AllergyUK

A practical guide for reintroducing milk using the milk ladder

For children with mild-to-moderate delayed (non-IgE) milk allergy

Allergy UK Helpline 01322 619898

www.allergyuk.org

Prepared by Allergy UK with input from specialist paediatric dietitians and parents/caregivers UK 2025.

The six-step international milk ladder referred to in this guide can be accessed by scanning or clicking the QR code below.

Scan  Click

Note: This leaflet is a general guide. Always follow the advice of your child's healthcare team.

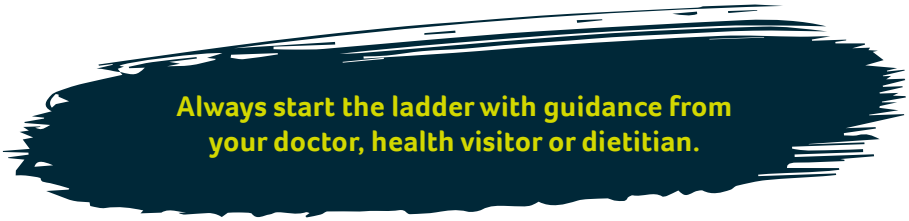
Who is this guide for?

This guide is for parents and carers of children with a diagnosis of mild to moderate non-IgE-mediated cow's milk allergy who have been advised by a healthcare professional to start the six-step international milk ladder.

It is not suitable for:

- IgE-mediated milk allergy
- Severe or potentially severe non-IgE-mediated allergy (such as food protein induced enterocolitis syndrome; FPIES)
- Eosinophilic associated diseases such as eosinophilic oesophagitis (EoE).

Children with faltering growth, feeding difficulties or severe eczema will need specialist advice.



Why reintroduce cow's milk?

Most children with a cow's milk allergy will start to tolerate some milk in foods within the first few years of life and eventually grow out of the allergy. The timing varies a lot – some grow out of it quickly, but it can also take much longer. A very small number may never fully outgrow the allergy, but they usually develop tolerance to some milk-containing foods.

Foods with milk that has been baked or well-cooked are often tolerated first, even if uncooked or lightly processed forms (like milk, cream, yogurt, ice cream or cheesy snacks) still cause reactions. The only way to find out if a child can tolerate some milk in foods is to try them. Including tolerated foods in the diet can add variety, help meet nutrition needs, make home life and social events easier and help children progress to unheated forms of milk sooner.

If your family mainly uses plant-based drinks, reintroducing cow's milk helps confirm whether the allergy has been outgrown. This gives clearer health information and allows your child more choice as they grow.

What is the milk ladder?

The milk ladder is a guide for introducing cow's milk gradually, starting with forms less likely to cause a reaction and moving step-by-step to other forms. It helps to find what level of milk a child can tolerate now and when to try other milk-containing foods to see if the child is growing out of the allergy. It is gradual and different from the much quicker milk introduction used to help diagnose a milk allergy.

Baking milk with flour traps it within the food, forming what's called a food matrix, which can reduce the likelihood of allergic reactions. Heating milk at high temperatures or fermenting it (as in yogurt and most cheeses) changes the protein structure which reduces the risk of reactions, to different degrees, compared with less processed milk products.

Allergy and dietetic experts developed the ladder to reduce the risk of reactions during milk introduction. It is based on how likely the food on each step is to cause a reaction. The foods chosen are widely eaten across different cultures and countries, can be made in low-sugar versions and are often accepted by children. Steps one to three are designed to be used with homemade foods. **Recipes can be found in the link below.**

A healthcare professional can help you to make adjustments, if necessary.

Milk ladder recipes
Click or scan the QR code to see milk ladder recipes for steps one to three.

The milk ladder
Click or scan the QR code for the six-step international milk ladder

When should the milk ladder be started?

A healthcare professional will advise on the best time to start the milk ladder. For many children, this is around 9-12 months of age. However, it may be earlier or later than this depending on your child's diagnosis, symptoms, and past reactions.

Is your child ready?

Before beginning the milk ladder:

- Your child should be well (no colds, coughs or tummy upsets).
- Eczema should be well-managed (for example, having a good plan in place from a healthcare professional about how to best look after the skin during flares, and in between).
- Try to have a good idea of your child's 'normal' (baseline). Be aware of their usual patterns whilst avoiding milk, including symptoms such as eczema, reflux or stool patterns for a clear idea of symptoms that are not milk-related. Keeping a diary of symptoms before starting the milk ladder can help you track any changes.
- You have been advised by a healthcare professional to start.

