

Sulphites and Airway Symptoms

Advice provided by allergyuk.org



Sulphites are preservatives used in the production of some foods and drinks. The Romans first discovered that adding certain substances (which we now know contain sulphites) to foods makes them last longer, and helps preserve their colour and flavour.

> Can sulphites cause allergy?

It is rare for someone to be allergic to sulphites. However, sulphites can cause allergy-like symptoms in people with underlying asthma and allergic rhinitis. The most common reaction is wheezing, tight chest and cough. The incidence of sulphite sensitivity in the general population is thought to be less than 2%, but this rises to between 5 and 13% in asthmatics.

Severe reactions to sulphites (anaphylaxis) have been reported but are very rare. Some people with urticaria, a type of skin rash, can also experience worsening of symptoms after eating sulphites.

> How do sulphites cause symptoms?

Sulphites work as food preservatives by releasing sulphur dioxide, a gas. Sulphur dioxide is an irritant gas that can cause the airway to become irritated and

constricted. It is thought that in most people sensitive to sulphites, the gas is released when sulphite-containing foods interact with acid in the stomach. The gas disperses into the stomach but also back up and into the airway, causing symptoms.

Rarely, some people can have IgE antibody to sulphites, which can cause an allergic reaction.

> What foods and drinks contain sulphites?

Sulphites are important, as they help preserve many foods and drinks and prevent them from 'going off'. Sulphites are also used in the production of most wines, as they stop the fermentation process, which would otherwise make the wine turn sour.

Foods which may contain added sulphites include (check labels):

- pickled foods and vinegar
- dried fruit eg dried apricots, prunes, raisins etc
- maraschino cherries
- tinned coconut milk
- beer, wine and cider
- vegetable juices
- some soft drinks
- grape juice
- bottled lemon juice and lime juice
- condiments (bottled sauces etc.)



For more help, contact the Allergy UK helpline:

9am to 5pm,
Monday to Friday

01322 619 898

Key facts

> Sulphites help preserve many foods and drinks

> Sulphite sensitivity affects up to 13% of people with asthma

If you have any comments about this factsheet, contact the Allergy UK Helpline - 01322 619 898.

Last review date: 01/1/2015

Next review: 11/2018

VERSION 3

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- guacamole
- dehydrated, pre-cut or peeled potatoes
- fresh or frozen prawns
- some processed meat products

EU food labelling rules require all food sold in the UK to show clearly on the label if it contains sulphur dioxide or sulphites at levels above 10mg per kg or 10mg per litre (or if one of its ingredients contains it). Bear in mind that non-pre-packaged foods (e.g. 'loose' foods or foods prepared on the premises, including takeaways and restaurant food) are also covered by this labelling requirement, but if in doubt, it is always wise to ask.

The following food additives contain sulphites; the same chemicals may be found in medications or cosmetics:

- E220 Sulphur dioxide
- E221 Sodium sulphite
- E222 Sodium hydrogen sulphite
- E223 Sodium metabisulphite
- E224 Potassium metabisulphite
- E226 Calcium sulphite
- E227 Calcium hydrogen sulphite
- E228 Potassium hydrogen sulphite
- E150b Caustic sulphite caramel
- E150d Sulphite ammonia caramel

> Do medicines contain sulphites?

Sulphites are sometimes used in medicines, as a preservative. These include topical creams and eye drops. However, since most people only react to sulphites when the substance comes into contact with acid in the stomach, it is very rare for these medicines to cause any adverse effects.

Some injection drugs (especially local anaesthetics) contain sulphites (generally sodium metabisulphite) as a preservative. If you are sulphite sensitive, ask your pharmacist to check that your medicine is sulphite-free. Check the ingredients on the patient information leaflet for any medicines you are given, including those that you buy yourself over-the-counter.

Some adrenaline injections and auto-injectors contain sulphites but there is no evidence that this causes problems, and adrenaline should be given as prescribed in an emergency.

Note that sensitivity to sulphites is different from allergy to sulphonamide-containing antibiotics. Sulphonamide is a different substance from sulphite, and used to be commonly found in antibiotics. However, due to allergies to this particular compound, the use of antibiotics containing sulphonamides has decreased, as alternatives are often available.

> Sulphites in cosmetics

Sulphites may be present in hair colours or bleaches, skin lighteners, fake tanning lotions, body lotions, shampoos and shower washes, moisturisers etc.

> Diagnosis

Most people with sensitivity to sulphites will not have a positive allergy test. Keeping a food diary to show to your healthcare professional helps make the diagnosis. Sometimes, your health professional may recommend an elimination diet of foods containing sulphites. This may be followed by a food challenge but this should only

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happen under medical supervision.

> Management

Once the diagnosis has been made, treatment consists of avoidance of sulphite-containing foods, medicines and cosmetics. The degree to which this must be done depends on how sensitive the individual is. Some people who suffer mild sensitivity will only need to avoid foods containing the highest sulphite content; others with more severe sensitivity will need to be scrupulous in avoiding even trace amounts in foods, medicines and cosmetics.

Symptoms arising from exposure to sulphites are treated according to the symptoms (e.g. anti-histamines or steroids for rashes, inhalers for asthma).

Some manufacturers produce test kits which can detect the presence of sulphites in food and drink. However, these are not 100% reliable.

If you are sensitive to sulphites, the most important thing is to know how to treat your symptoms and be able to do so when, for example, you are eating away from home.

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