

## Patient information

# How to reintroduce cow's milk following a milk-free diet

### General Information

Most children will grow out of their cow's milk allergy. The following plan explains how to start reintroducing small amounts of cow's milk into your child's diet in a safe way. The first stage is to give small amounts of milk protein in a biscuit. This is because cow's milk protein is less likely to cause an allergic reaction in this form as the flour mixture and high heating temperature changes the protein to be more tolerable. The ability to tolerate foods with milk as an ingredient not only makes dietary choices less restrictive, but also helps to speed up the body's ability to tolerate larger amounts of milk and progress onto a normal diet. Some children remain severely allergic to milk and need to continue a strict milk-free diet or have a supervised challenge in hospital. However, if your dietitian or doctor has assessed your child to be ready to introduce milk at home, you should follow the plan below.

### Important information about the reintroduction plan

- You may stay at each stage for longer, but **do not increase** to the next stage quicker unless you have been told to do so.
- Try to give the dose every day.
- Do not increase to a higher dose if your child is unwell but try to maintain the dose they were on before they became unwell.
- If you miss several days (e.g. your child is unwell) give a slightly smaller dose when you restart.
- If your child begins to show symptoms (e.g. a rash, eczema flare, tummy ache, vomiting, diarrhoea / loose stool, loss of appetite, throat tingle) reduce the dose to a lower level that is tolerated.
- Try to remain on the ladder if at all possible, as even a tiny crumb will help to build tolerance. If symptoms are unmanageable, stop for a month, and then start again.
- For reactions, follow the treatment plan given to you by the doctor for treatment of allergic symptoms (e.g. giving a dose of antihistamine, e.g. Piriton).

## Home milk reintroduction

### STAGE 1 – Malted Milk biscuit.

**Use biscuits that contain milk powder rather than whey powder.**

A recipe for home-made biscuits at the end of this leaflet if you would prefer to reduce sugar content.

Small crumb of biscuit containing whole milk as an ingredient. Build up over 5 weeks as tolerated.

Check the biscuit contains less than 1g protein per biscuit.

#### **Stage 1 food alternatives:**

Examples include; Malted milk, Karmel mini Biscotti.

#### **Week 1:**

- Small crumb of biscuit containing milk to be eaten every day – malted milk biscuit.



#### **Week 2:**

- Large crumb of biscuit to be eaten (2 days)



- 1/16 biscuit to be eaten (2 days)



- 1/8 biscuit to be eaten (3 days)



### **Week 3:**

- 1/4 biscuit to be eaten daily.



#### Week 4:

- ½ biscuit to be eaten daily.



#### Week 5:

- 1 whole biscuit to be eaten daily.



### STAGE 2

Once your child is tolerating a whole biscuit, you can begin to offer other foods that contain milk that is mixed with flour and cooked at high temperatures, and products that contain small quantities of less cooked milk e.g. ordinary butter and margarine, cheese flavouring on crisps. There are more food ideas given below. You can also use homemade recipes of the below that contain milk as an ingredient.

- Your child can continue having foods from stage 1 while they have foods from stage 2.
- For each new food tried, give a small amount first and then allow in the diet. **This is especially important when trying cheese flavouring.**
- If a particular food causes symptoms, leave it out or try a smaller quantity but retry in a couple of months.
- If symptoms are frequent with stage 2, stick to stage 1 (1 biscuit per day) for 1 month longer.

- You can pick any foods from any of the categories below:

## Stage 2a

Biscuits	Cakes	Savoury	Wheat free items, no egg	Wheat free items, do contain egg
Butter crunch biscuits, Garibaldi biscuits, Malted milk, Asda Coconut Rings, Organix Little Ruskits Vanilla, LU Le Petit Beurre, Heinz So Yummy Biscotti, Jaffa cakes, Baker Street Nankhatai, Familijne Ciastka Biscuits, Regal Puff Pastry finger biscuits.	Waffles, Muffins, Fruit teacakes, Malt loaf, Scones, scotch pancakes (recipe attached) flapjacks, Trifle sponges, ice cream wafers, Brownies, Sponge and pastry flan cases, French fancies, lemon cupcakes, Nutri-Grain breakfast bars, Belvita breakfast biscuits, Shortbread, Croissants.	Aunt Bessie ready-made Yorkshire puddings, Warburtons Milk Roll Butter enriched puff pastry, Asda Scone mix	Nairn's Cheese oatcakes, Schär Viennese biscuits, Asda Free from shortbread, Walkers Gluten Free Shortbread.	Asda Free from Yorkshire puddings, Tesco Free from mini breadsticks, Schär Rich Tea biscuits, Tesco free from Madeira loaf cake, Sainsburys Free from sultana scones.

