

FOOD INTOLERANCE NETWORK FACTSHEET

Hints for challenges

[The rules of challenge](#)

[Some common mistakes](#)

[Keep a challenge diary](#)

[Types of food reactions](#)

[If you pass the challenge](#)

[Salicylate challenge](#)

[Amine challenge](#)

[If you react to both salicylates and amines ...](#)

[After challenges, what's your tolerance?](#)

This page is intended to support people who are following the RPAH (Royal Prince Alfred Hospital) elimination diet supervised by a dietitian.

Your dietitian's booklet will tell you exactly what to eat and how much to eat of it during your challenges.

The key is to concentrate on one food chemical at a time and to eat lots of it. As a rule of thumb, 3 days for artificial additives and 7 days for natural chemicals such as salicylates; however, we find that people may need longer for bread preservative 282 (5-7 days or more) and at least 10 days for milk.

The rules of challenge that your dietitian will recommend are:

- Several days without symptoms before each challenge (ask your dietitian – usually it's 3-5 days)
- Stick strictly to the elimination diet. Start again at the beginning (several days without symptoms) if you make a mistake.
- Stick strictly to the challenge foods on your dietitian's list

Some common mistakes

- Eat enough foods: at least the minimum amount of the specified challenge food every day. This is essential. Especially if you start slowly, you may get confusing results.
- Eat only specified foods. Foods like oranges, tomatoes and avocados have no place in salicylate or amine challenges because they contain both.
- Continue until there is a reaction. A full seven days is often recommended. However, be realistic. One boy who broke a window at school during his salicylate challenge was punished severely. Continuing after you have seen a behavioural reaction may help to identify other symptoms that may develop (e.g. physical symptoms such as rashes may come after behaviour) but think about the consequences to the child - you may need to keep your child at home or stop the challenge early. Some people (e.g. with arthritis, may need a longer challenge), see Bernard's story on the [arthritis factsheet](#).

- No mini challenges except for babies. Do not give your child one or two serves of one particular fruit and conclude that "she's OK with bananas" or "apricots don't affect him". It depends what else he or she eats. Only the most sensitive will react to a mini challenge. You are looking for the slow cumulative build up of food chemicals which cause good days and bad days with no obvious cause.

Keep a challenge diary

This is the diary of a seven day salicylate food challenge with a five year-old boy who exhibited different kinds of effects - behaviour, rash and bedwetting. Note that effects can be delayed, occur at different times, build up slowly and fluctuate. Behavioural reactions depend on the environment so if the child is getting his own way he will be fine, but when asked to do something he doesn't like, he will overreact. From story [446] on www.fedup.com.au

Day 1 - No reaction

Day 2 - Tantrum, kicking, punching (wanted more peppermints)

Day 3 - Punched a peer's arm at kindy

Day 4 - Itchy rash appeared on inside of elbow

Day 5 - Well behaved

Day 6 - Red blotches and pimples all over lower half of face, tantrum, screaming and hitting me (didn't want photo taken)

Day 7 - More blotchy and spotty, face sore and raw. [End of challenge foods]

Day 8 - Wet bed

Day 9 - Wet bed, sore tummy, sore red anus, constipated

Day 10 - Wet bed, kindy complained of very small attention span, loss of concentration.

Day 11 - Face clearing, no wet bed, generally seems to be getting better

Day 12 - wet bed again.

By the end of your elimination diet, you must know whether you are sensitive to salicylates and amines. Otherwise you may be restricting healthy foods unnecessarily. If you are avoiding dairy foods, wheat or gluten, the same applies. Very sensitive people and young babies need not challenge. Reactions to small amounts of salicylate or amine containing foods will already have been obvious.

It is easy to make mistakes during challenges. The worst case scenario is an inconclusive result. People at teaching hospitals will get capsule challenges which are quick and obvious. Others do food challenges. Most people enjoy the salicylate and amine challenges, at least until reactions start. Don't expect immediate reactions. People are different. Some reactions build up slowly and some reactions are very delayed.

Types of food reactions

- Same day: can occur almost immediately or within a few hours and last a few hours
- Next day: can start the next day and last for a whole day
- Slow reaction: can build up slowly, sometimes worst on the third day, then slowly improving – it can take a week or up to a month for effects to fully disappear. Children who take a month to completely recover can be extremely difficult to work with because can appear to have recovered but may flare up again if there is a negative interaction.

