



The South African Porphyria Foundation

THE TRIGGERS

Known Triggers:

- Unsafe drugs (Barbiturates, Sulfa / Sulfonamides, Pentothal)
- Hormonal fluctuation / Birth control pills / PMS / Estrogen / Progesterone
- Unsafe Homeopathic / Natural medication and supplements
- Alcohol
- Infections
- Dieting to loose weight (starvation)
- Dietary restriction of carbohydrates
- Severe or ongoing stress
- UVB / Sun

Abstract:

- Sulfur in foods, drinks, supplements and other items*
- Inflammation
- High Uric acid levels due to prescribed diet
- STD's
- Underlined illness
- Excessive Heat (placing body under stress)
- Excessive Cold (placing body under stress)
- Excessive exercise (placing body under stress)
- Lactic acid build-up
- Oxygen depletion / lack of Oxygen
- Carbon / Charcoal
- Parasites
- Allergies – ragweed / additional others (placing body under stress)



- Camomile
- Anemia (common in Porphyria)
- Lack of Vitamin D (common in Porphyria & chronic fatigue)
- Depleted Adrenal gland (common in chronic fatigue)
- Low levels of Testosterone (common in chronic fatigue)
- Low levels of Cortisol (common in chronic fatigue)

Medication To Avoid:

- **Barbituates**
Act as central nervous system depressants, and can therefore produce a wide spectrum of effects, from mild sedation to total anesthesia. They are also effective as anxiolytics, hypnotics, anticonvulsants and anti-seizure medication.
- **Sulfa**
Adverse drug reactions to sulfonamides, a group of drugs that includes those with and without antibiotic characteristics.
- **Pentothal**
Ultrashort-acting depressant of the central nervous system which induces hypnosis and anesthesia.
- Contraception / fertility control medications (some)

The Sulf/ Sulph Debate:

There is much confusion regarding allergy to sulfa-containing drugs, sulfite as a preservative agent in foods and medications, sulfate salts of medications and the chemical element sulfur. Sulfas, Sulfates and Sulfites all have different effects in our diets.



* **Sulfur or sulphur** (British English) is a natural chemical element.

Elemental sulfur is a bright yellow crystalline solid when at room temperature. Sulfur occurs naturally as the pure element (native sulfur), and as sulfide and sulfate minerals.

Chemically, sulfur can react as either an:

1. oxidant (substance that removes electrons from another reactant) or
2. reducing agent (substance that adds electrons from another reactant).

Sulfur OXIDIZES most metals and several nonmetals, including carbon (soot, charcoal, graphite, diamonds) which leads to its negative charge in organic compounds that contain sulfur, but it REDUCES several strong oxidants, such as oxygen and fluorine.

Keep this fact in mind when dealing with sulfur as it REDUCES oxygen when combined with charcoal / soot!

* **Sulfa** is a synthetic organic compound used in medications.

If you are talking about a group of antibiotics known as sulfa drugs, "sulfa" is the appropriate term. "Sulfur" or "sulphur" is sometimes mistakenly used in its place. Sulfa-containing medications are a common cause of drug allergy, and must be AVOIDED in Porphyria.

Sulfa allergies are common, hence medications containing sulfonamides are prescribed carefully. It is important to make a distinction between sulfa drugs and other sulfur-containing drugs and additives, such as sulfates and sulfites, which are chemically unrelated to the sulfonamide group, although sulfates and sulfites should also be AVOIDED (or used with caution) when having Porphyria.

* **Sulfite / Sulfites** are common preservatives used in various foods and medications.

Sulfites have been used for centuries, mainly as food additives, but can also occur naturally in foods such as fermented beverages and wines.

* **Sulfate / Sulfates** are salts of sulfuric acid.

Sulfates are commonly used in the making of various drugs, such as albuterol sulfate, iron sulfate, chondroitin sulfate and codeine sulfate. While allergic reactions to these medications are possible, it's not likely that it's because of the sulfate group. There does not appear to be any reason for people with sulfa or sulfite allergies to avoid medications that contain a sulfate salt.



Medications Containing Sulfa – **AVOID**

The following list is by no means comprehensive. People with an allergy to sulfa or sulfonamide-related medication should always check with their doctor or pharmacist prior to starting any new medications.

