



Solve Salicylate Sensitivity

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Transformation starts now!

Hands-on workshop

Be inspired

Get equipped with a tactical plan

Leave excited to do your homework

Access to Fullscript & Rupa Health

Fullscript general link: <https://us.fullscript.com/welcome/dr crist a>

Rupa Health Salicylate Bundle: <https://labs.rupahealth.com/bundle/KqAD7ng>

The resources including handouts and links are for class enrollees only.

We ask that you not share with others.

*Note: this is intended for the general public. It's not a practitioner level course.

Today's action plan

Review salicylates

Salicylate reactions

Contributors (“causes”)

*Group share

How to stop them from coming in, and speed up getting them out

Testing

Therapeutics

Rescue pack

*Group share

Gratefulness

Honor my teachers, patients, and leaders in this field

Dr. Donna Beck

Dr. Thalia Hale

Dr. Benjamin Feingold

Beth O'Hara, FN

Anne Swain

What are salicylates?

Protective compound in plants in the phenol family.

Aspirin-like compounds that have beneficial effects for us with pain and inflammation.
Their action is to inhibit an inflammatory molecule called prostaglandin.

The more stressed the plant, the more salicylates it makes.

For the plant, salicylic acid acts as a signal molecule, triggering the production of defense-related proteins and compounds that help ~

- survive longer
- combat infections, including fungi, bacteria, and viruses
- resist insect invasion

Lesson: eat happy fruits and veggies!

Salicylate sensitivity

Having an adverse reaction when exposed to “a usual amount” of salicylates, either taken by mouth or applied to the body.

This is a metabolic condition, not an “allergy”.

The goal of recovery is to correct the metabolic imbalance.

The good news about metabolic conditions is that they’re not lifelong.

Salicylate sensitivity reactions

Headache

Fatigue

Itchy, watery or swollen eyes

Runny nose, sinusitis

Itching, hives, eczema, many different types of rashes

Drop in blood pressure

Difficulty taking a deep breath

Abdominal pain, nausea, diarrhea

Constipation that clears on a low-salicylate diet

Commonly found in people with nasal polyps, allergic tendency, asthma, and anaphylaxis.

Correlated with those missing a gall bladder.

Found in approximately 2-7% of people with inflammatory bowel syndrome and food allergies.

PMID: 16247191

How we clear salicylates from the body

Liver makes them water-soluble (kidney excretion via urine) or conjugates into bile (bowel excretion via stool) ~

Glycination

Glucuronidation

Backup pathways may be engaged if these aren't working well, indicated by other sensitivities, ie: sulfation, histamine, methylation, oxalates.

Gut microbiome also plays a role.

Main contributors/causes

Certain mold mycotoxins, especially with fungal overgrowth

Omega 3 deficiency

Low sex hormones

Adrenal exhaustion

Pathogenic gut bacteria

Mold toxins

Primary

Patulin mycotoxin ~

Penicillium urticae converts 6-methylsalicylic acid into patulin.

The body wants to stop the supply of salicylic acid to stop the mold.

Vibrant urine mycotoxin is the only lab that's testing this currently.

Secondary

Mold toxins which tax the glucuronidation pathway ~

Mycophenolic acid (*Aspergillus spp*, *Penicillium spp*, *Eurotium repens*) Zearalenone mycotoxin (*Fusarium* species)

Trichothecene mycotoxins (many species and mycotoxins in this family)

Ochratoxin mycotoxin (*Aspergillus ochraseus*, *A. niger* *Penicillium verrucosum*, *P. nordicum*, *P. chrysogenum*)

Those that may reduce albumin: Citrinin, Ochratoxin, Zearalenone

Low albumin levels can increase the availability of unbound (active) salicylate, potentially exacerbating symptoms.

Omega-3 deficiency

Small omega-3 study ~

3 patients with disabling salicylate-induced intolerance were given 10 grams daily of fish oils rich in omega-3 PUFAs for 6-8 weeks.