Artificial colours and MSG are often a same day reaction, preservatives a next day reaction, and salicylates or amines a next day or slow reaction, but everyone is different. Expect anything. Timing also depends on the size of the dose.

If you pass the challenge

Most people assume they can add challenge foods back into their diet as soon as they pass a challenge. However, so many people make mistakes when doing this - such as thinking 'I don't react to salicylates so I can eat broccoli again' although broccoli contains both salicylates and amines (I did this!) - it is better to finish all your challenges before reintroducing the food chemicals you can tolerate.

Salicylate challenge

None of the very high salicylate foods (tomato sauce, broccoli, oranges, your favourite lasagne recipe) are suitable for the challenge because they all contain amines as well. Some people get inconclusive results from their challenge because they expect salicylates to be like food colours, one big dose and you see a big reaction, but it's not like that. Salicylates are eaten many times a day every day and reactions can build up slowly to have the same effects as food colours.

Your dietitian will tell you to eat a certain number of serves per day of the following foods. It is important to eat as much as possible. One serve equals approximately one cup. It is best to use more high salicylate foods (capsicum, corn, cucumber, zucchini, Jap pumpkin, Granny Smith apples, apricots, guavas, peaches, nectarines, cherries, strawberries, rockmelons, watermelons) than moderate salicylate foods (mango, asparagus, carrot, butternut pumpkin). You can also use spices such as cinnamon or curry-type spices (turmeric, cardamom, coriander, cumin, garam marsala, ginger, paprika, pepper) in powder form - not curry paste that can contain colours or synthetic antioxidants; honey, preservative-free apple juice and peppermint tea. Use salicylate options in recipes and see salicylate challenge recipes in the Failsafe Cookbook and Fed Up. It is important to eat the highest dose of salicylates you can, right from the start.

Salicylate challenge story 1: 'Of the foods listed we ate tinned apricots (heaps) in syrup on our rice bubbles, preservative-free apple juice, curries or pumpkin soup for dinner and only vegetables recommended for the salicylate challenge. We put away mountains of carrots and similar of grannies in a week as well as large quantities of pumpkin, kumara, corn, capsicum (had forgotten how good that tastes), cucumber, curry, cinnamon, tea and everything else we could find in season that was on the list.

'We went for about the first three days with no reaction at all. Everyone seemed to respond differently. My husband and one son seemed not to react. My 8 year old son - the reason we started this thing - became fractious and difficult and seemingly continuously involved in conflict with his brothers and sisters, pretty well back to pre-elimination behaviour. Yuk! The youngest two had wet beds and seem a bit anxious and grumpy. I have probably had the most obvious reaction. My flesh felt like it was crawling, my eyes were stinging, I was tired and grumpy. I also had bloating and tummy aches and alternating constipation and loose stool. I got restless legs so badly while I was trying to fall asleep that I would nearly jump off the bed.' Reader, by email.

Salicylate challenge story 2: 'I found the salicylate challenge really difficult. Even though salicylates have the worst effect on my children, it took me over a year to work that out because they are delayed responders and the reactions are irrational fears and social withdrawal - not what I had expected'.

Amine challenge

Your dietitian will probably tell you to eat a certain number of ripe bananas and dark chocolate every day for seven days. It would be less for small children. Amine reactions are usually delayed up to several days or more. For dark chocolate you can use commercial dark chocolate bars or Nestle dark chocolate choc bits. For children who don't like dark chocolate - although most do after three weeks on the elimination diet - you can cook the choc bits into

chocolate cake or banana muffins, or freeze the bananas and process into banana icecream topped with melted chocolate, see recipes in the Failsafe Cookbook.

You can also eat as much as you want of: canned tuna, salmon, sardines, frozen fish, seafood except prawns, pork chops and roast pork (but not bacon and ham with preservatives) or homemade gravy (see recipe in the cookbook). In my experience, and research supports this, amines can be associated with aggression and conduct problems in some children. Consider keeping children with a potential to react like this at home for the amine challenge (and preferably for all challenges). You can use an antidote as soon as you are convinced there is a reaction, but you need to keep noting effects in your diary - some children take up to a week or even a month to recover from the amine challenge, with increasing good days punctuated by occasional outbursts.

If you react to both salicylates and amines ...