- **Sulfa antibiotics.** In people with adverse reactions to sulfonamide antibiotics, all other sulfonamide antibiotics should be avoided. These include trimethoprim-sulfamethoxazole (Septra[®], Bactrim[®] and generics), sulfadizine, sulfisoxazole, and dapsone. Topical sulfa antibiotics, such as sulfacetamide eye drops/shampoos/creams, silver sulfadiazine cream, and sulfanilamide vaginal preparations.
- **Diuretics (water pills).** The risk for sulfa-containing diuretic medications causing reactions in sulfa-allergic patients is low. Many diuretic medications, such as [hydrochlorothiazide \(HCTZ\)](#) and [furosemide \(Lasix\)](#) are sulfa-based, while [ethacrynic acid \(Edecrin\)](#) is not. While there is no proof that people with an allergy to sulfa-based antibiotics will also react to sulfa-based non-antibiotics, it is recommended that a sulfa-allergic person take the first dose of a sulfa-based diuretic under direct medical supervision.
- **Sulfonylureas.** Oral medications used for the treatment of [diabetes](#), called sulfonylureas (such as chlorpropamide, glyburide, and glipizide), are structurally similar to sulfonamides. While there are a few reports of these medications causing problems in sulfa-allergic patients, these medications are generally tolerated.
- **Celebrex[®].** Celecoxib (Celebrex[®]), a popular COX-2 inhibitor used for the treatment of arthritis and pain control, is a sulfonamide non-antibiotic medication. Although there have been no reports of sulfa-allergic patients reacting to Celebrex[®], it is a theoretical concern, so the recommendation is that sulfa-allergic patients avoid this medication.
- **Sulfasalazine.** Sulfasalazine is a sulfonamide that is related to aspirin, and is used for [inflammatory bowel disease](#) and [rheumatoid arthritis](#). This medication should not be used in people with sulfa allergy.
- **Imitrex[®].** Sumatriptan (Imitrex[®]), used for the treatment of [migraine headaches](#), is related structurally to sulfonamides, although there is no evidence that people with sulfa allergy are at increased risk for reactions from this medication.
- **Zonisamide.** Zonisamide is a sulfonamide medication used for the treatment of [seizures](#). It has been associated with severe skin reactions, those typically seen with sulfa reactions. This medication should not be used in sulfa-allergic patients.



Medications Containing Sulfites – **AVOID**

Sulfites are added to some medications for their antioxidant properties as well as the prevention of browning of medications.

Bronchodilator solutions for asthma

- Adrenalin chloride 1:1000 concentration
- Bronkosol
- Isuprel hydrochloride solution

Topical eye drops

- Pred-Mild
- Pred-Forte
- Sulfacetamide
- Prednisol
- dexamethasone)

Injectable medications

- Amikacin
- Betamethasone phosphate (Celestone)
- Chlorpromazine (Thorazine)
- Dexamethasone phosphate (Decadron)
- Dopamine
- Epinephrine (Adrenaline, Ana-Kit, Epi-Pen)
- Garamycin
- Gentamycin
- Isoetharine HCl
- Isoproterenol (injectable)
- Hydrocortisone (injectable)
- Lidocaine with epinephrine (Xylocaine)
- Meperidine (Demerol)
- Metarminol
- Norepinephrine (Levophed)
- Procaine (Novocaine)
- Prochloroperazine (Compazine)
- Promethazine (Phenergan)
- Solutions for total parenteral nutrition and dialysis
- Tobramycin



Supplements High In Sulphur Groups – **AVOID**

Sulfur is a nonmetallic element. It is believed that you cannot be allergic to sulfur, as it is a natural part of every cell in your body. Occasionally, however, people are allergic to the OTHER end of a sulfate molecule. With great controversy, the following supplements should be kept in mind if patient do not feel well, as some believe it might aggravate Porphyria.

- ALA (Alpha Lipoic Acid or Thioctic Acid). Bromelain and papain (use enzymes derived from animals)
- Chlorella,
- Cysteine
- Dairy source acidophilus,
- DMSO,
- Extracts of the high sulphur foods, (included in this document)
- Glutathione,
- NAC,
- MSM,
- Methionine (converts down into cysteine)
- Turmeric is really good at raising sulfur / thiol levels.

Sulphur Based Preservatives – **AVOID**

Be aware of presevatives in foods as most contain sulphites.

If you want to avoid sulfur-based *preservatives*, these are the names to watch for:

- Sulfur Dioxide
- Sodium Sulfite
- Sodium Bisulfite
- Sodium Metabisulfite
- Potassium Bisulfite
- Potassium Metabisulfite



Porphyrinogenic (Dangerous Foods) - **AVOID**

Porphyrinogenic foods contain chemicals that stimulate heme synthesis, and will aggravate Porphyria.