All 3 had complete or virtually complete resolution of their symptoms allowing for discontinuation of systemic corticosteroid therapy.

*Symptoms relapsed after dose reduction.

For a very small number of my patients, this was all that was needed.
(All were post-mold, post-remediation, yet “over-bindered”.)

Lesson? Treat the cause while you suppress inflammation. **DO STILL DEAL WITH THE INFLAMMATION!**

PMID: 18795922

Low sex hormones

Correlated to lowered estradiol plasma levels in women in a nasal polyp/salicylate sensitivity study.

Clinically I've seen correlation in low testosterone in men.

Impaired glucuronidation is the hormone connection because hormones are made using this same pathway.

Thus the correlation to mold toxins which use the glucuronidation pathway in the liver.

PMID: 33332460

Adrenal exhaustion

Adrenals oversee our stress response, inflammation levels, immune function, blood sugar, blood pressure, and hormone balance.

The leading adrenal hormone is cortisol.

Salicylate inhibition of prostaglandin synthesis may influence the body's ability to respond to stress and regulate cortisol levels.

Research suggests that salicylates can affect glucose metabolism, which is the process by which the body uses sugar for energy. This could potentially influence the body's response to stress and ability to regulate cortisol levels.

PMID: 6274894

Pathogenic bacteria

Certain microbial strains in the gut increase beta-glucuronidase.

This enzyme breaks down the raw materials for healthy glucuronidation, so the liver can't work its natural process.

Tends to be alongside fungal overgrowth.

Indicated on labs by the metabolites vs the species (at this point).

PMID: 16247191

Other contributors/causes

Environmental chemicals which burden glycation and glucuronidation pathways in the liver ~

Environmental “xenobiotics”, such as fragrances, pesticides, herbicides, and plastics like BPA.

Medications that use the glucuronidation pathway ~

An estimated 40-70% of medications use this pathway.

Aspirin, NSAIDs, steroids, propranolol, benzodiazapines, CBD, and second-generation antihistamines, like cetirizine (Zyrtec) and loratadine (Claritin).

Genetic ~

Several genes involved in glucuronidation encode for UDP-glucuronosyltransferases (UGTs), particularly those in the UGT1A family, COMT, many other backup pathways such as sulfation with CBS and SUOX.

Testing

Salicylate ~

Blood test for salicylate level is mostly used for overdose situations. It's not typically high in those with functional salicylate sensitivity. This can be run by any standard lab (ie: Quest, Labcorp).

Essential fats ~ are not correlative in my experience with this condition.

Sex Hormones & Adrenals ~

Urine or saliva. My preference is urine because saliva can be more easily falsely elevated from cross-contamination for those on bioidentical hormone replacement (it takes a LONG time to spit that much!)
Dutch Complete urine test.

Glucuronidation ~

Organic acids urine test has a possible indicator of impairment in glucuronidation.
Doctor's Data Hepatic Detox Profile urine test.

Microbiome ~

Stool test to look for pathogenic species, yeast overgrowth, high/high-normal beta-glucuronidase.
Genova GI Effects™ Fundamentals 1X stool test. Add-on Parasitology Module if hives is primary symptom.

Rupa Health Salicylate Bundle: <https://labs.rupahealth.com/bundle/KqAD7ng>



Share time!

Shareables

Added reactions ~

tinnitus as an early sign

insomnia

nervous system; hyperactivity, sense of doom, irritability, rage (aka sals rage)

burning mouth (correlated to low estrogen)

blood sugar issues

blood blisters on inner cheeks

restless leg syndrome

Added contributors ~

Bismuth subsalicylate (Pepto-bismol)

Recovery overview

Temporarily stop inputs

Provide nourishment

Support the clearance pathway

Balance hormones

Support adrenals

Remove the cause

Bring back natural (not synthetic) salicylates slowly

First step: stop inputs

Temporarily reduce dietary salicylates x 4-6 weeks.

Natural salicylates are beneficial compounds, helping with inflammation and pain.

The goal is to treat the cause(s) and return these to your diet.

