

WORRIED ABOUT DAIRY-FREE WEANING?

A healthcare professional practical guide to complementary feeding without cow's milk

Common reasons for milk-free complementary feeding include plant-based eating, cow's milk allergy and cow's milk/lactose intolerance.



GENERAL PRINCIPLES OF INTRODUCING SOLIDS TO BABIES

Most babies are ready for solids between 4–6 months of age. It is important to look for signs of 'readiness for solids' before starting. These include strong head/neck control, ability to sit supported in a high chair, can pick up food and put it in their mouth, show interest/reach out for what the family is eating and have lost their tongue-thrust reflex, demonstrating munching oral-motor activity and lateral tongue movements.

DIFFERING CIRCUMSTANCES	AGE OF INTRODUCTION	NOTES
Healthy term babies	From around 6 months, alongside breastfeeding (BF)	Peanuts/eggs/gluten should not be differentiated from other foods ¹
Preterm babies	Usually between 4–6 months corrected age. Can consider from 13 weeks corrected age.	Consider gestational age at birth, assess readiness to eat & nutritional status ^{2,3,4}
Babies with eczema and/or existing food allergy	From around 4 months of age	Include cooked egg, then peanut as some of the first foods offered ⁵

NUTRIENTS REQUIRING PARTICULAR ATTENTION IN BREASTFEEDING (BF) MOTHERS, INFANTS AND YOUNG CHILDREN AVOIDING COW'S MILK

NUTRIENT	COW'S MILK FREE SOURCES	RNI BF MUM ⁶	RNI 1YR OLD	SUPPLEMENTS
Energy (kcal)	<ul style="list-style-type: none"> • Starches (some wholegrain) e.g. cereals, pasta, bread, quinoa, rice, couscous, bulgur wheat, buckwheat, root veg • Fats and oils • Higher energy plant-based milk and dairy alternatives 	2100	700	

NUTRIENT	COW'S MILK FREE SOURCES	RNI BF MUM ⁶	RNI 1YR OLD	SUPPLEMENTS
Protein (g)	<ul style="list-style-type: none"> •Beans, pulses, lentils, soya beans/edamame, tofu/TVP, mycoprotein (Quorn™) •Nuts and seeds e.g. cashew, pistachio, chia, pumpkin, ground linseed (flax), hemp •Higher protein plant grains e.g. quinoa, buckwheat, wild rice, seitan •Higher protein plant-based milk & yogurt alternatives and fortified nutritional yeast •Meat, fish, eggs (if eaten) 	50+11	14.9	
Riboflavin (B ₂) (mg)	<ul style="list-style-type: none"> •Nuts e.g. almonds and pulses e.g. kidney beans •Vegetables e.g. spinach, broccoli, asparagus, avocado, some mushrooms •Fortified nutritional yeast and yeast extract •Fortified breakfast cereals, grains, bread •Fortified plant-based milk alternatives •Eggs, meat, oily fish, shellfish (if eaten) 	1.1+0.5	0.4-0.7*	Many multivitamin supplements contain riboflavin. (BF support vitamins provide approx. 2mg)
Cobalamin (B ₁₂) (µg)	<ul style="list-style-type: none"> •Fortified breakfast cereals, grains, bread •Fortified nutritional yeast and yeast extract •Fortified plant-based milk alternatives and foods e.g. yogurt, margarine •Meat, oily fish, shellfish, eggs (if eaten) 	1.5+0.5	0.5	If not consuming at least 3µg from foods daily, adults should take a supplement providing at least: 10µg daily or 2000µg once a week
Calcium (mg)	<ul style="list-style-type: none"> •Calcium fortified plant-based milk, yogurt & cheese alternatives •Calcium fortified breakfast cereals and bread •Calcium enriched fruit juice •Soya bean curd/ tofu (if set with calcium chloride/ sulphate) •Vegetables e.g. spring greens, broccoli, kale •Tinned fish with bones e.g. sardines (if eaten) 	700+550	525-350*	Majority of BF mums are likely to need supplementation (BF support vitamins provide approx. 600-700mg daily).
Iodine (µg)	<ul style="list-style-type: none"> •Fortified plant-based milk and yogurt alternatives •White fish, shellfish (if eaten) •Eggs (if eaten) •NB/ Seaweed & kelp are too high in iodine to consume 	140+?§	60-70	WHO recommend iodine supplement (150µg) for pregnant and BF mums in countries who don't use iodised salt e.g. UK. BF support vitamins contain approx. 140-150µg).

