

Sensitivity to Salicylates in food



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Contents

3	Introduction
4	Low salicylate diet
4	High salicylate foods
5	Labels
5 - 9	Salicylate content of food
10	Other food additives
10	Management



Introduction

Salicylic acid (acetylsalicylic acid) is the active ingredient in aspirin. The salts and esters of salicylic acid are known as salicylates, which have a range of actions in the body including anti-inflammatory and pain relief and could provide some protection from cancer and heart disease.

Salicylates occur naturally in many fruits, vegetables, herbs and spices, and are also often used as artificial flavourings and preservatives in skin products, perfumes, toothpaste, sweets and chewing gum, and found in many medications.

Most people can consume normal amounts of salicylates in foods and standard doses in medications without any problems. However, some adults and children have a reduced tolerance to aspirin and other medications and products containing non-steroidal anti-inflammatory drugs (NSAIDs) e.g. ibuprofen, naproxen or diclofenac which act in a similar way. They may also have reduced tolerance to salicylates naturally found in foods or added to cosmetics. This is known as salicylate sensitivity. The tolerated amount of salicylates and the type and severity of symptoms will vary from person to person.

Commonly reported symptoms of salicylate sensitivity include:

- Sinusitis
- Nasal polyps
- Runny/blocked nose
- Wheezing or worsening of asthma
- Hives (urticaria)
- Itchy skin

Other possible symptoms include:

- Stomach pain
- Nausea
- Diarrhoea
- Headaches
- Fatigue

If your Doctor or Dietitian suspects you may be sensitive to salicylates, they may recommend a low salicylate diet to see if your symptoms improve. This diet sheet provides information on the main sources of salicylate in the diet so that they can be avoided or limited.



Low Salicylate Diet

The best way to establish whether or not you are sensitive to salicylates is to avoid all high salicylate foods for 4 weeks (see Table of Salicylate Content of Foods). You should also limit the number of medium salicylate foods you have at any one time as the cumulative amount of salicylates might also cause a reaction. In addition, you must be careful to avoid medication, supplements, toiletries and cosmetics which contain salicylates (salicylates are easily absorbed through the skin).

After 4 weeks if your symptoms have:

IMPROVED—try also limiting medium salicylate foods for an additional 2 weeks to see if there is additional benefit

NOT IMPROVED—it is unlikely that salicylates are causing your symptoms.



High Salicylate Foods

The salicylate content of a food can vary depending on factors such as plant variety, the soil and climate in which it was grown, degree of ripeness and the way in which it was processed or prepared. The main sources in the diet are fruits and vegetables. Levels are highest in unripened fruit, just under the skins, or in the outer leaves of leafy vegetables. Peeling fruit and vegetables and not eating the outer leaves will therefore lower the salicylate content.

The tables on pages 6 - 9 provide guidance on low, medium and high salicylate containing foods.

Products flavoured with mint, menthol and oil of wintergreen also contain a high amount of salicylates (e.g. toothpaste, mouthwash, throat lozenges and chewing gum). Alternatives include some 'sensitive' or unflavoured oral health products which may have no or lower levels of salicylate containing ingredients.



Labels

Salicylates are natural components of certain plant foods. Forms of salicylate might be present in a variety of products, but current UK labelling laws do not require them to be listed. In order to identify salicylates in packaged food, medicinal or beauty products, check labels for the following ingredients:

- Pain Relieving drugs e.g aspirin, ibuprofen, naproxen, diclofenac
- Cold/flu medications
- Acetylsalicylic acid, salicylate, salicylic acid
- Benzyl salicylate, magnesium salicylate, phenylethyl salicylate, sodium salicylate, ingredients that include salicyl.....
- Menthol, mint, spearmint, peppermint,

Ask your GP or pharmacist to check if medication you require contains salicylates.



Salicylate Content of Foods

The table which follows is based on an analysis of published sources of salicylates in foods and drinks. Due to differences in methods used to test levels and variations in food content, figures vary between published lists. Many lists give food content per 100g but the food may only ever be eaten in small quantities and so would not contribute much salicylate to the diet. The following table therefore lists foods based on typical portion sizes. If a food is not listed, this is because a figure has not been published.

