



## Healthy Eating on a Vegan diet

A vegan diet includes only plant-based food and drinks and excludes all food from animal sources, including meat, fish, dairy and eggs. It is possible for children and teenagers to get all the nutrition they need from a vegan diet, but this takes careful thought and planning.

Some essential nutrients are primarily found in animal products, therefore vegans must ensure they have an adequate intake of particular foods that contain these nutrients, or choose fortified foods or supplements. This leaflet will guide you through these nutrients. A dietitian can help to ensure your child's diet is balanced with these important nutrients.

The information in this leaflet is suitable from 12 months of age onwards.

### Protein

Protein is needed for growth and to help your body repair and make new body tissues. Our bodies also use it for a number of tasks, including fighting infection, making hormones and carrying oxygen.

You should aim to give your child a portion of protein 2-3 times per day. Good sources of protein include:

- Soya products such as tofu, tempeh, edamame/soya beans, soya mince, soya sausages and soya milk alternatives and yoghurts.
- Seitan
- Lentils, chickpeas, beans and peas
- Nuts and seeds

### Calcium

Calcium helps to build strong bones and teeth. This is particularly important in childhood and teenage years as their bones are growing rapidly. It also plays an important role in regulating muscle contractions and maintaining a healthy heartbeat. How much calcium your child needs depends on their age:

Age (years)	Calcium (mg) per day
Under 1 year	525 mg
1-3 years	350 mg
4-6 years	450 mg
7-10 years	550 mg
11-18 years	800 mg (girls) 1000 mg (boys)

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Some good sources of calcium you should aim to include in your child's diet are:

- Calcium-fortified dairy alternatives, such as plant-based milk alternatives and yoghurts. The majority of alternatives are fortified, but you should check the food label. Organic versions are not fortified.
  - From one year old, soya milk is the best vegan friendly option to give as a main drink if you are not breastfeeding. Alpro Growing Up Soya 1-3 is the best choice.
  - Other milk alternatives can be given including oat milk, pea milk, coconut milk, hazelnut milk, cashew milk, hemp milk and almond milk. It's best to speak to your child's dietitian to find out which plant milk is best for them.
  - Rice milk should not be given as a drink to children under five years old
- Some calcium-fortified cereals are vegan friendly, however they often fortified with vitamin D from sheep's wool lanolin.
- Calcium-fortified bread, e.g. Hovis Best of Both and Kingsmill 50:50 vitamin boost
- Dark leafy green vegetables such as kale, spring greens, broccoli
- Calcium-set tofu (check the ingredients for calcium chloride or calcium sulphate)

## Iron

Iron is an important nutrient for helping transport oxygen around the body. A deficiency in iron can cause anaemia. Children deficient in iron may be tired more often, pale and have a reduced appetite. They may also be more susceptible to infections. It's particularly important to include iron-rich foods when weaning children, as their iron reserves from birth begin to reduce.

Good vegan sources of iron include:

- Pulses and legumes (such as chickpeas, lentils, beans, peas)
- Green leafy vegetables (such as spinach and broccoli)
- Dried fruit (such as figs and apricots)
- Tofu
- Nuts and seeds
- Some iron-fortified cereals are vegan friendly, however they often fortified with vitamin D from sheep's wool lanolin. Vegan-friendly options include Shreddies, Go Free Cornflakes and Weetabix.

Vitamin C helps to increase iron absorption, so it's a good idea to have a source of vitamin C with iron-containing foods. Good sources of vitamin C include oranges, kiwis, strawberries, broccoli and peppers. Tea and coffee makes it difficult to absorb iron, so it is recommended to avoid drinking these around meal times.

### Meals rich in iron with a source of vitamin C:

- Add dried fruit to porridge and serve with orange juice
- Eat a kiwi after a lentil curry
- Tofu and broccoli stir fry

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- Bean chilli with peppers
- Spinach and lentil Bolognese with peppers

### Vitamin B12

Vitamin B12 is an important vitamin for maintaining a healthy nervous system and the formation of red blood cells. Vitamin B12 deficiency in children can cause reduced appetite and energy and may lead to faltering growth, and can lead to permanent damage if not corrected.

