

FACTSHEET

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Soy allergy and soy free diet

What is soy allergy?

Soy allergy is a reaction that happens soon after exposure to soy or soy products. It is usually due to allergy (IgE) antibodies against soy proteins. IgE antibodies can be detected using an allergy test such as a skin prick test or blood test.

How common is soy allergy?

Soy allergy is uncommon compared with peanut, egg or milk allergy. Allergy to soy is most commonly seen in young children with atopic dermatitis (eczema). Only 2-3% of young children will have positive allergy tests to soy. However only a small amount of these (<10%) have symptoms when they eat soy.

What are the symptoms of soy allergy?

Reactions can range from mild to severe. Mild to moderate reactions may be any one or more of the following:

- Hives or welts, swelling of the lips/face/eyes
- Tingling of the mouth
- Abdominal pain or vomiting.

Severe reactions (anaphylaxis) include one or more of the following:

- Difficulty/noisy breathing
- Swelling of the tongue
- Swelling or tightness in the throat
- Difficulty talking and or hoarse voice
- Wheeze or persistent cough
- Persistent dizziness or collapse, pale and floppy (in young children).

It is rare (but possible) for these symptoms to occur alone without hives and/or vomiting. Delayed reactions to soy which are not due to IgE allergy antibodies can cause a flare of eczema and/or bowel symptoms in some children.

Are children with cow's milk allergy usually allergic to soy as well?

No. Only a small amount of children with cow's milk allergy (about 15%) will also have or will develop allergy to soy.

How is soy allergy diagnosed?

The presence of allergy IgE antibodies to soy can be confirmed by an allergy skin prick test or a blood test (sometimes called a RAST test). It is important to realise that not every child with a positive allergy test will develop symptoms on exposure to soy products. Test results should be discussed with your doctor.

Can my child grow out of soy allergy?

Children with soy allergy may outgrow their allergy. Children with a particular form of soy allergy called "food protein induced enterocolitis" (FPIES) usually grow out of the allergy by 2-3 years of age. Your doctor will discuss what sort of soy allergy your child has and whether your child is likely to grow out of it. In cases of soy allergy due to IgE allergy antibodies, your doctor may see if the allergy is still present by performing allergy tests every 12 months or so.

Does exposure to soy increase the risk of peanut allergy?

No. There is no good evidence that eating soy products increases the risk of developing peanut allergy even though both peanuts and soy are legumes.

What is an EpiPen?

An EpiPen is an emergency device called an adrenaline autoinjector. It injects a dose of adrenaline into the muscle. EpiPens are used to treat severe allergic reactions (anaphylaxis). The drug adrenaline reverses the severe allergic reaction and can be lifesaving.

Should my child carry an adrenaline autoinjector?

All allergists agree that children who have had a serious reaction with involvement of the breathing passages should have an adrenaline autoinjector. The need for other children to have an adrenalin autoinjector depends on a number of factors which should be discussed with your doctor.

If you have an adrenaline autoinjector it is very important that you understand how and when to use it and that you have a written anaphylaxis action plan provided by your doctor.

How do I avoid exposing my child to soy?

Soya beans are used widely in the manufacture of processed foods although they are not commonly eaten in Australia. e.g. tofu, miso, teriyaki, soy sauce, edamame beans and soy milk need to be avoided.

Avoid foods which contain:

- Soya beans / Edamame
- Soy flour
- Soy milk & soy milk products eg. soy yoghurts, soy cheeses, soy desserts, soy ice cream
- Soy bean sprouts
- Tofu (soy bean curd)
- Textured/Hydrolysed vegetable protein (TVP, HVP)
- Fermented products such as: miso (soy bean paste), tempeh, soy sauce, tamari, bean curd, teriyaki

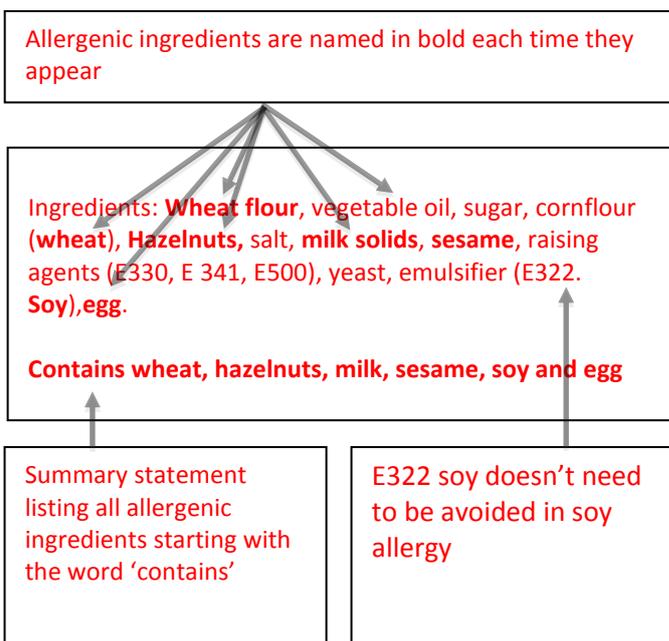
Foods that sometimes (but not always) contain soy include:

