

# Plant-based Nutrition

for babies aged 0-12 months

**Taiora Whēkana mō ngā pēpi  
0-12 ngā marama te pakeke**

**VEGAN<sup>NZ</sup>  
SOCIETY**  
TE RŌPŪ WHĒKANA O AOTEAROA



**Congratulations on the birth  
of your baby!**

**Kia whakamānawatia te  
whānautanga mai o tō pēpi**

Raising a baby as a vegan from birth is a recent trend which has not been widely studied. As a parent you may wonder whether this is a safe choice. The research does suggest that tamariki raised on a well-balanced plant-based diet can grow well, are less likely to be overweight and may have a lower long term risk of chronic disease.

A poor diet (vegan or otherwise) can lead to nutritional deficiencies and poor growth which may affect your child for life.

As a vegan it is especially important to be aware of potential pitfalls when cutting out all animal products. Applying the information in this brochure to plan pēpi's diet will ensure you're off to a great start.

It is important to take pēpi to have regular health and growth checks and to make sure they are reaching their developmental milestones. Well Child Tamariki Ora provider will support you on this journey.





## First Steps Ngā Hātepe tuatahi

### Breastfeeding

Breastfeeding is the best start for all pēpi. Breastfeeding helps to establish a strong emotional bond between mum and pēpi, it protects pēpi against infections and allergies and also provides many life-long health benefits. The longer you can continue breastfeeding, up to two years or longer, the better this is for pēpi. This is because breastmilk is such an important source of nutrients and immune protection for all babies, including vegan babies in the first years of life.



If you are struggling to establish or maintain breastfeeding it is important to get the help you need from your midwife, Well Child Tamariki Ora nurse or from breastfeeding support services such as La Leche League or Lactation Consultant (IBCLC). See [www.womens-health.org.nz/find-your-breastfeeding-support](http://www.womens-health.org.nz/find-your-breastfeeding-support).

The most important indicators of breastfeeding going well are baby weight gain and output in the nappies. The baby being unsettled or breastfeeding frequently does not usually mean there is a problem. Most breastfeeding challenges can be resolved with good support and it's best to ask for help as soon as you are having an issue.

### Formula Feeding

If you are formula feeding your baby, Manatū Hauora recommend a cow's milk based formula for the first year of life. However, there are a number of plant-based infant formulas available which have a similar nutritional composition to cow's milk formulas. Your midwife, Well Child Tamariki Ora nurse or Lactation Consultant (IBCLC) will be able to support you to make the best decision for your circumstances. When necessary, a referral to a paediatric dietitian can be made. It is crucial to use any recommended formula you choose as directed.



*Be aware that regular plant-based milks from the supermarket or homemade infant formula are unsuitable and inappropriate as the main milk source for pēpi under 12 months of age.*

### Weaning Te Whakapāhunu

At around six months, when your baby is showing all the signs of readiness to start on solids, they can start eating puréed or mashed kai. Pēpi has a small stomach and will initially only manage 2-3 teaspoons at a time. Breastmilk will remain their main source of energy and nutrients.

Iron requirements cannot be met by breastmilk or formula after the age of 6 months and therefore iron-rich foods (such as iron fortified baby cereals, lentils, dried beans, smooth nut butters and tofu) should be prioritised. These should be offered at most meals. Pureed cooked vegetables and mashed raw / cooked fruit can also be offered. Iron-fortified baby cereal can be mixed to the right consistency with breast milk or infant formula. If you're concerned about food allergies it's good to know that introducing potential allergenic foods, such as soy and nut (as nut butters) while you are still breast-feeding can actually help to reduce the likelihood of your pēpi being allergic. If your baby refuses a new food or spits it out, don't force it. Try again a few days later. It is quite normal for pēpi to need to taste a new kai many times before accepting it.

It is a great idea to make your own kai pēpi (baby food). Wash fruits and vegetables well, cook kai thoroughly, blend or mash well if required. Focus on family foods and all foods can be offered including herbs and spices. Prepare kai without added salt or sugar.