The following table shows which foods have low, medium and high levels of salicylate based on portion size normally consumed. Your Dietitian can help you if you are unsure about the portion sizes of foods you normally eat.



Low - Can be eaten freely

Fruit (1 medium to large sized fruit, 2 small fruits, or 1 large slice of fruit (e.g. watermelon))

Green apples, sugar apple, bell fruit, blackberries (fresh), clementines, dragon fruit (red and white), durian, gooseberries, guava, jujube, lemon, lime, longan, gala melon, nectarine (peeled), papaya, pear, oriental pear, pomelo, ponkan, star fruit, tamarillo, yellow watermelon.

Vegetables (1 average portion)

Bamboo shoots, bean sprouts, baked beans, cooked broccoli, cabbage (green, red, Chinese), carrot, celery, baby corn, cucumber, lettuce (butter), mushroom (fresh), okra (canned), olives (black), onion (white, Spanish, shallot), mange tout, yellow pepper, white potato (peeled), sauerkraut, seaweed (kelp), spinach, sweetcorn, cooked tomato, turnip.

Birds nest fern, bitter melon, bottle gourd, burdock root, Chinese chives, Chinese kale, crown daisy, enokitake mushroom, Japanese yam, king oyster mushroom, loofah, lotus root, rape/choy sum, shiitake mushroom, taro, Wasabi, water bamboo shoot, water convolvulus, yam leaves.

Beans/pulses (1 average portion)

Chickpeas, blackeye beans, borlotti beans, lima beans, mung beans.

Herbs/spices (2tsp dried or average portions)

Asafoetida, fresh basil, carraway, chilli flakes, fresh chilli, chives, chat masala, coriander leaves, dried fennel, dried fenugreek, garlic, dried goji, fresh ginger, horseradish, lemongrass, Maggi seasoning, dried mint, French mustard, nutmeg, oregano, parsley (dried and fresh), black pepper, white pepper, saffron, dried thyme, tandoori powder, vanilla essence.

Dairy, egg (average portion)

Egg, buttermilk, milk, cheeses, yogurt.

Meat and seafood (average portion)

Beef, chicken, kidney, pork, ham, turkey, lamb, liver, oyster, prawn, salmon, scallop, tripe, tuna.

Nuts and seeds (average portion)

Almonds, Brazil nuts, coconut, hazelnuts, macadamia nuts, peanut butter, pecans, pistachios, walnuts.

Poppy seeds, pine nuts, sesame seeds.

Cereals (1 cup flour, 1 serving size or 2 slices of bread)

Arrowroot, barley, millet, white quinoa flour/flake, white rice, rye, wheat (bread, flour, pasta).

Miscellaneous (2 tsp or average portion size)

Beef stock cube, bolognaise sauce, gravy granules, horseradish sauce, malt vinegar, olive oil, salad cream, soya sauce, sunflower oil, sweet and sour sauce, tabasco sauce, tomato ketchup, tomato soup, white vinegar.

Caramel, cranberry sauce, carob, cocoa, jam (raspberry, blueberry, strawberry), golden syrup, honey, maple syrup, sugar, molasses, peppermints.

Drinks (1 mug or 1 glass, 1 unit of alcoholic drinks)

Lemon tea, Oolong tea, Ovaltine, soya milk.

Bitter, brandy, gin, red wine, vodka, whiskey, white rum.

Bitter lemon, grapefruit juice, lemonade, sparkling apple/peach water, orange squash, tomato juice.



Medium - Limit to one portion per day 0.1 - 0.5 mg/portion

Fruit (1 medium to large sized fruit, 2 small fruits, or 1 large slice of fruit (e.g. watermelon))

Banana, blueberries (fresh), cherries, currants, figs (fresh/dried/canned), grapefruit, grapes (white and red), kiwi, loquat, lychee (tinned), mandarin, mango, cantaloupe melon, mulberry, nectarine (unpeeled), black olives, passionfruit, pawpaw, peach, Packham pear (peeled), William pear, persimmon, plum, strawberries, tangelo, watermelon.

Vegetables (1 average portion)

Alfalfa, asparagus, aubergine, beetroot, bok choy, broccoli, Brussels sprouts, butternut squash, cauliflower, choy sum, corn on the cob, courgette, fennel (bulb and top), green beans, leek, lettuce (cos, iceberg), marrow, green olive, parsnip, sugar snap peas, green and red peppers, potato (unpeeled), rocket, swede, sweetcorn (canned), seaweed (kombu), tomato (common), watercress.