Improvement in any symptom from the avoidance diet indicates burdened detox pathways.

Many confusing/conflicting food lists. Use food guides adjusted for normal portions.

<https://www.bda.uk.com/static/5284c6c5-ee49-43f5-a50cede11ba44e85/Salicylate-Sensitivity-2022.pdf>

*portion adjusted

Drink filtered water. Since the “aspirin a day” craze, more salicylates in our water supply.

Temporary avoidance diet

Reduce foods high in salicylates *at normal portions*.

Foods that have been concentrated by being dried, condensed or made into sauce, or that are overly ripe.

The peels of plant-based foods.

Fruits: berries, cherry, apples, grapes, currants, apricot, tomatoes (esp sauce), avocado, pineapple, orange, pomegranate, coconut.

Vegetables: green peas, endive, squash, sweet potato, pumpkin, radishes, water chestnut, canned mushrooms, red kidney beans.

Nuts and seeds: almonds, peanuts, walnuts.

Beverages: fruit juices, coffee, green and black tea.

Spices: turmeric (curry), cinnamon, cloves, nutmeg, anise, thyme, oregano, dill, tarragon, cumin, mustard powder, rosemary, paprika, mint, etc.

Herbs: willow bark, meadowsweet, birch.

What to eat

Carnivore or near-carnivore diet x 2-3 months.

Not paleo because coconut has salicylates.

Grind or food-process meat if poor absorption.

Best tolerated plant-based foods clinically are ~

- Steamed cabbage

- Peeled pears

Safe-“er” herbs ~

- Dandelion root

- Pellitory of the wall

- Marshmallow

Free up the burdened detox pathways

Reduce environmental salicylate exposure ~

Personal care products: mint, pain creams containing white willow, meadowsweet or birch.

Environmental “xenobiotics”

Synthetic fragrances ~

Laundry detergent and dryer sheets, cleaning products, soaps, candles, “deodorizers”, plug-ins, etc.

Dietary challenges to glucuronidation ~

Pesticides, herbicides, food dyes, chemical sweeteners, microplastics.

Binders which lower glycine ~

Any binder that binds bile (cholestyramine, colestesvelam, insoluble fiber).

Therapeutics overview

Omega 3 fish oil

Glycine

Balance hormones

Spore probiotics

Treat mold

Stock some rescue tools, just in case

Omega 3s

Since mold is often in the picture, make sure these (and all other fat-soluble nutrients) are supplemented in an emulsified, triglyceride, or liposomal form for maximum absorption.

- Mold mycotoxins impair absorption of fat-soluble nutrients in the bile and the colon, especially DON's effect in blocking absorption in the gut.

Omega 3s: 10gm divided daily for 6-8 weeks

Alight Health Formulas: <https://dr crist a.com/product/dha-absorb/>

Once stable, reduce by 1gm weekly until you get to a maintenance dose, which may be higher than typical, and that's ok.

Lessons from the omega-3 study: treat fungal overgrowth if there.

Glycine

An amino acid that is not only involved in salicylate breakdown, but is also a calming neurotransmitter in the brain.

Additionally, glycine is one of the 2 amino acids making up bile acids, along with taurine.

Excessive use of bile binders can reduce this critical amino acid, compromising the glucuronidation pathway.

Dose: Repletion dose is from 1-4 grams daily, best divided.

May be used under the tongue as a rescue from salicylate reactions, typically 1 gram.

May cause excessive sense of relaxation in higher doses.

Vital Nutrients Glycine Powder (Fullscript)

Adrenals

“Like feeds like.” Feed adrenal glands with “whole food”, adrenal glandular support. Provides the entire spectrum of nutrients, cofactors, growth factors, and regulators found in a healthy gland.

Similar concept as using Armour thyroid (whole pig thyroid gland) for people with hypothyroidism.

Dose. Adrenal glandular. 250mg daily in the morning.
Priority One. Grass fed whole gland bovine adrenal.

Sex hormone support

Test first!