- Once you are convinced there is a reaction, you can use an antidote (look under Antidote in the index of any of my books), although it will only help for an hour or two
- People who react to both salicylates and amines can stop challenges now as they will probably react to additives as well, although it is worth doing some challenges, see below
- It is useful for asthmatics to identify which additives are associated with their asthma - e.g. sulphites, benzoates - but this should be done supervised by your dietitian

If you have passed salicylates or amines, it is worth doing the rest of the challenges. Some people react only to one or two additives, yet if they eat them every day the result is the same as for a person who reacts to everything.

Dairy and wheat challenges should be done at some stage if you are avoiding these.

- Your dietitian will probably recommend at least one cup of milk every day for a week. In our experience, ten days is better, as this can be a slow reaction. We recommend the same for A2 milk, in our experience, it's worth challenging A1 and A2 milk separately. A2 milk (www.A2australia.com.au) is sometimes better tolerated by people with food intolerance.
- Your dietitian will probably recommend a serve of plain uncoloured pasta plus a certain brand of plain wheat crackers (no hidden antioxidants!) every day for a week for the wheat challenge. Note that bread is not suitable for a wheat challenge because it contains so many other ingredients. If you pass your wheat challenge, you may still need to consider wholegrains. Many people find they can manage refined white flour products such as bread and pasta but wholegrain wheat products affect them. This has been implicated in everything from behaviour to irritable bowel to psoriasis. You can try at least 4 wholegrain biscuits such as VitaBrits or Weetbix per day as well as wholegrain flour, pasta and wholemeal failsafe bread for three days or more.

Bread preservative (282) is worth challenging because it is often eaten unknowingly every day in a healthy food and some people are so badly affected. Although the label may list preservative, the dose can vary especially in winter. In our experience it is best to continue for a week if you don't see a reaction within a few days. Eat as much preserved bread, crumpets and/or English toasted muffins per day as you want – at the very least a few slices per day.

Annatto colour (160b) is worth challenging because it is in so many foods labelled 'all natural'. Many failsafers report reactions from vanilla yoghurt coloured with annatto (try it several days in a row. If dairy free, look for soy yoghurt with annatto, or the Sanitarium So Good Bliss vanilla icecream. Some custard powders also contain annatto. If you see a reaction, please report it to us! (suedengate@ozemail.com.au)

Sulphites (220-228) - sulphites are the additive most likely to affect asthmatics, but they are also associated with the complete range of food intolerance symptoms including behaviour. Some people are very sensitive to even tiny amounts. Most foods which contain sulphites (eg wine, dried fruit, sausages, fresh grapes) also contain salicylates or amines so it is best to do those challenges first. **WARNING** If you are an asthmatic, don't do this challenge without supervision by your doctor or dietitian as it can be rapidly life-threatening, even if you've never noticed a reaction before. See reader experience below.

Sulphite challenge story: "Our food journey all started with me picking up your Fed Up with Asthma book from the bookstore after our four year old had just experienced a bout of wheezing. I read it all in one sitting and was left both horrified and hopeful. We decided that since we had nothing to lose that we would try the diet as a family in an attempt to pinpoint the trigger of our daughter's asthma. I was optimistic about finding a trigger but not really expecting to find it. Grace did the sulphite challenge with an apricot fruit bar as recommended by our dietitian (she had no reaction to the salicylate or amine challenges) that I gave her at the start of a short car journey. Within 5 minutes of finishing the bar, her breathing had become so laboured and wheezing so loud that I had to stop the car to give her Ventolin.

Over the next few months I repeated the challenge with a different brand of fruit bar, berry flavour and again with 4 dried apricots. The same results each time. Prior to the diet she would eat dried fruit, sausages and non-organic grapes quite often and was on a substantial twice daily preventer medication regimen as well as Ventolin about 1-2 times per week. Funnily enough it had never occurred to us that 'healthy' food could possibly trigger asthma."

Benzoates (210-213) If you think lemonade is a relatively safe drink for your failsafe child at parties, it's worth doing this challenge. It's also worth doing because sodium benzoate (211) or other benzoate preservatives are used in most medication for babies and children. At the time of writing, Schweppes canned lemonade contains benzoates but the bottled lemonade is preservative-free but this can change – read the label. You can try several cans of lemonade per day for several days.