#### 7-8 months

Pēpi should be eating a variety of kai including soft-cooked grains, smooth nut/seed butters, legumes, as well as soft fruit and vegetables. By this age, your pēpi will likely be on three meals per day. It is great to eat with your pēpi at mealtimes. Continue breastfeeding or offer suitable breastmilk alternative.



#### 9 months

Pēpi's diet should now include a variety of textures including lumpy and finger foods. Offer three meals a day at regular times and they may also like some extra snacks. Include as much variety as you can within each food group. This introduces them to new foods and gives them the best chance of getting all the nutrients they need to grow well. Continue breastfeeding or offer suitable breastmilk alternative after meals. (See sample meal plan).



#### One year

By one year, pēpi should be enjoying regular whānau meals but avoid using too much salt, sugar or fats (eg deep frying) when preparing meals as these are not healthy for you or pēpi. Make sure the kai is cut up well, soft, ground or mashed. Avoid giving pēpi chunks of hard raw fruits or vegetables, grapes, cherry tomatoes, popcorn or whole nuts as these pose a high choking risk. Continue breastfeeding if possible or offer formula or full fat fortified soy milk as an alternative.



# Specific Nutrients Ngā taiora whāiti

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Regardless of whether baby is raised as a vegan or omnivore, they all need the right balance of energy and nutrient dense foods to thrive.

### Energy and fats

The healthy eating recommendations for adults to eat less fat and more fibre, are unsuitable for children under two. Even if baby's diet provides adequate protein and nutrients, they need enough energy (calories) to grow well. Pēpi tummies are small and plant-based foods tend to be higher in fibre and lower in energy. Fat provides a concentrated form of energy and small amounts can be added to pēpi's meals to increase calories without increasing the volume. Good sources of fat include vegetable oils, vegan margarine, nut and seed butters and avocado. Pēpi also needs Omega 3 fatty acids for brain and eye development. After 6 months, adding a small amount of flax seed oil or ground walnut, hemp or chia seeds will provide omega-3 in the form of alpha-linolenic acid (ALA).

#### Fibre

Plant-based diet are high in fibre. This is great for adults, but too much fibre can be filling for small children, which can make it harder for them to eat enough. Too much fibre can also reduce the absorption of minerals such as iron and zinc. Offer a variety of high fibre and low fibre foods. For instance, white as well as brown bread and rice. Soak legumes well before cooking. Make sure pēpi gets enough to drink.

#### Vitamin D and Calcium

Both are essential for strong bones and teeth. So long as pēpi is being breastfed on-demand they should be meeting their calcium requirements. Otherwise check the alternative milk provides >100mg calcium per 100mls.

Vitamin D is linked to bone health in babies, and a deficiency of vitamin D may be linked to low birth weight, dental caries, and acute respiratory infections. Breastfeeding is the biological norm for infants and contains antibodies which protect them against illness. If mothers have low levels of vitamin D during pregnancy and breastfeeding, babies may not receive sufficient vitamin D through breastmilk so supplementation with oral drops is recommended.

#### Iodine

Iodine is vital for healthy growth and brain development; a deficiency can lead to stunted growth and intellectual disability. New Zealand soils contain little iodine, hence, vegetables and grains grown here have low levels.

Iodine is added to some foods, like salt and commercially baked bread. However, most rock, pink or sea salts, which are increasingly popular, are not iodised.

So long as the vegan mum continues to use iodised salt and supplement with iodine (150 mcg daily) her breastmilk should meet pēpi's needs for the first year. If mum is no longer breastfeeding, pēpi's iodine needs (110 mcg/day) will need to be provided by formula or supplement.

#### Zinc

Zinc is essential for growth. Good sources of zinc for vegans include legumes, nuts and nut pastes, seeds and soy products (including tofu).

#### Protein

Protein is the building block of all the cells of the body and is essential for growth and a strong immune system. Throughout the first-year breast milk is an important source of protein. Pēpi's daily diet should also include a variety of foods high in protein such as legumes, tofu and nut butters.

#### Vitamin B12

Vitamin B12 deficiency can lead to severe developmental delay and neurological damage in pēpi. Provided mum has adequate B12 stores and is taking a vitamin B12 supplement, her breast milk should meet baby's needs for the first 4-6 months. Thereafter, baby will need a vitamin B12 supplement. Otherwise baby may need a supplement from birth. Vitamin B12 should be given daily as a stand-alone supplement in drop form (25mcg/day or as advised by your health professional).