- Cabbage
- Brussel sprouts
- Red plums
- Red grapes
- Red / purple grape juice
- Prunes

Foods High In Sulfur - **CAUTION**

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artichokes, Jerusalem but not French	daikon	peanuts
asparagus	dairy products	pineapple (slightly)
bakery products containing whey, cysteine, eggs or enzymes	egg yolks	radishes
bean curd/tofu milk	garlic	rutabaga
bean sprouts	green beans	sauerkraut
beans of all sorts	greens	shallots
bok choy	horseradish	sour cream
broccoli	jicama	soy cheese
brussel sprouts	kale	soy milk
cabbage	kohlrabi	spinach
carob	leeks	split peas
cauliflower	lentils of all sorts	tempeh
cheese of all sorts	milk from any animal	tofu
chives	miso soup	tomatoes
chocolate	mustard	turnip
coffee	raw onions	turmeric (though not high in thiols, it is really good at raising thiol levels)
collard greens	papaya (slightly)	whey
cream	peas	yeast extract



Note:

Watch out for foods that have garlic and onion powders added e.g. processed meats like hot dogs.

Meat is also high in sulfur, but most people tolerate it well due to low thiol level and it depends upon how sensitive you are. If you need to limit meat, then you would also need to supplement amino acids, especially **glutamine**, but only if a medical practitioner declared the product safe.

This also helps to heal the gut lining.

Foods High In Sulphite - AVOID

Sulfites are sulfur-containing chemicals used as food preservatives used in various foods and medications.

They are entirely different from sulfates and sulfa drugs. Sulfites are common. Sulfites have been used for centuries, mainly as food additives, but can also occur naturally in foods such as fermented beverages and wines.

Examples include:

- sodium sulfite
- sodium bisulfite
- sodium metabisulfite
- potassium bisulfite
- potassium metabisulfite

Sulfites are added to foods for various reasons.

These include:

1. Reduction of spoilage by bacteria
2. Slows the browning of fruit, vegetables and seafood
3. Inhibits of growth of bacteria during fermentation of wines
4. Conditioning of dough in frozen pie and pizza crust
5. Bleaching effect for maraschino cherries and hominy



Greater than 100 ppm of sulfites

(very high levels, strict avoidance advised in people with sulfite allergy)

- dried fruits (excluding dark raisins and prunes)
- bottled lemon juice (non-frozen)
- bottled lime juice (non-frozen)
- wine
- molasses
- sauerkraut (and its juice)
- grape juices (white, white sparkling, pink sparkling, red sparkling)
- pickled cocktail onions

Between 50 and 99.9 ppm of sulfites

(moderate to high levels of sulfite, avoidance advised in people with sulfite allergy)

- dried potatoes
- wine vinegar
- gravies/sauces
- fruit toppings
- Maraschino cherries

Between 10 and 49.9 ppm of sulfites

(low to moderate levels of sulfite, may cause symptoms in people with severe sulfite allergy)

pectin	fresh shrimp	corn syrup
pickled peppers	pickles/relish	corn starch
hominy	frozen potatoes	maple syrup
imported jams and jellies	fresh mushrooms	imported sausages and meats
cordials (alcoholic)	dehydrated vegetables	various cheeses
corn bread/muffin mix	canned/jarred clams	clam chowder
avocado dip/guacamole	imported fruit juices and soft drinks	ciders and cider vinegars



Less than 10 ppm of sulfites

(very low sulfite levels, generally do not pose a risk, even for people with sulfite allergy)

- malt vinegar
- canned potatoes
- beer
- dry soup mix
- soft drinks
- frozen pizza and pie dough
- beet sugar
- gelatin
- coconut
- fresh fruit salad
- domestic jams and jellies
- crackers
- cookies
- grapes
- high fructose corn syrup

Foods / Ingestables To Avoid For Additional Reasons In Porphyria - AVOID

- “Ragweed will make symptoms spike suddenly after eating honeydew melon, cantaloupe or bananas.”
- “Symptoms can also spike after drinking chamomile tea, using soap or face powder containing chamomile, or taking herbal supplements that include it.”
- “Organ meats like liver and kidney should be avoided. Particles of insecticides along with heavy metal toxins are stored in the liver. Eating liver should be avoided especially from wild game and poultry.”
- “Avoid Balsam containing foods. Avoiding balsam-related foods can help improve skins conditions which produce redness and itching. People who gave up foods such as citrus fruits, cola, chocolate, and spices such as vanilla, as well as tomatoes, reported a complete or significant improvement of their symptoms.”
- “Soy is a natural estrogen. Avoid all Soy containing foods.”