## Stage 2b

Once your child is tolerating the above foods well and in normal portions for their age, then try these 2 foods. They do not contain wheat and are a good indication that your child is ready to move onto Stage 3.

- Butter and margarines and recipes that contain butter/margarine.
- Crisps and snacks that contain milk or cheese powder as a flavouring.

## STAGE 3

Only begin to try foods from this stage if your child is **regularly** eating foods freely from stage 1 and 2 **without symptoms**, or your dietitian has told you to do so. These foods contain considerably more milk protein, and this can vary between the different products.

- Your child can continue to eat foods from stages 1 and 2 while having foods from stage 3.
- Give small amounts initially e.g. 1 lick of yoghurt or 1 strand of cooked cheese and build up on the quantity.
- Each food is different so **do not** assume if you are eating one product, all brands or versions will be tolerated. Start **each** new food in small quantities first.
- If symptoms occur on small traces of these products, stay on stage 2 for another 2 to 3 months.
- It is much better to have a daily 'dose' of a milk containing food and build up the quantity every week rather than give it only once or twice per week in larger quantities.

Products that contain cheese or whole cow's milk as a **heated** ingredient.

- Custard, custard tart,
- Pizza (choose a base that doesn't contain milk)
- Cheese or white sauce.
- Soup made with milk (cream soups)
- Rice pudding
- Dishes that contain heated milk e.g. mash potato topping (cottage/shepherds/fish pie),
- Homemade batters e.g. pancakes, Yorkshire pudding
- Chocolate and chocolate covered items e.g. chocolate biscuit.
- Chocolate as an ingredient e.g. choc chip. (10g chocolate/35g bag of buttons).
- Lasagne or other oven baked pasta dish (some recipes attached)

## STAGE 4

These foods should only be tried if your child is **regularly** eating foods from stage 3 with no symptoms.

- Your child can continue to have foods from stages 1,2, and 3 while they have foods from stage 4.
- Try the foods in order that they are on the list below.
- Start with small doses e.g. teaspoon ice cream, small piece of cheese.
- If trying fresh cow's milk, start by trying 1 teaspoon on breakfast cereal and increase every couple of days.
- If your child dislikes the taste of milk, try it in hot chocolate, milkshake or mixed with the child's usual milk substitute.
- If symptoms occur, refer to your 'treatment of allergic reaction' plan and continue to only allow foods from stage 3, but retry in 2 – 3 months until full tolerance is achieved.

1. Fermented desserts e.g. Yoghurt, fromage frais
2. Uncooked cheese (25g hard cheese)
3. Uncooked non-yoghurt desserts e.g. cheesecake, mousse, ice cream, cream cakes
4. Sterilised / UHT milk / normal infant formula.
5. Fresh cow's milk (pasteurised milk), milk shakes.

## Recipes to go with milk ladder

### Biscuit (“malted milk”)

Makes 40 small biscuits

#### Ingredients

110g unsalted butter – softened

110g caster sugar

175g self-raising flour

50mls evaporated milk

Water if mixture is too dry.

#### Method

- Preheat oven to 180°C (160°C for fan ovens)
- In a large bowl, cream the butter and sugar and evaporated milk until pale
- Mix in sifted flour. This will make a stiff dough – if too dry add a small amount of water.
- Divide dough into 2 and then into 2 again.
- Out of each quarter of the dough – make 10 small equal size balls.
- Place on baking tray covered with greased baking paper.
- Cook for 15 minutes or until golden at the edges but still a little soft.
- Transfer to cooling rack.

Dough not used can be wrapped in cling film and frozen.

Cooked biscuits can also be frozen.

#### Variations

Add any of the following – dairy free chocolate drops, grated lemon and / or orange zest and a small amount of juice, any spices such as cinnamon, dried fruit such as raisins, apricots, dates, or for a **savoury** version add 40g grated milk-free cheese such as Vegan Cathedral City.

#### Nutrition Information

Milk equivalent per biscuit: 2.88ml (1/4 biscuit = 0.72mls and ½ biscuit = 1.44mls)

Milk protein per biscuit: 0.095g

#### Gluten and wheat free alternative:

For a gluten and wheat free biscuit replace the wheat flour with 175g gluten and wheat free self-raising flour.



## Mini muffins/cupcakes

Makes 8 muffins.

THESE MUFFINS/CUPCAKES can also be used for a BAKED MILK challenge.  
In order to provide 50ml of milk (as per Ann Nowak-Wegzyn studies\*), 2 muffins need to be eaten.