Remember...

- **Do not start the milk ladder (or move up steps) if your child is unwell, about to have vaccinations, just about to start new medication or other treatment, or is going through a big change imminently (for example, moving house or starting nursery).**
- **Have a good idea of what your child's 'baseline' is before starting.**

How to use the milk ladder

- Start at step one unless your child already tolerates some milk-containing foods (in this case, your healthcare professional can advise which step to start from).
- When trying a new step, the food can be given every day, every other day or at least two-to-three times per week, depending on the amount being given and how quickly your child tends to react. Smaller amounts can be easier to give more often, and daily intake while building up to a full portion can make progress easier to track. For children with delayed reactions, offering the food every other day with a "break day" in between can be helpful.
- Stay on each step until a full portion is eaten without a reaction at least three times.
- Once a step is tolerated, the food can be eaten normally while trying the next step. You don't need to give foods from each tolerated step daily but do make sure that your child is having some tolerated milk-containing foods regularly, at least two to three times per week.
- Giving new foods early in the day can be helpful to monitor for symptoms later in the day.
- Introduce new foods at home before asking other caregivers to offer them. Some families successfully include other family members, nannies or childminders, but clear communication about foods eaten and symptoms is essential.

If a reaction occurs:

- If a reaction occurs at the beginning of a step, stop that step and continue to include foods from previous steps.
- If a smaller amount of the food on the same step has been tolerated - this can be continued. For example, if your child tolerated one quarter of a biscuit, but reacted to half a biscuit, you can continue with one quarter of a biscuit.
- Try the step (or higher amount) again in one-to-three months' time, depending on advice from your healthcare professional and what else is happening in your child's life. Don't be disheartened if your child reacts - they may just need more time. You may wish to try with smaller amounts next time.

How much of the food to give?

The milk ladder suggests a starting amount and final portion for each step. This is a guide and can be adjusted to each child depending on their previous symptoms. Some children may start with a crumb or pea-size portion and increase very gradually, while others may start with quarter or half a portion and build up more quickly.

The final portion suggested may be too large or unachievable for your child due to their age or appetite. Aim for what you feel is a normal portion size for your child.

Smaller amounts can be used to start with

The final portion size can be adjusted to your child

Click or scan the QR code for some examples of possible starting amounts and tips for each step. **Your healthcare professional can select a starting amount or add in an alternative for your child.**

How quickly do you move up to the next step?

The time spent on each step varies a lot - anywhere from a week to several months, or years if that's where a child's tolerance level stays. Move to the next step only once you are confident your child tolerates the current one. There is no need to rush.

Alternative foods

The milk ladder is best followed using the recipes for steps one-to-three as these have been tested and have a measured amount of milk protein. The recipes are free-from egg and soya, can be adapted to be wheat or gluten-free, are low in sugar and have sweet and savoury options. Added sugar is not recommended for babies under one year of age.

Many shop-bought biscuits, cakes and pancakes contain lower amounts of milk, are higher in sugar and may be ultra-processed. Some include milk in unbaked forms, such as icing or chocolate chips, which are not suitable for the lower steps. Flavoured crisps and savoury snacks are often coated with cheese or milk-powder after baking or frying, which also makes them unsuitable.

Discuss further with your healthcare professional if you will struggle to make homemade recipes. Alternative foods are discussed below. These have not been tested for their likelihood to cause reactions and contain varying amounts of milk protein.

Note: Be aware that ingredients in shop-bought foods can change at any time, without any obvious change to the packaging. Always check the label, even for foods you buy regularly. This is also why dietitians struggle to provide reliable lists of shop-bought products.

