

# SULFITE SENSITIVITY

by Ronald L. Myers, CNC

Patients suffering from *sulfite* sensitivity may mistakenly report having *sulfur* sensitivity. According to FDA estimates, only 1% of our population suffers from sulfite sensitivity and those suffering from true sulfur sensitivity is even less than this. Statistics notwithstanding I am getting more and more calls about how to help patients with *sulfite* sensitivity. In this issue I will cut to the chase giving you the research available regarding sulfite sensitivity; *what is it really*, what can be done to help those suffering from it and what are common sources of sulfur and sulfite in our diet today.

This issue is a concern to practitioners involved in nutritional therapy because they are trying to design supplement programs for their arthritic patients (usually), using some type of sulfur-bearing product which the patient reports they cannot take due to a *sulfur* (?) sensitivity, thereby impairing the hoped for effectiveness of the protocol.

## WHAT IS SULFUR SENSITIVITY??

Is this some type of “allergy” to sulfur? Not really. Sulfur is essential in the diet and we obtain it primarily from foods rich in the sulfur-bearing amino acids methionine and cysteine.<sup>1</sup> It appears that *sulfite sensitivity* as it is usually referred to, is caused by a relative deficiency of the enzyme sulfite oxidase. Dorland’s Illustrated Medical Dictionary describes this as an oxidoreductase class enzyme that catalyzes the reaction from sulfite to sulfate. This is a mitochondrial molybdohemoprotein meaning molybdenum is a necessary co-factor in the synthesis of this enzyme. Not enough molybdenum, not enough sulfite oxidase is produced possibly resulting in sulfite sensitivity. What we have here may better be described as a metabolic problem not an allergic one.

So, the question is: Do these patients really have “*sulfur*” sensitivity? NO! If they did they would react to any sulfur they consumed including foods rich in the sulfur-bearing amino acids methionine and cysteine. **Sulfite** sensitivity is a different animal altogether! Because a person may have had problems with **sulfa** drugs years ago does not mean they have sulfur sensitivity today. Will these patients have a reaction to *sulfate* containing supplements?? NO! They do not contain sulfite but sulfate; it has been acted on by sulfite oxidase.

When patients come in and say they have *sulfur* sensitivity, question them carefully. What do they really mean to say? Did they react to sulfa drugs and now think they have a sensitivity to **sulfur**? Do they get headaches or post-nasal drip or sinus congestion, etc., when they drink wine or consume other foods listed below that contain *sulfites* and now think they have a sulfur sensitivity?

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<sup>1</sup> *The Healing Nutrients Within*, Braverman, E., Pfeiffer, C., 1987, Keats Publishing, Inc.

## **HELPING THE SULFITE SENSITIVE PATIENT**

As mentioned above, the enzyme catalyzing the reaction from sulfite to sulfate is a molybdenum dependant enzyme. If you suspect your patient has sulfite sensitivity, a simple sulfite urine test (sulfite dipsticks are available from Meridian Valley Labs) will allow you to confirm this. If positive, consider supplementing the patient with the necessary co-factor molybdenum in the form of :

**MO-Zyme Forte** 1 tablet with each meal.

Monitor the patient's urinary sulfites to allow the dose to be geared to the individual after efficacy is established.

Monitor copper (ceruloplasmin), and iron in patients presenting need for molybdenum. Too much copper or iron can reduce serum molybdenum levels. If urine sulfites are increased along with serum uric acid decreased the need for molybdenum is great. Two enzyme pathways are impaired due to molybdenum need, they are; sulfite oxidase (sulfite to sulfate conversion); xanthine oxidase (catalyzes last step in uric acid synthesis).

Research published in 1951 showed promising results supplementing sulfite sensitive patients with vitamin B12.<sup>2</sup> I am reproducing some of the results below. What amazes me is given the results of these studies—why weren't they continued??

### RESPONSES TO B12 SUPPLEMENTATION:

intractable asthma—18 out of 20 improved; chronic urticaria—9 out of 10 improved; chronic contact dermatitis—6 out of 6 improved.

**EFFECTIVE DOSE:** 2000 to 4000 mcg of vitamin B12, which would be 2 lozenges of **B12 2000** a day dissolved under the tongue.

Markers of functional B12 need are MCV, MCH increased and urinary or serum methylmalonic acid increased.

*For difficult cases* that do not respond to molybdenum therapy alone, consider evaluating their serum copper and iron levels as well and treating accordingly. Increased iron and/or copper levels; supplement with zinc (**Zn-Zyme Forte**). Advise the patient to avoid supplements containing vitamin C, lysine, histidine, cysteine and methionine, which increase iron absorption. Also, consider using **B12 2000** at 2 – 3 lozenges daily adjunctive to **MO-Zyme Forte**.

## **DIETARY SOURCES OF SULFUR**

Egg yolks, red peppers, muscle protein, garlic, onion, asparagus, cabbage, Brussels sprouts, broccoli, cauliflower, mustard and horseradish. Patients who react to these foods may have *true* sulfur sensitivity with sever molybdenum need. Confirm with urinary sulfites and serum uric acid levels.

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<sup>2</sup> J Allergy 2: 183 – 5, 1951

## **DIETARY SOURCES OF SULFITES**

What is more probable is your patients' react to the following foods, which are high in sulfites:

- Alcoholic Beverages (labeling of sulfites in alcoholic beverages is required if the concentration is 10 parts per million or greater.)
- Bakery Items: Breads containing dough conditioners, cookies, crackers, pie and pizza crusts, tortillas, waffles.
- Beverages: Beverages containing sugar or corn syrup, dried citrus fruit beverages, canned bottled, and frozen fruit juices.
- Condiments: Horseradish, relishes, pickles, olives, wine vinegar.
- Dairy: Processed cheese foods.
- Dried Foods: Dried herbs and spices, dried fruits, trail mixes.
- Fish and Shellfish: Fresh shrimp and scallops frozen, canned or dried clams, shrimp, lobster, crab, scallops, dried cod.
- Fruits: Fresh grapes, dried fruits (including raisins and prunes and especially pale fruits that have not discolored), canned, bottled and frozen fruit and juices, maraschino cherries, glazed fruit.
- Gelatins, Fillings, Frostings: Fruit fillings, flavored and unflavored gelatin, pectin, jelling agents, canned frostings and frosting mixes.
- Grain Products: Cornstarch, modified food starch, spinach pasta, gravies, hominy, breading, batters, noodle and rice mixes.
- Hard Candies
- Jams and Jellies
- Nuts: Shredded coconut.
- Plant Protein Products: Soy protein products including tofu, textured vegetable protein, infant formula.
- Snack Foods: Filled crackers, dried fruit snacks, trail mixes, tortilla chips, potato chips.
- Sugars: Brown, white, powdered and raw sugars.
- Vegetables: Vegetable juices, canned vegetables (including potatoes), pickled vegetables (including cauliflower, peppers, sauerkraut), "fresh cut" potatoes (as delivered to restaurants), frozen vegetables (including french fries and deli potato salad).

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