SULFA, SULFITE, SULF-WHATEVER ALLERGIES  by Ann Gerhardt MD
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Many people who say they have sulfa allergy believe that they will react to anything with ‘sulf’ in its name or structure. (If you hail from the British Isles or former colonies, you might spell it ‘sulph’.) Except for a few, rare, highly allergic individuals, this is not the case. All substances with names that start with ‘sulf’ are not related, and allergy to one ‘sulf’ compound may not translate to allergy to a different one.

There are three major groups of ‘sulf’ substances that cause reactions - sulfonamide antibiotics, sulfites and DMSO / MSM. The reaction to sulfonamide antibiotics is a true allergy, involving antibodies and histamine, that escalates with each subsequent exposure. Sulfites, DMSO and MSM cause an irritant reaction, the degree of which is determined by a person’s innate sensitivity and amount consumed.

Sulfur is an element, like oxygen and helium. It not only is not toxic, but, as part of amino acids (think protein), it is essential for life. Anyone who couldn’t tolerate sulfur would be dead, so no living person reacts to sulfur itself.

Sulfur dioxide and sulfites cause an irritant reaction in some people, usually asthmatics or highly allergic individuals. Sulfites may trigger asthma, hives, rash, sneezing, swollen or scratchy throat, stomach pain, nausea or diarrhea. Sulfate causes no adverse reaction. It is a natural by-product of metabolism which is excreted in urine.

The food industry uses sulfites and sulfur dioxide as food preservatives to prevent discoloration and browning. Their use on salad bar foods has been banned, and, in general, use has declined recently.

Sulfur dioxide and sulfites are added to some (but not all) processed foods and meats, fruit juices, wines, pharmaceutical products, dried fruits, beers, sauces, pickles, hamburger patties, soft drinks, potato products and vinegar. If present, one of the sulfites will be listed in the ingredients list. Sulfites are also used as preservatives in some medical intravenous solutions.

**SULFITES**
- sodium sulfate
- potassium sulfite
- sodium metabisulfite
- potassium metabisulfite

Asthmatics and sulfite-reactive individuals may also be sensitive to tartrazine (yellow dye #5) which contains two sulfite groups. The symptoms are exactly the same as for sulfite sensitivity.

Tartrazine is a synthetic, lemon-yellow, food coloring agent derived from coal-tar. Any yellow, green or orange colored food, pill or capsule, or food that is supposed to taste like mustard, lemon or cheese may also contain this dye.

‘Sulf’ (sulfonamide) antibiotics contain a specific chemical structure that is metabolized to a compound that ~5% of people can’t clear well from the body. This causes an allergic reaction.

**SULFONAMIDE ANTIBIOTICS**
- sulfamethoxazole (Bactrim, Septra)
- sulfadiazine (Microsulfon)
- sulfanilimide
- sulfisoxazole (Gantrisin)
- sulfacetamide (Klaron, Blephamid)
- sulfanilamide (AVC cream)
- sulfabenzimide/sulfacetamide/sulfathiazole (Triple Sulf cream)

The reaction may be as mild as a skin rash or fatigue, or as severe as high fever, headache, gastric problems, anaphylaxis or life-threatening skin and internal membrane erosion. Reactions may occur after pill, skin cream, vaginal, intravenous or eye cream exposure.

There are also non-antibiotic sulfonamide medications: For some unknown reason, less than 10% of people who are allergic to sulfonamide antibiotics react to these other sulfonamides. Non-antibiotic sulfonamides include hydrochlorothiazide, furosemide, glyburide, celecoxib and probenecid.

Methylsulfonylmethane (MSM) and dimethyl sulfoxide (DMSO) are sulfur-containing supplements. They are not sulfonamides, but can cause adverse reactions, including nausea, headache, and rash.

Each of these substances, first DMSO in the 1960s and more recently MSM, has been touted to treat many...
conditions, particularly those related to pain. The only approved use for DMSO is injection for interstitial cystitis (inflammation of the bladder). DMSO, first made in 1866, is prepared from byproducts of paper manufacturing and used as an industrial solvent. MSM is derived from DMSO.