Alternative options for step one

- Malted milk biscuits are commonly used as they contain a similar amount of milk to the homemade biscuit. However, they are high in sugar and are not suitable for wheat- or gluten-free diets.
- Certain baby biscuits, shortbread, biscottis, crackers, oatcakes and crackerbread contain small amounts of milk and are well-baked until dry. Suitable products usually contain 'milk powder' listed later in the ingredient list (ingredients are listed in order of quantity). Products with only 'whey powder' from milk are not suitable as they do not contain a balance of milk proteins.
- Certain milk roll/loaf, scones and frozen well-baked Yorkshire puddings may also only contain small amounts of milk-powder, but are not baked as thoroughly and may be more likely to cause reactions.
- Butter baked into foods (not added after baking or simply melted) provides very small amounts of well-cooked milk protein and may be suitable.
- For wheat- or gluten-free options, search for wheat- or gluten-free biscuits, baby biscuits, shortbread, cookies and crackers with smaller amounts of milk powder (lower in the ingredients list), higher amounts of butter (higher up in the ingredients list) or both. For example, 'free-from' cookies/biscuits with butter as one of the first ingredients may be suitable. Check with your healthcare professional.

Alternative options for step two

- Bread/scones/brioche made with milk rather than water might be suitable alternative foods and can be discussed with a healthcare professional. Shop-bought options should have milk listed as a top ingredient alongside flour.
- Homemade recipes should have equal amounts of milk to flour, be thoroughly baked to a dry crumb, and provide 10 portions per 250g flour.
- Once step two is tolerated, most bakery foods with milk baked into the dough or pastry are usually tolerated, as long as milk is not present in unbaked forms such as icing or chocolate chips.
- Shop-bought Yorkshire puddings and Scotch pancakes may also be tolerated (homemade versions are higher in milk and should wait until step three).

Alternative options for step three

- If your child doesn't like pancakes, you can try oven-baked mashed potato as an alternative (see the recipes).
- Other high-milk batter foods such as homemade Yorkshire puddings and waffles can also be tried.

Help! Is it a reaction?

- Mild symptoms (tummy ache, loose stools, mild rash or eczema flare) may occur as your child gets used to a new food or have other causes. Therefore, it can be useful to continue the food at the current amount (or a slightly smaller amount) to see if symptoms pass. If they continue beyond what you feel is normal for your child, worsen or are causing distress, stop the food and return to the previous tolerated amount or step.
- Consult your healthcare team if eczema flares are frequent or severe as eczema management might need to be changed. Keeping a log of foods, triggers (for example temperature changes, teething, illness, stress) and eczema flares can be helpful.
- If symptoms occur due to a milk reaction, stop the food and continue foods from previously tolerated steps.
- Treat any reaction as advised by your healthcare professional.

If your child develops immediate reactions that are mild or moderate such as hives, swelling of the lips, eyes or skin, vomiting, or itchy eyes, **stop** the food and seek medical advice (the GP or NHS 111). Monitor for severe reactions affecting the airways, breathing or consciousness. These are very rare, but if they are suspected, seek emergency help immediately: call 999 or 112 and say "anaphylaxis" (ANA-FIL-AXIS).

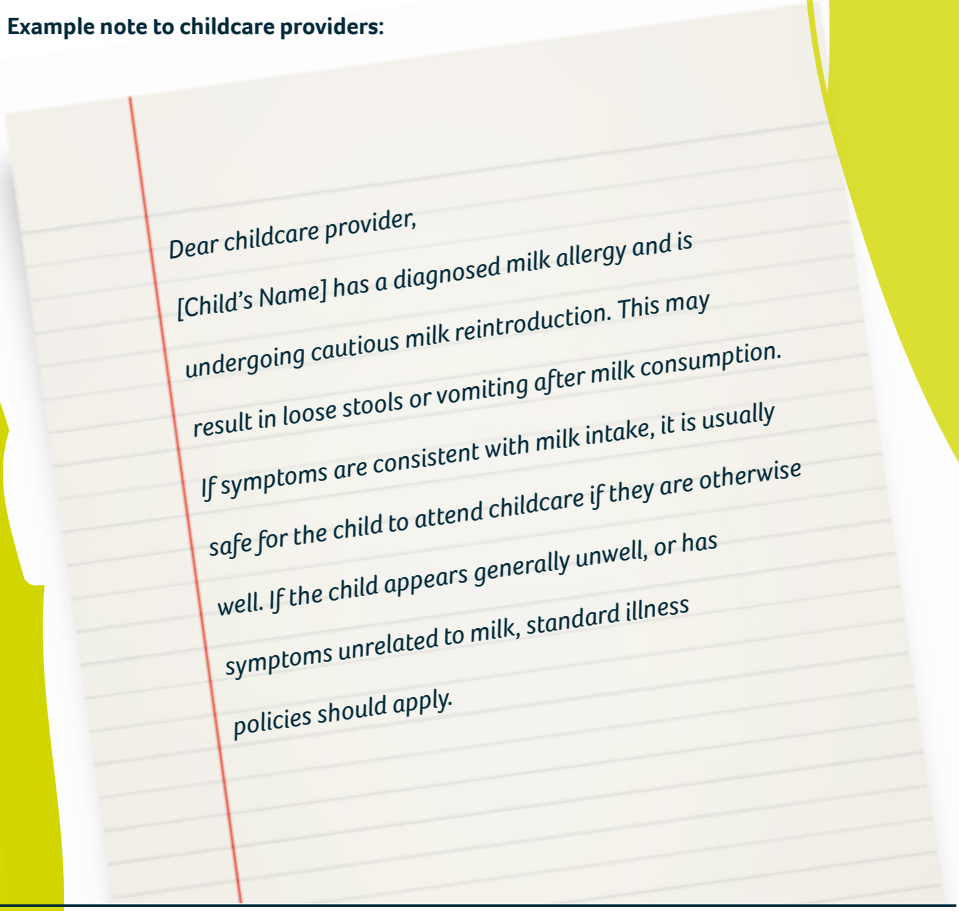
Click or scan the QR code to read our leaflet - Anaphylaxis: The 4s.