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| <ul style="list-style-type: none"> • Bread (soy flour is used in many commercial breads) • Breakfast cereals • Bread crumbs • Cakes and biscuits • Chocolate flavourings | <ul style="list-style-type: none"> • Many meat substitutes • Mayonnaise type dressings • Packaged sauces and gravy mixes • Sausages, sausage rolls, frankfurts, pizza |
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| <ul style="list-style-type: none"> • Chocolates and sweets (check for HVP) • Crumbed meats, • Deli meats and salads • Fish • Flavourings | <ul style="list-style-type: none"> • Soups • Taco shells • Unlabelled processed foods eg. takeaway food • Vegetable gum • Vegetable Starch • Vegetable broth |
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It is important to:

- Learn to how to read food labels carefully. Always check the food list for 'soy' on the label even if it says "soy-free". The following is an example of a food label:



- Avoid foods that don't have a food label or that you haven't made yourself, as there is no guarantee that the food doesn't contain soy
- Plan eating out and travelling and talk to staff serving you about your child's allergy
- Avoid food that is served using spoons/tongs that are also used to serve food containing soy (e.g. some takeaway meals)
- Prepare safe meals at home for your child to take out
- Teach your child about their allergy

Are all foods made from soy equally allergenic?

No. High levels of some soy allergens may be found in soy milk drinks or in soy powder, lesser amounts in textured soy protein, tofu and soy flakes and very low amounts of allergen in fermented products such as soy sauce or miso and in strongly heated products such as roasted soybeans. There is no need to avoid soy lecithin No 322.

Research studies show that most people with soy allergy can safely eat soy lecithin and soyabean oil.

What about soy sauce?

Soy sauce is prepared by fermentation which reduces the ability of the food to cause an allergic reaction. Therefore some allergic children may not react to soy sauce, yet react to other soy products. Also some soy sauces are actually made from wheat products.

What about soy in processed foods?

Almost half of soy allergic patients have had an allergic reaction due to ingestion of “hidden” soy. “Hidden” soy allergens are found in foods such as:

- boiled ham,
- sausages,
- cheese puffs,
- cakes and sweets
- breakfast cereals
- taco shells
- precooked dishes,
- desserts and
- gravy & stock cubes

What about foods that may contain traces of soy?

In general the amount of the food needed to trigger an allergic reaction is much higher for soy than for other food allergies. Therefore soy allergic patients are at less risk for allergic reactions to traces of soy in processed foods.

Soy free bread alternatives

Most breads are made with a starter containing soy. This can make avoiding soy very difficult. Options for soy free breads are:

- Home-made using a breadmaker and allowed flours
- Check your local baker, greengrocer, delicatessen or supermarket for soy free breads
- Crumpets
- Many flat breads e.g. Lebanese or Indian bread, wraps, mountain breads

Soy milk substitutes

Instead of:	Use
Soy milk infant formula for a child less than one year of age. NB rice drink is NOT suitable for a child less than 1 year.	Breast milk, cow’s milk formula, hydrolysed formula or amino acid formula. Speak with a medical professional to choose the right one based on your child’s diagnosis
Soy drink for a child over one year of age NB rice drink is NOT suitable for a child less than one year.	Cow’s milk Rice drink – choose one with more than 120 mg calcium /100 ml rice drink Speak with a medical professional to choose the right one based on your child’s diagnosis
Soy yoghurt	Cow’s milk yoghurt
Soy cheese, soy sour cream	Cow’s milk cheese, and sour cream
Soy ice cream	Cow’s milk ice cream, sorbet, gelato

What if my child is allergic to cow’s milk & soy milk?

Cow’s milk and dairy products or soy drinks are the main source of **calcium** in our diet. When it isn’t possible to use cow’s milk or soy milk it is essential to make sure your child gets it from other sources. You need to discuss other options with your doctor and possibly a dietitian to make sure your child meets their daily requirement for calcium that is so important for your child growing up.

Calcium

Daily calcium requirements are:

	CHILDREN
1 – 3 years	500mg
4 – 8 years	700mg
9 – 13 yrs	1000 – 1300mg
14 – 18 yrs	1300mg

Reference: Nutrient Reference Values for Australia and New Zealand, 2006

An example of how to keep count of calcium consumption is as follows:

FOOD	Calcium content	Quantity consumed	Calcium consumed (mg)
Cow's milk	120 mg		
Rice drink with added calcium	120mg		
Yoghurt * 200g (1 large tub)	300 mg		
Cheese * 20g (1 slice)	180mg		
Ice cream * 2 scoops	120 mg		
Custard* -½ cup	150 mg		
Salmon with bones ½ cup	400 mg		
Sardines 1 small tin	230 mg		
Breakfast cereal with added calcium*	Check label		
Broccoli ½ cup	20mg		
Supplement			
Other			
TOTAL			

Where can I find more information on the Internet?

- The Australian Society of Clinical Immunology and Allergy (ASCIA) website contains useful information on food allergy written by Australian specialists (www.allergy.org.au).
- The patient support group Anaphylaxis Australia offers valuable updates and tips for dealing with food allergies (www.allergyfacts.org.au).
- FSANZ - Food Standards Australia and New Zealand for information on food labelling www.foodstandards.gov.au

Calcium supplements

In some cases it may be necessary to give a calcium supplement.

Examples:

- Sandocal, (1000mg calcium/tablet) a pleasant fizzy drink which can be made up with water or juice.
- Caltrate, (600mg/tablet) a tablet which can be crushed and added to food or drink.
- Calcia (500mg) chewable lemon or orange flavoured tablet.
- Calsup (500mg) mint flavoured chewable tablet.

There may be other supplements not listed here that are suitable for your child.

Formulations change all the time and medications don't have the same labeling laws as foods. Please discuss with your pharmacist.