NUTRIENT	COW'S MILK FREE SOURCES	RNI BF MUM ⁶	RNI 1YR OLD	SUPPLEMENTS
Zinc (mg)	<ul style="list-style-type: none"> •Legumes e.g. lentils, chickpeas, tofu, fermented soya products e.g tempeh, miso •mycoprotein (Quorn™) •Nuts e.g. cashew, walnuts •Seeds e.g. sesame, chia, pumpkin, hemp, ground linseed (flax) •Fortified nutritional yeast •Meat, shellfish, eggs (if eaten) 	7+6	5	BF significantly increases requirements which are difficult to meet if no animal products are consumed. BF support vitamins contain approx. 15mg daily.
Selenium (µg)	<ul style="list-style-type: none"> •Brazil (avoid excess) and cashew nuts •Sunflower seeds, pulses, lentils •Wholegrains, oats •Spinach •Meat, oily fish, shellfish, eggs (if eaten) 	60+15	10	BF support vitamins provide approx. 75µg
Vitamin A (µg)	<ul style="list-style-type: none"> •Fortified margarine •Orange/ red vegetables & fruit e.g. sweet potato, carrots, butternut squash, red pepper, mango •Dark green vegetables e.g. Spinach, kale, broccoli •Oily fish, eggs (if eaten) 	600+350	400	Many combined supplements contain vitamin A. Important to avoid exceeding RNI from supplementation. Healthy Start children's vitamins contain 233µg, 0.3ml Abidec 200µg
Choline (mg)	<ul style="list-style-type: none"> •Soya, pulses •Quinoa, wheatgerm •Cruciferous vegetables e.g. broccoli, sprouts •Peanuts, sunflower seeds •Eggs, meat, poultry (if eaten) •Fish, shellfish (if eaten) 	?#	?#	BF support vitamins in the UK currently do not contain this nutrient, although EFSA suggested increase in requirements.
Vitamin D (µg)	<ul style="list-style-type: none"> •UV exposed mushrooms •Fortified foods e.g. margarines, breakfast cereals & some plant-based milk alternatives •Eggs and oily fish (if eaten) 	10	10	All pregnant, BF mums, breastfed infants, infants taking <500-600ml infant formula, children 1-4 yrs, those with darker skin and older people should take 10µg vitamin D all year round. Others consider between Oct-Mar (SACN, 2016). Healthy Start vitamins available; mothers & infants 10µg

* Requirements significantly change from 10-12 month to 1-3 yr age groups
\$ WHO RNI iodine 250 µg/d, EFSA 200 µg/d for BF mothers
EFSA adequate intake choline 400 mg in adults, 520 mg during lactation

FORTIFICATION OF PLANT-BASED MILK AND DAIRY ALTERNATIVES

The nutrient content of plant-based milk and dairy alternatives varies widely in their energy, protein, vitamin and mineral content. Some are fortified with a wide range of micronutrients including vitamins B₂, B₁₂ and D, iodine and calcium whilst others, particularly organic products, are unfortified. It is advisable to check the nutrition label.

COW'S MILK FREE WEANING RESOURCES

For use by Health Professionals:

- **First Steps Nutrition Trust: Eating well, vegan infants and under fives**
https://static1.squarespace.com/static/59f75004f09ca48694070f3b/t/5e56fa31f3d6f227ed61362c/1582758484838/Eating_well_Vegans-Feb_2020_forweb.pdf
- **BDA FASG cow's milk free diet for infants and children (available only to BDA members to discuss with individual patients) - contains pages dedicated to introducing solids & meal/snack ideas**
- **BSACI Infant feeding and allergy prevention (to discuss with individual patients)**
<https://www.bsaci.org/pdf/Infant-feeding-and-allergy-prevention-PARENTS-FINAL-booklet.pdf>
- **BDA position statement on complementary feeding**
<https://www.bda.uk.com/uploads/assets/bcff7799-fe21-4031-a617792edfcef5d7/b4daa984-352b-4c38-a922a6f32cd3ab1f/200330-BDA-Position-Statement-Complementary-Feeding.pdf>

For use by the Public:

- **Vegan Society: A nutrition guide for vegans under 5 years of age**
https://www.vegansociety.com/sites/default/files/uploads/downloads/Under-fives%20PDF%202_0.pdf
- **BDA milk allergy fact sheet**
<https://www.bda.uk.com/resource/milk-allergy.html>
- **Allergy UK: Cow's milk free diet information for babies and children**
https://www.allergyuk.org/assets/000/001/207/Cow's_Milk_Free_Diet_Information_for_Babies_and_Children_original.pdf?1501228993

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