Loose stools, vomiting and childcare considerations

If your child tends to develop loose stools or vomiting as a reaction to milk, discuss this with your childcare provider before introducing milk. This can help you create a clear plan to avoid unnecessary exclusions from childcare. If needed, ask your healthcare professional to provide a note (see an example below).

If your child is generally unwell, has been in contact with others who are ill, or if the timing of symptoms doesn't match milk consumption (or if other family members are unwell), it may be an infection. When in doubt, keep your child at home.

Example note to childcare providers:



The final step - the transition to fresh milk

- Children under one year should only have breast milk, breast milk substitute (infant formula) or water to drink and not cow's milk or milk alternatives. Start with a small splash of cow's milk added to foods with the child's usual milk drink (for example cereal or porridge) and gradually increase over days or weeks.
- For children over one year, you can start gradually replacing their usual milk drink with cow's milk, for example one to two tablespoons (half to one ounce) at a time. Doing it gradually can help the body adjust to digesting milk and the child adjust to the new taste.
- After one year of age, it is recommended to offer milk from a cup rather than a bottle. It is normal for children to drink less from a cup. At this age, less milk is often needed, as cow's milk contains more calcium than breast milk or formula, and calcium requirements naturally decrease as growth slows.
- Mild gut symptoms (loose stools or changes in stool colour) can be normal with any change of milk. If mild symptoms are not causing distress, continue the current amount, but avoid increasing until symptoms settle. If symptoms worsen or become concerning, return to the previous amount tolerated.
- Breastfeeding can continue alongside the introduction of cow's milk; it does not need to be replaced.

UK guidance recommends exclusive breastfeeding for baby's first six months followed by continued breastfeeding alongside solid foods for at least the first year, or as long as mother and baby want.

Useful tips

1. Children may struggle to enjoy the homemade biscuits and muffins on their own. Be creative about how they are offered and see ideas for how to serve the biscuits in the recipe pack. Many of the ideas work for the step two muffins/soda bread rolls as well.

2. When using batch-cooked muffins or pancakes, reheating is not recommended, as it can slightly alter the milk protein. Defrost frozen items in the fridge overnight without re-heating.

3. Try to be relaxed when introducing foods - children pick up on anxiety. Don't force your child to have any foods and give them time to explore it.

4. Keeping your child milk-free at nursery or school can be helpful until their tolerance of milk-containing foods in known. Talk to your childcare providers about how confident they are with introducing some, but not all, milk-containing foods to help decide when they should start providing them.

5. For children who have more than one home, a clear plan and communication about foods given and symptoms seen is important. Some families find it easier to introduce milk at one home only.

Troubleshooting and FAQs

What if my child is ill, teething, or has an eczema flare?

Pause at the current step, continuing foods in amounts already tolerated. Avoid increasing the amount or moving up a step. Once symptoms settle, continue as normal.

What if we miss days or go on holiday?

Restart with a slightly smaller amount of the food previously tolerated before picking up where you left off.

My child is a fussy eater and refuses the food.

Talk to your healthcare professional about alternative foods. Skipping a step may also be fine if reactions are mild.

