

Food Chemical Intolerance

A sensitivity to natural chemicals found in foods, such as histamine and salicylates, can sometimes be a hidden contributor to skin and joint inflammation. Typically, if food chemical sensitivity is involved in psoriasis or arthritis, there will be a variety of other symptoms present too, including:

- Chronic hives,
- Flushing, itching, or burning skin, particularly on the face
- Eczema
- Asthma
- Nasal congestion
- Headaches
- Stomach pain or diarrhea
- Low blood pressure/dizziness
- Fatigue or irritability
- Joint pain
- Muscle pain

Many of these symptoms overlap with symptoms of true food allergy, but the pattern of when symptoms occur is quite different between the two scenarios. Typically, a food allergy will consistently produce symptoms when even a small amount of the food is eaten, whereas reactions to histamine or salicylates are more unpredictable, a wider variety of foods seem to be involved, and the reaction may vary greatly depending on the amount consumed. That is because amines and salicylates are found in a broad array of foods but will only trigger symptoms if you consume more than your body can handle on that particular day.

Intolerance to histamine and salicylate often waxes and wanes over time, with increasing sensitivity when the immune system is in a reactive state (such as during illness, exacerbations of small intestinal bacterial overgrowth, or following exposure to other allergens).

If you have reason to suspect amine or salicylate intolerance, it may be worth eliminating the foods with the highest concentration of these chemicals for 30 days to see how you respond.

A strict elimination of histamine and salicylates is quite difficult to combine with other dietary restrictions (such as limiting starch), but in most cases it is not necessary to be overly strict; you may benefit from just eliminating the foods with the largest amounts of histamine and salicylates (listed below).

Salicylate Content of Foods

Salicylates are unfortunately found in the largest amount in otherwise healthy antioxidant-rich plant foods. To reduce salicylate intake temporarily without compromising nutrition too much, the best place to start is to limit tea, chocolate, nuts, all spices, and dried herbs (small amounts of fresh parsley and chives are fine). The next step is to minimize the use of fruits and vegetables with the largest amount of salicylates and become mindful of portions for moderate salicylate fruits and vegetables.

Salicylate Content of Vegetables

Low Salicylate	Moderate Salicylate	High Salicylate
Bean sprouts Bok choy Cabbage Celery Fennel Iceberg lettuce Leek Parsnip White potato	Asparagus Broccoli Brussel sprouts Capsicum/bell peppers Cauliflower Carrots Cucumber Cos lettuce Mushroom Onion Parsnip Pumpkin Spinach Tomato Zucchini	Avocado Beets Corn Green peas Green beans Sweet potato Arugula (rocket)

Salicylate Content of Fruit

Low Salicylate	Moderate Salicylate	High Salicylate
Golden delicious apple Banana Cantaloupe Honeydew melon Mandarin/clementine* Naval orange* Lemon	Apricot Apples Clementine* (may be low) Naval orange* (may be low) Pear* (may be low) Grapes Mango Papaya Peach Plum Watermelon* (may be high)	Avocado Blueberry Blackberry Coconut Dates Kiwi Prunes Strawberry Raisins Raspberry

The categorization of fruits and vegetables as low, moderate, or high salicylate should be taken as rough guidance only. There have been very few studies measuring salicylates in foods and the data is often quite inconsistent —even between different samples within the same study. This is likely because the amount of salicylates varies depending on variety, ripeness, and growing conditions of fruits and vegetables.

As a general rule, fruits and vegetables that are more brightly colored and strongly flavored will have more salicylates. The lowest salicylate produce is typically rather bland and pale in color. We also know that salicylates are often concentrated in the peel of fruits and vegetables. Peeling apples, pears, cucumbers, and zucchini dramatically reduces the amount of salicylates and may allow you to use these foods more freely.

Salicylates can also be found in medications, shampoos, lozenges, and other household products. Lotions and shampoos listing salicylic acid as an ingredient should be avoided, along with products containing mint, wintergreen, eucalyptus, menthol, or aspirin.

