?**

The capsules might include something to which the patient is already known to be allergic. Alternatively, the excipients could include something chemically similar to a known allergen.

**(b) What is the clinical presentation of the rash? Its timing, resolution, appearance?**

When did the rash begin in relation to starting cefaclor capsules, and has it improved if the capsules have now been stopped? This helps you to ascertain how likely it is that something in cefaclor capsules was to blame. You will also need to ask about the presentation of the rash – its appearance, distribution and intensity – because the registrar has asked you to determine which excipients might be responsible. To do this you need clinical details to help you. Was it a maculopapular rash, a photosensitivity disorder, eczema...?

**(c) Are there any other symptoms?**

Again this information is necessary to help you advise the registrar about whether an excipient might have been the cause and if so, which one – for example is there fever, bronchospasm or facial swelling?

**(d) Which brands of cefaclor capsules and suspension were taken?**

This is essential to know from a practical point of view since excipients will not be exactly the same for different manufacturers' products. The registrar may not know this and so you will need to establish what brands are available on the ward.

**Suggested sources:**

- This question is different to the first one, above, in that you need to advise the registrar about which excipients are most likely to cause the reaction, if any. So, although SmPCs and manufacturers' medical information departments will help to identify excipients, you will need to use sources which describe reactions to excipients to ascertain likelihood. These sources could include Embase/Medline, and resources such as the Pharmaceutical Excipients publication from Pharmaceutical Press or Martindale, if your MI centre has access.