Antioxidant challenge

- Gallates (310-312)
- TBHQ, BHA, BHT (319-321)

This challenge is definitely worth doing because these additives are often unlisted. Your dietitian may recommend a particular brand of cooking oil or margarine. These change constantly so check the label. At the time of writing, McDonalds fries contain BHA 320 and could be used as a challenge but you would need to check this first on their website, as ingredients change frequently. Many failsafers have been tripped up by assuming hot chips are a safe snack when shopping because they haven't seen a reaction after one dose. You need to know what to expect if your child eats synthetic antioxidants every day for three or four days – kids love this challenge. Please report reactions to us!

Sorbates (200-203) – This challenge is worth doing because many families noticed reactions when sorbate preservatives were first added to cream cheese. You can also use Philly preserved cream cheese in the tub but not the packet (read the label). As it is the kind of item often used every day e.g. in sandwiches, and the reaction can be a slow build up, you could try normal serves every day for a week or extra high doses (e.g. in a home-made cheese cake) for a few days. Please report reactions to us!

MSG (621 and natural glutamates) – your dietitian's booklet will probably recommend soy sauce with meals, although I have heard of a dietitian suggesting MSG powder such as Vetsin from Chinese groceries. We find that many people can manage the small amounts in green peas, even if they react to large doses of MSG. For a green pea challenge, eat green peas twice a day every day for three days. If no reaction, you can add peas back into the diet.

Flavour enhancers 635, 627 and 631 also called ribonucleotides, disodium guanylate and disodium inosinate - if you don't react to anything else, you could still be affected by these additives, see the [Ribo Rash factsheet](#). We don't recommend challenges because some people never recover. If you eat any product containing these additives, look for possible reactions for the next 48 hours, and understand that reactions are related to dose - if you don't react to a small amount, you can still be affected by a larger amount. This new additive has been associated with everything from behaviour problems to anxiety and heart palpitations and many people develop an unbearably itchy rash and/or swelling of the lips, throat and tongue. To see if you are affected by these additives, it is best to keep a detailed diary of food and reactions.

Nitrates (249-252) – your dietitian will probably recommend processed meats such as ham or bacon. Not for amine reactors. Check that the ham or bacon contains only nitrates, not sulphites or flavour enhancers as well. We don't recommend this challenge because when eaten frequently, nitrates are a known carcinogen (cancer-causing agent). Even if you pass this challenge, it is best to limit your intake of nitrates.

Sugar - This challenge is optional. It is for people who are convinced their children react to sugar. In nearly all cases, this will be due to salicylates or additives. However, there are a very few extremely sensitive people who do react to white sugar. You need to test this with a challenge. Eat 10 sugar cubes and observe reactions. If no reaction, double the amount.

Fish oils, supplements and other foods - You can choose to challenge anything you want, from favourite foods to herbal or nutritional supplements. Just follow the rules of challenge. My children chose Mars bars - one a day every day for three days - and failed.

After challenges, what's your tolerance?

Your dietitian will probably suggest very careful gradual reintroduction: for example, half a cup or less of moderate salicylate foods (e.g. carrots or butternut pumpkin for salicylates) every two or three days for a few weeks, then every day for a few weeks; then increasing the dose and so on. As usual, keep a diary! When you start reacting, you go back to the previous level. This is where a lot of people come unstuck. They keep on adding salicylate-containing foods until the levels are quite high, then six months or a year later, they say 'the diet isn't working as well as it did when we first started.' Effects can sneak up on you. If the diet isn't working as well as you'd like, you can go back to low salicylate foods and keep the rest for holidays when your tolerance is higher due to lack of stress.

Reader comment: 'I am at the stage now where I have reintroduced amines [e.g. bananas, tinned tuna] into my diet about twice a week, with the exception of my premenstrual week. I am prone to being over confident and blowing my reintroduction from time to time but I have pretty much worked out the timing and culprits'. - reader, NSW

[877] 621: Juvenile Rheumatoid Arthritis – pain free when avoiding MSG (November 2009)

SUCCESS!!! Our 12 year old daughter with Juvenile Rheumatoid Arthritis is pain free!!

We have finished all challenges on the elimination diet and have discovered glutamates - MSG and all 600 numbers to be extremely bad for our daughter with arthritis. Within 8 to 12 hours of having MSG our daughter went from no pain to all the symptoms of arthritis, swollen joints, very sore, trouble walking, and lots of pain. We continued the challenge for 48 hours and by then she had problems with all her joints, soreness, swelling and was absolutely miserable! Within 12 hours of stopping MSG her symptoms settled and she was back to "normal" – no pain! We now totally avoid MSG, all 600 numbers and unspecified 'flavour' listed on any product!