Histamine Content of Foods

Histamine forms when the amino acid histadine is broken down. Many species of bacteria and yeasts, including those used to ferment foods and those naturally occurring on meat and fish, have enzymes that metabolize amino acids present in proteins and produce histamine as a byproduct. As a result, any dairy, meat, or fish that is fermented, aged, or preserved is likely to be high in histamine. These foods can also contain other similar compounds, such as tyramine, that can also cause symptoms such as headaches, fatigue, and digestive complaints.

For individuals who are particularly sensitive to histamine, ensuring freshness of meat, poultry and fish is paramount. Slow cooking should be avoided and leftovers should be frozen promptly. Frozen fish may be safer if you do not have a source of very fresh fish. Wild Planet canned salmon appears to be lower histamine than other brands, likely because the salmon is processed quickly after catch.

High Histamine Foods

Meats and Seafood	Dairy	Fermented & Other	Produce
Bacon Anchovies Smoked salmon Salami Sardines Sausages Jerky Bone broth Marinated meats Organ meat Aged steak	Strong or aged cheeses (parmesan, blue cheese, brie, camembert, etc.) Kefir	Vinegar Soy sauce Coconut aminos Fish sauce Worcestershire sauce Tomato paste Yeast extract Kombucha Sauerkraut	Avocado Over-ripe banana Pineapple

Reintroduction Phase

After reducing your intake of histamine and salicylates for 30 days, you can start reintroducing foods to test your reaction. Some people react only to histamine or salicylates, while others react to both. For this reason, the reintroductions are performed separately. It is probably best to start by reintroducing foods containing salicylates since this group includes many nutritious fruits and vegetables. To perform the salicylate challenge, eat a range of high-salicylate foods over seven days in increasing amounts. To keep results clear, it is important to choose high-salicylate foods that are not also high in amines. Citrus, strawberries, pineapple, nuts, and tomatoes are poor choices for this reason.

Good choices for the salicylate challenge include:

- Granny Smith apple
- Cucumber with peel
- Honey
- Cinnamon
- Curry powder
- Apple juice
- Strong black tea
- Peppermint tea

On the first day of the challenge, start with two or three servings from the list, such as an apple with a tablespoon of honey and a cup of black tea. If you do not notice a reaction, gradually increase the amounts over the course of seven days. After the salicylate challenge, go back to the elimination diet for at least seven days—or until symptoms resolve, in the case of a reaction to salicylates—before challenging with amines.

For the amine challenge, good choices include:

- Very ripe bananas
- Smoked salmon
- Canned sardines or tuna

The initial symptoms of a reaction to amines or salicylates may not be the psoriasis or arthritis symptoms you are most concerned with. The initial reaction may only involve a headache, diarrhea, skin flushing, or itching, for example. Any such reaction suggests that you have an intolerance, which could potentially contribute to psoriasis or arthritis over the longer term.

If you do react to amines or salicylates, there is a higher chance you will also be sensitive to other food chemicals, especially glutamates (found in MSG) and preservatives such as sulfites and benzoates (found in dried fruit and other processed

foods). For this reason, it is advisable to minimize packaged and processed foods since these additives are often unlabeled.

Fortunately, a sensitivity to food chemicals is not necessarily permanent and typically does not require complete avoidance. It is only necessary to keep your intake below the threshold that triggers symptoms in your particular case. This threshold will likely change over time, and your sensitivity will likely decrease as you restore the balance of gut bacteria and decrease overall inflammation, using the strategies described in the book.

For further information see:

- [Royal Prince Alfred Hospital Elimination Diet Handbook](#)
- [Malakar, S., Gibson, P. R., Barrett, J. S., & Muir, J. G. \(2017\). Naturally occurring dietary salicylates: A closer look at common Australian foods. *Journal of Food Composition and Analysis*, 57, 31-39.](#)
- [Food Intolerance Network Fact Sheet: Salicylates](#)
- [SIGHI Histamine Elimination Diet](#)