Chinese mustard, chayote leaves.

Beans/pulses (1 average portion)

Black beans, soya beans.

Herbs/spices (2tsp dried or average portions)

Allspice, bay leaf, basil (dried), cardamom, cayenne, celery powder, cinnamon, cloves, black cumin, coriander powder, fresh dill, hot pepper, rosemary, sage leaves, tamarind, vanilla extract.

Nuts and seeds (average portion)

Almonds, pumpkin seeds.

Cereals (1 cup flour, 1 serving size or 2 slices of bread)

Corn flour, oats, brown rice, soya flour.

Miscellaneous (2 tsp or average portion size)

Curry sauce, cranberry sauce, tomato paste.

Honey, liquorice.

Drinks (1 mug or 1 glass, 1 unit of alcoholic drinks)

Camomile tea, raspberry tea.

Cider, white wine.

Apple juice, cranberry juice, cola, orange juice.



High - to avoid >0.5 mg/portion

Fruit (1 medium to large sized fruit, 2 small fruits, or 1 large slice of fruit (e.g. watermelon))

Apples: golden delicious, granny smith, pink lady; apricot (fresh and tinned), avocado, blackberries (tinned) blackcurrants (frozen), blueberries (tinned), boysenberry, cherries, coconut (dry), cranberries (tinned), dates (fresh and dry), guava (tinned), loganberry (tinned), orange, peach (tinned) pear (Packham and nashi), pineapple (fresh & tinned), pomegranate, prunes (tinned), raisins, raspberries (fresh and frozen), redcurrants, rhubarb, sultanas.

Vegetables (1 average portion)

Chicory, endive, gherkin, mushroom (canned), green peas, sweet potato, jap pumpkin, radish, squash, tomato (roma, sundried, cherry and tinned), water chestnut.

Beans/pulses (1 average portion)

Broad beans, red kidney beans.

Herbs/spices (2tsp dried or average portions)

Aniseed, canella, black cardamom, chilli powder, cumin, curry powder, dill powder, five spice, garam masala, mace, fresh mint, mixed herbs, mustard powder, paprika, tarragon, turmeric, thyme.

Cereals (1 cup flour, 1 serving size or 2 slices of bread)

Buckwheat flour, roasted buckwheat groats.

Miscellaneous (2 tsp or average portion size)

Worcestershire sauce.

Drinks (1 mug or 1 glass, 1 unit of alcoholic drinks)

Instant coffee, decaffeinated coffee, coffee substitutes.

Tea: black, earl grey, green, lapsang souchong, peppermint rosehip.

Lager, liqueurs, port.

Pineapple juice.



Other foods and additives not on the list

Natural flavourings can also contain salicylate, as can herbal remedies, supplements and vitamin and minerals derived from natural plant foods although it is not clear how much salicylate such products may contain. Aloe Vera is often cited as containing salicylate but the salicylate content is currently unknown. For the purposes of the 4 week diet, it is **best to avoid all products containing natural plant extracts.**

Many sources of information also suggest avoiding such additives as benzoates, BHA, BHT and artificial colourings. It is not clear whether these contain salicylate or have a similar chemical structure to salicylate, but for the purposes of the dietary elimination it is probably **best to avoid food and drink with added colouring or flavouring whether it is natural or artificial.**



Management

If you have established that you are sensitive to salicylates, you need to find out what level of salicylate you can tolerate in your diet. You might just need to avoid foods containing very high levels, or you might find that you can only tolerate one or two medium salicylate foods at a meal in addition to avoiding foods containing high levels. Whatever your tolerance, it is important that you eat plenty of the low salicylate fruits, vegetables and pulses in order to maintain a healthy diet. Fruit and vegetables have been shown to have a beneficial effect on health and are protective against cancer, heart disease and diabetes, so aim for at least five portions a day.

It is best to trial this diet with the support of a Dietitian to ensure that your diet remains adequate. This is particularly important if you also need to avoid other food ingredients.

If you have asthma, make sure it is well controlled and use your inhaler if foods make you wheezy.

NOTES:

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