Those with SS usually need bioidentical hormone replacement therapy, supporting with the actual hormones versus “inducers”, because the glucuronidation pathway is behind schedule and can’t make the hormones, otherwise it would.

Takes a long time for body to re-establish balance. Hormones are a web. When you change one, the others adjust. Retest no sooner than 3 months.

Pregnenolone may be considered as an exit strategy to get off hormones once the glucuronidation pathway is fully functional again and hormones are rebalanced.

Spore-based probiotics

Spore-based probiotics go by the name Bacillus. Various species and strains.

Most appear to rebalance the gut pH rather than attempt to “repopulate”.

By rebalancing the terrain, the good guys seem to thrive.

Dose: start VERY low, die-off common. 1 capsule over 1-2 weeks, then 1 capsule over 4-7 days, then 1 capsule over 2-3 days, until maintenance dose of 1/day.

Microbiome Labs: <https://dr crist a.com/product/megasporebiotic/>

Antifungal

Amphotericin B is preferred as it does not use the glucuronidation liver pathway.

Whereas fluconazole (Diflucan) and itraconazole (Sporonox) use the glucuronidation pathway.

Compounding pharmacy. 100mg/ml oral suspension. Dose 250mg daily until sensitivities halt.

Suspension using “SuspendIt” is allergen free except for corn (free from dairy, gluten, wheat, soy, eggs, peanut, tree nut, fish, crustaceans, dyes.)

Doctor should monitor liver enzymes every 30-45 days.

If sinu-nasal fungal colonization, this may be used in a nasal atomizer preparation to use daily. It can cause irritation and nose bleeds, which improve with nasal probiotic snuffs.

Rescue pack

Apis mellifica homeopathic 30c. 3 pellets under the tongue, away from anything by mouth by 15 minutes.

May repeat every 15 minutes until symptoms subside.

Boiron Homeopathics

Amylase enzyme. Serving size is 3 capsules (270mg)

Note that the serving size is 3 capsules for the first dose. If repeating, reduce to 2 capsules to reduce the side-effect of reflux. May repeat every 30 minutes until symptoms subside.

Ness Formula 3

Bicarbonate (chloride-free for acid/base balance). 1/2 tsp in a little water. May repeat every hour until symptoms subside.

Tri-Salts by Ecological Formulas

Glycine powder. 1/4 tsp (1000mg) in a little water or dissolved directly under the tongue. May repeat every 30 minutes until symptoms subside. Can be combined with Tri-Salts.

Vital Nutrients

Fullscript: Select My Health, then select Community Plan or go to:

<https://us.fullscript.com/plans/dr-crista-dr-crista-s-salicylate-rescue-pack>

Buteyko breathing — increases bicarb in the blood

Food re-introduction

Start with 1/2 tsp of any high salicylate food, in the middle of the largest meal.

If it induces a reaction, wait a few weeks and try again.

If no reaction, eat 1/2 tsp of that same food for 3-4 days in a row.

If it induces a reaction, wait a few weeks and try again.

If no reaction, add 1/2 tsp of a different high salicylate food, eaten at a different time than the first re-added food.

If it induces a reaction, go back to just the first food until the reaction clears, then try to add 1/4 tsp of the new food.

If no reaction, keep eating 1/2 tsp of both foods, eaten separately, for 3-4 days in a row.

Keep using this principle of slow introduction until all foods are back in rotation.



Share time!

Shareables

For those who don't tolerate fish oil ~

Algae DHA - same dose as omega-3s

Pro-resolving mediators - 1/2-1/3 the dose of omega-3s

More fats; phosphatidylcholine.

Clean humic/fulvic acid to “charge up” the electrical nature of the cells, trace mineral cofactors.

Moor mud topically for ultra sensitive to supplements - start with soles of the feet for 5 minutes, work up to baths.

Non-fermented, non-fruit based enzymes - lumbrokinase.

Homeopathic vasopressin for urinary frequency to manage ADH resistance.

Treat mold in the nose if persistent runny nose.



Thank you!

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