Do we have to complete the milk ladder before introducing other foods (for example egg/soya/wheat)?

No, as long as a child is stable on a step and tolerating foods from that step and below, the milk ladder can be paused to try other foods. It may be important to introduce other foods earlier rather than later. Discuss with your healthcare professional about a plan for your child. A child with allergies to milk, soya and egg might introduce soya flour in bread, then baked milk, then baked egg, before progressing further with each one at a time.

I'm avoiding milk as a breastfeeding parent - when can I reintroduce milk into my diet?

Speak with your healthcare professional about whether to reintroduce milk before or after your child starts the milk ladder. You may be able to reintroduce milk beforehand as only tiny amounts of partially digested milk protein pass into breast milk. If the milk ladder is started first, note that once step two is tolerated, the child has a good chance of tolerating any milk via breast milk.

Does my child really need cow's milk?

Cow's milk isn't essential, but it is an excellent source of nutrients including calcium, iodine, protein, vitamins, and other minerals. Meeting nutritional needs without dairy is more challenging. If you choose not to include milk in your child's diet, speak with a dietitian to ensure their nutritional needs are met.

Will my child react to goat, sheep, or lactose-free milk if they have a cow's milk allergy?

Children allergic to cow's milk often also react to goat, sheep, and buffalo milk. Foods with these milks can be introduced at the appropriate steps, for example between steps five and six for soft goat's/sheep's/buffalo cheeses. Lactose-free milk still contains milk protein and is not suitable for milk allergy. Most children tolerate lactose, although temporary lactose intolerance can occur after stomach illness. In adults, reactions to milk are more often due to lactose intolerance than allergy. Lactose-free products are helpful when there is lactose intolerance but no milk allergy. See www.allergyuk.org/resources/lactose-intolerance.

When can my child have semi-skimmed or skimmed milk?

Full fat (whole) milk is recommended for children under two years of age. After age two, semi-skimmed may be used if the child is growing well and the diet is varied. Skimmed milk is not recommended before five years of age.

How do I meet my child's calcium needs whilst on the milk ladder?

Continue usual breast milk, formula, or calcium-fortified milk alternatives until cow's milk is fully reintroduced. From one year of age, three portions daily of dairy or calcium-fortified alternatives milk will meet calcium needs (more than five portions a day can reduce appetite and increase the risk of iron deficiency). Example portion sizes are shown below (include yogurt and hard cheese, once tolerated):

Food	1–3 yrs	4–6 yrs	7–10 yrs	Boys 11–18 yrs	Girls 11–18 yrs	Adults 19+ yrs
Milk or calcium-fortified alternative (ml/day)	100	125	150	275	220	200
Yogurt (g/day)	80	100	120	220	175	150
Hard cheese (g/day)	15	20	25	50	40	30

My child reacted to yogurt/chocolate/cheesy snack - are they ready for the ladder?

Many children who react to fresher milk can tolerate baked milk in lower steps, so starting the ladder is usually appropriate.

We keep trying the milk ladder, but our child keeps reacting to the first step.

Speak with your healthcare professional for personalised advice. For some children, a modified approach, slower progression, or additional guidance may be needed.

Despite multiple attempts, we can't move past our current step.

You may have found what your child's tolerance level is at this current point in time. Continue to include tolerated milk-containing foods regularly (two to three times/week or more) and speak to your healthcare professional for further advice.

Final note

- **Every child is different - avoid comparing with others.**
- **Reactions and setbacks are common; retrying later often succeeds. Play the long game!**
- **The goal is to find your child's current tolerance level, not necessarily reach the top. Tolerance can improve with more time.**
- **Celebrate small achievements - even tiny amounts tolerated matter. Well done on every tiny little progress made!!**

Listen to our podcast: 'Navigating the everyday challenges of a child's cow's milk allergy'

Allergy UK's Annette Weaver chats with Becca, mum to a child with cow's milk allergy, about life after diagnosis, using the milk ladder, and finding practical support along the way.

***Listen now at bit.ly/milk-ladder-podcast or scan the QR** code.*

Need further support?

Our Helpline advisors are available Monday–Friday, 9am–5pm

Call: 01322 619898 Webchat: allergyuk.org Email: info@allergyuk.org

Acknowledgements

The content of this booklet was developed by Annette Weaver, Clinical Dietetic Advisor, Allergy UK, after input from a panel of specialist allergy dietitians and two parent consultations.

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