#### Iron

Iron deficiency anaemia is the most common nutrient deficiency in the world and under-fives are most vulnerable. By the time pēpi reaches six months their iron stores are low, and their requirements are high due to rapid growth and development. Hence it is important to include iron-rich kai daily.

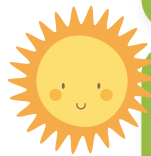
Iron fortified baby cereal is a great start. Also offer pēpi well-cooked mashed legumes (lentils, chickpeas and dried beans), tofu and green leafy veg daily. Include a rich vitamin C source (such as a piece of kiwifruit, orange, squeeze of lemon) along with the meal to boost iron absorption.

#### Vitamin A

Vitamin A is essential for pēpi's growth, eye health and a robust immune system. Plant foods do not provide pre-formed vitamin A. However, betacarotene from plant foods can be changed in the body into the active form of vitamin A.

In many people, however, this process is inefficient. Recent research indicates vegan children may be at risk of low vitamin A. Therefore it is important to ensure a high intake of vegetables rich in beta-carotenes, such as carrots, kumara, kale and spinach.

Cooking and mashing will make it easier for pēpi to get a good serve. Adding some fat helps to increase absorption - vegan margarine fortified with vitamin A is a great choice.





# Sample meal plan 9-12 month old

He mahere kai tipako 9-12 ngā marama te pakeke

This is a guide only. The amount your pēpi eats can change from day to day. At this stage pēpi will be eating ~ ½ cup of food 3 times a day plus snacks. Pēpi will let you know when they are hungry or full. Continue breast feeding on demand. Food should be offered before breastmilk or formula.



## Breakfast Ō-Ata

Iron Fortified infant cereal or ground oats porridge  
Full fat fortified soy milk \*  
1/2 tsp flax oil  
Kiwi fruit, orange slices or berries

## Lunch Ō-Rānui and Dinner Ō-Ahiahi

At this stage the focus should be on whanua kai  
Mashed beans, chick peas, lentils or silken tofu  
Mashed potato or kumara. Rice, pasta or other grains.  
Soft cooked green / orange veg (See comment re Vitamin A)  
1 tsp vegan margarine / olive oil  
Soft or mashed fruit or squeeze of lemon juice (for vitamin C)

## Snacks

Mashed or grated fruit  
Soy yoghurt or custard  
Chia pudding  
Crustless bread fingers or crackers with nut butter, avocado or hummus  
Partially cooked carrot sticks with hummus

\* Note: Full fat fortified soy milk can be used on cereal and in cooking but should not replace breastmilk or formula until 12 months of age.

## Precautions Ngā ohiti

### Striving for perfection and high needs babies:

We all want the best for our pēpi. As a vegan it is likely you place a high value on raising your pēpi on a plant-based diet. In certain cases, however, following a plant-based diet may not offer the best outcome for your pēpi, for instance,

- \* If your tamaiti was born prematurely,
- \* You are unable to successfully establish breast-feeding,
- \* Pēpi is a picky eater,
- \* Pēpi has developmental delays, ongoing health issues or food allergies,
- \* Pēpi's growth is not on target.

If any of these apply, your health care provider may recommend adding some animal-based foods to pēpi's diet. That should not be seen as a failure, but a temporary set-back.

If you need more advice do reach out and discuss your concerns with a plant-based health professional. You can also contact The Vegan Society for recommendations for vegan-friendly dietitians. See other helpful links below:

<https://www.tewhauora.govt.nz/for-health-professionals/clinical-guidance/specific-life-stage-health-information/maternal-health>

<https://healthify.nz/hauora-wellbeing/b/breastfeeding-topics>

<https://health.govt.nz/products/starting-solids>

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Disclaimer: The information in this brochure is for educational purposes only. While we have tried to make sure it is accurate and up to date, we cannot guarantee that it will always apply to your individual circumstances. If you have specific dietary concerns or medical conditions always seek medical advice from your doctor or health professional.

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