- “Broccoli and Brussel Sprouts are known inducers of P-450. Broccoli and Brussel Sprouts also has a large Vitamin K content and reduces the prothrombin time in blood coagulation.”
- “People include foods containing the amino acid tyramine (red wine, aged cheese, smoked fish, chicken livers, figs, some beans), chocolates, nuts, peanut butter, fruits (avocado, banana, citrus fruit), onions, dairy products, baked goods, meats containing nitrates (bacon, hot dogs, salami, cured meats), foods containing monosodium glutamate (an additive in many foods), and any processed, fermented, pickled or marinated foods.”
- “Fructose corn syrup is often used in soda pop and sports drinks and should be avoided by porphyria patients. Ingestion of high fructose corn syrup causes a close down of normal metabolism function which needs to be avoided by acute porphyria.”
- “Dioxins are known to trigger porphyria. Don't freeze your plastic water bottles with water as this also releases dioxins in the plastic. Moreover we should not be heating our food in the microwave using plastic containers. This applies to foods that contain fat. The combination of fat, high heat and plastics releases dioxins into the food and ultimately into the cells of the body.

Everytime you exercise, get an elevation in body temperature or diet to loose weight....you are releasing those toxins from the fat and into the blood stream.....and in fact exposing yourself to triggering another porphyria attack. Dioxins are carcinogens and highly toxic to the cells of our bodies. Instead, use glass, Corning Ware, or ceramic containers for heating food.

So such things as:

- TV dinners
- weight watchers dinners
- lean cuisine dinners
- instant ramen cup of noodles, and soups, etc.

To add to this: saran wrap placed over foods as they are nuked, with the high heat, actually drips poisonous toxins into the food, use paper towels. Avoid any chance of dioxins.”



Environmental Porphyrinogenic (Dangerous) Materials - AVOID

What are Environmental Porphyrinogenic (dangerous) Materials that need to be avoided by Porphyria patients?

Alcohol, particularly ethanol	Aldehydes	Arsenic
Chlorinated hydrocarbons	Chlorine, chlorinated cleaning agents	Chlorophenoxy acetic acid herbicides
Estrogens, Progesterones & other Hormones	Formaldehyde (includes tobacco smoke), other aldehydes [Found in carpeting]	Freons
Glycols, glycol ethers	Hexachlorobenzene (pesticide)	Polychlorinated biphenyls (PCBs)
Smoke / Soot from open fires (fire places, field fires ect.)	Vinyl chloride fumes and dusts	Tetrachloro dibenzodioxins (TCDCs)
Vehicle exhaust fumes	Paint fumes, particularly epoxies [urethane, adhesive, silicone,etc]	Metal dusts and fumes
Heavy vehicle exhaust fumes	Possibly any chlorinated cleaning agents	Possibly any chlorinated hydrocarbon
Majority of pesticides, rodenticides, fungicides,	herbicides	Tobacco
Latex		



Chemical Triggers of Porphyria - **AVOID**

This list might be repeating some info already mentioned or be repeated under different names.

Anesthesia	Prescribed medicines	Gasoline
Food additives	Food preservatives	Propane
Diesel exhaust	Natural gasses	PCBs
PVC	Dioxin	Flexible plastics
Trichloroethylene	Particleboard	Insect repellants
Pesticides with Lindane, 2-4-D, Diazinon.	Citronella	Charcoal
Metal dusts and fumes (lead, arsenic, gold, cadmium, vanadium, nickel, zinc, tin).	Stink bombs	Naphtha (gas in lighters)
Smoke	Soot	Cigarettes / Secondary smoke
Matches	Char grilling food in the hot smoke of a wood fire	Energy drinks (some) / Energy bars (some)
Fire lighters	Fire retardants	Shampoos (most) that contain: Sulfate, alcohol & penthenol.
Alcoholic beverages	Coffee / Tea in excess due to caffeine	Nail polish / Artificial Nail products
Perfumes / Colognes	Deodorants	Room air fresheners
Conditioner (most) that contain: Sulfate, alcohol & penthenol.	Hairspray	Detergents
Acetone	Toothpaste / Mouthwash / Chewing gum (some)	Cooking spray
Cleaning agents	Bleach	Paint (fresh)
Fabric softeners	Dryer sheets	New car interiors
Deodorized cat litter	Solvents	Inks
Formaldehyde	New carpet	Gun oil & powder
New fabrics	Pesticides	Carbonless paper
Fresh newspapers and magazines	Glue vapor	Some chewing gum
Adhesives	Marking pens	Gasoline
Mold	Cough drops	Condoms (latex)
Band-Aids (latex)	Rubber bands (latex)	Balloons (latex)
Erasers (latex)	Some shoes and articles of clothing (latex)	Some items of sporting equipment containing latex
Surgical gloves (latex)	Catheters (latex)	Helmets (latex)
Blood pressure cuffs (latex)	Some watch bands (latex)	Ventilator tubing (latex)
Tooth brush massagers (latex)	Bowling balls (latex)	