It has been 7 months now since we began the elimination diet and took our daughter off all arthritis medication. She is fantastic! We had a check up with the rheumatologist recently and she was amazed. We don't need to see her for another 6 months and she has classed our daughter as "in remission"!!!! No pain, No symptoms and No medication!

I hope this is of assistance to other sufferers of arthritis! It has made a huge difference to our daughter's life. Thank you for your wonderful information, without this we would be further down the track of a life of pain, misery and medications with nasty side effects for our daughter. To look at our daughter now, you would never know that she suffers from a chronic, debilitating condition, she is full of energy and her love for life is back again!

We completed all food challenges in this order: milk, wheat, bread, salicylates, amines, MSG, propionates, sorbates, antioxidants, colours, benzoates, nitrites and sulphites (all food not capsules). The only challenge our daughter reacted to was MSG, 600 numbers and naturally occurring glutamates. She had no reaction to any other challenge. Once we had completed all the challenges we challenged tomatoes, broccoli and those foods high in natural glutamates separately. She came out in an itchy rash if she ate too many tomatoes or broccoli (at least 6 to 8 serves a day) but the amazing thing for us was that she didn't have joint pains. We are tending to think that manufactured MSG must contain VERY HIGH levels of glutamic salt compared to those foods that have it naturally occurring such as tomatoes and broccoli. We have now restricted how much she has of these things. She is very good at knowing what she can and can't have. She reads labels everywhere, even when she stays over at friends or goes to birthday parties, she will read labels and decide if she can have it or not. We always send her with plain chips and 'safe' snacks for a party. Her friends have been very supportive and know that she can have plain hot chips at a party instead of pizza or party pies.

We saw the dietitian you recommended. She was very helpful, knowledgeable and thorough in what quantities etc to challenge. She was very interested in the results. She suspected MSG from early on because we had commented on how over the Christmas holidays (before elimination diet), our daughter had eaten CC's and was so sore the next day she could hardly walk. We kept a daily food diary and I also kept a dated scrap book with labels of products we had eaten so I could check back as a reference if needed.

For the MSG challenges we used "Coles Farmland" packet chicken noodle soup, about 500 mls to a litre a day (contains 621, 627 and 631) and soy sauce about 4+ tablespoons a day. (Need to check labels for soy sauce because not all list MSG or 600 numbers).

We are amazed at how many foods with unspecified 'flavour' (but no MSG or 600 numbers listed) affect her. We have found this with tomato soups, tomato pastes etc where they list 'flavour' and our daughter has been sore after having this. We have completed our own challenge with some of these products and her reaction varies. We avoid any savoury type products that have 'flavour' listed with no specific ingredient numbers on labels. The unknown is not worth the soreness for our daughter.

Foods previously eaten which we avoid completely now include: All packet soups, cup of soups, packet stocks, stock cubes, any chips or corn chips that have a flavour, BBQ shapes and all shape/savoury biscuits with flavour, tomato and BBQ sauce, some mayonnaise and dressings, packet pasta mixes (ie continental pasta packs), sausage rolls, pies, breads with savoury toppings, pizza, concentrated tomato paste, tomato soup - most have unspecified 'flavour' - and lots of other savoury foods. We never used to eat a lot of these foods, but even having things once to twice a week was enough to have our daughter in continuous pain.

She now is totally pain free, medication free and living a very active, sporting life. She plays netball weekly, has participated in the school athletics and cross country team this year and is currently in weekly training with the school volley ball team to go to Nationals in December. All of these activities were completely impossible 12 months ago! The difference is amazing! We are so thankful that your website and information has led us to finding an alternative to medication, and a way to manage our daughter's condition and allow her to live a very active life. I hope that there will be others out there that will try the elimination diet and find an alternative to medications and a life of chronic pain. - Sandra, Vic

www.fedup.com.au

The information given is not intended as medical advice. Always consult with your doctor for underlying illness. Before beginning dietary investigation, consult a dietician with an interest in food intolerance. You can find a supportive dietitian through the Dietitians Association of Australia www.daa.asn.au or write for our list of supportive dietitians (confoodnet@ozemail.com.au)

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