\*Nowak-Wegzyn A, Assa'ad AH, Bahna SL, Bock SA, Sicherer SH, Teuber SS. Work Group report: oral food challenge testing. J Allergy Clin Immunol 2009 Jun; 123 (6 Suppl) : S365-S383

### Ingredients

132g wheat or wheat free flour  
40g cocoa powder  
1 ½ tsp baking powder  
¾ tsp bicarbonate of soda  
100g soft brown sugar  
40ml any oil  
70ml prune juice/Apple Puree  
200ml milk  
½ tsp vanilla extract

### Method

- Mix all the dry ingredients together.
- Mix the oil, apple puree/prune juice, milk and vanilla extract together.
- Add the fluid to the dry ingredients and mix lightly.
- Scoop mix into muffin pans.
- Bake at 180°C for 20min.

### Variations

Can be served with icing made with a suitable dairy free margarine or dairy free cream cheese.

### Nutrition Information

Milk per muffin: 25 mls (1/2 muffin =12.5mls)

Milk protein per muffin: 0.825g

*Carina Venter, Penny Barnard, Isabelle Brady, Sally-Ann Denton, Anna Carling, Carol Fudge, Nicky Heather, Kate Maslin, Rebecca Weeks, Mich Lajeunesse.*

## **Scotch pancakes:**

Recipe provides 18 pancakes.

### **Ingredients**

120g self-raising flour

Small pinch of salt

30g caster sugar

1 egg

144ml milk

### **Methods**

- First grease your pan – use oil as butter will burn, and then heat.
- Sift the flour into a bowl, add the pinch of salt and the sugar.
- Crack the egg into the milk and whisk.
- Pour the egg and milk liquid into the dry ingredients, and mix to form a smooth batter.
- Test that the pan is hot enough by putting a teaspoon of batter onto it.
- Use a tablespoon to drop the batter onto the pan.
- When the surface of the batter has become covered in bubbles get ready to flip them over using a spatula.
- When cooked remove the pancakes from the pan and wrap in a clean tea towel to keep moist.

### **Egg free or wheat free alternative**

For an egg free alternative replace the egg with ½ large banana or use the instructions on an egg replacer.

For a wheat-free pancake replace the wheat flour with wheat-free flour.

### **Nutrition information**

Milk per pancake: 8ml (1/2 scotch pancake = 4mls)

Milk protein per pancake: 0.26g

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## **Shepherd's pie Recipe**

**Excludes:** Egg, Wheat, Gluten, Soya, Nuts

Serves 8 children.

### **Ingredients**

650g lamb mince or beef mince  
1 tbsp vegetable oil  
1 large onion, finely chopped  
600ml vegetable stock  
½ tsp mixed herbs  
1 tbsp tomato puree  
Sea salt and freshly ground black pepper  
900g potatoes, peeled and chopped  
55g butter  
100mls milk  
5g skimmed milk powder (dissolved into milk)  
40g grated cheddar cheese.

### **Nutrition information**

Milk equivalent per child's portion: 18.8 ml milk and 5g cheese

Milk protein per child's portion: 1.9g

*Carina Venter, Penny Barnard, Isabelle Brady, Sally-Ann Denton, Anna Carling, Carol Fudge, Nicky Heather, Kate Maslin, Rebecca Weeks, Mich Lajeunesse.*

## **Lasagne**

**Excludes:** Egg, Nuts, Soya

**Contains:** Wheat, Gluten, Dairy

Serves 8 children

### **Ingredients**

Oil, to fry

450g lean beef mince

1 onion, finely chopped

1 red pepper, seeds removed, finely chopped

1 green pepper, seeds removed, finely chopped

150g mushrooms, sliced

200g tomato puree

2 bay leaves

2 x 400g tin chopped tomatoes

1tsp dried thyme, parsley and oregano

Salt and freshly ground pepper

350g lasagna sheets

Make a white sauce with – 20g butter, - 20g plain flour and gradually add 330ml milk

40g grated mature cheddar cheese.

### **Nutrition information**

Milk per child's portion: 41.3ml + 5g cheese

Contains cow's milk protein – 2.6g per child's serving

### **Gluten and wheat free alternative:**

For a gluten and wheat free lasagne replace the lasagne sheets with 300g dried wheat free pasta sheets.

## **Mini pizza**

### **Ingredients and method**

Use bread or pitta bread

Tomato puree to cover the bread or pitta bread

Add a variety of vegetables as preferred

Cover the pizza with 15g (1/2 oz) of cheese (mozzarella or cheddar or a mix)

Bake for 5 – 10 min at 200°C

### **Wheat free alternative**

For a wheat free pizza, use a wheat free pitta bread or a corn tortilla.

### **Nutrition Information**

Milk protein content per “pizza” = 3.75g milk protein

Milk equivalent per portion: 15g cheese.

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