Vitamin B12 is made by micro-organisms, and is not present in plants. Foods fortified with vitamin B12 and supplements are the best way to ensure your child meets their requirements.

Foods fortified with vitamin B12 include:

- Nutritional yeast
- Fortified milk alternatives
- Fortified cereal
- Yeast extract e.g. Marmite

Your child may need a nutritional supplement to help meet their B12 requirements if you are unable to meet their requirements through fortified food products.

### Selenium

Selenium is an important component of many enzymes and is a powerful antioxidant, meaning it can help to protect your body's cells from damage.

Brazil nuts are a very good source of selenium. Just one brazil nut per day can meet your child's selenium requirements. Whole nuts should not be given to children under 5 years of age. Try using ground brazil nuts in porridge, yoghurts or you can even blend your own brazil nuts to make brazil nut butter.

Other vegan sources of selenium include tofu, whole wheat pasta and couscous.

### Omega-3 fats

Omega-3 fats are a group of unsaturated fats needed to maintain a healthy immune system, brain, nerves and eyes. The main types of omega-3 fats that the body requires are:

- **ALA (alpha linoleic acid)**

These types of omega-3 are readily available in a variety of plant foods.

- **EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid)**

These are needed for healthy heart and blood circulation. They are mainly found in fish and therefore very difficult to obtain adequate amounts from in a vegan diet. Our body can convert ALA into these fats, however only a small amount. It is therefore important to have a high intake of ALA, or alternatively take an omega-3 supplement.

Good sources of vegan omega-3 fats (ALA) include:

- Ground flaxseed, chia seeds and hemp seeds (these are good mixed into porridge, cereal and yoghurts)
- Nuts, particularly walnuts, hazelnuts and pecans (whole nuts should not be given to children under the age of 5)
- Green leafy vegetables

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- Rapeseed oil is the most omega-3 rich type of cooking oil

Vegan omega-3 supplements made from algae can also be used to help meet omega-3 requirements.

### Iodine

Iodine is important to help produce thyroid hormones and plays a vital role in thyroid health. There are not many reliable sources of iodine in vegan foods. Seaweed is a good source of iodine however is not recommended, as the iodine content is variable and can sometimes be too high. Some plant milks and yoghurts are fortified with iodine, including these specific brands:

- All Asda own plant milk (non-organic versions)
- All Marks & Spencer own plant milks (non-organic versions)
- Alpro Soya 1-3 Growing Up Milk
- All Oatly milks and Oatgurt yoghurts
- Koko Super Drink
- Mighty Pea milks

A vitamin containing iodine may be necessary if your child does not have regular intake of these plant-based milk and yoghurt alternatives.

### Vitamin D

Vitamin D helps to absorb calcium into our bones and is therefore important for bone health. During summer months we can make Vitamin D when our skin is exposed to sunlight. Vitamin D cannot be produced from sunlight in the autumn and winter months. It is also more difficult for people with darker skin to produce vitamin D from sunlight. Vitamin D supplementation is often recommended regardless of dietary preferences for the below groups:

- Breastfed babies
- In pregnancy and breastfeeding
- Formula-fed babies having less than 500 ml formula milk per day
- All children age 1-5 years
- Children above 5 years during the autumn and winter months. Supplementation during the summer months may still be recommended for children with darker skin and those who are not exposed to sunlight regularly

Dietary vitamin D can also be obtained through fortified breakfast cereals and fortified milk alternatives.

### Useful Resources/Contact Details

- <https://www.bda.uk.com/resource/vegetarian-vegan-plant-based-diet.html>
- <https://www.vegansociety.com/>
- <https://www.nhs.uk/live-well/eat-well/the-vegan-diet/>

For further information please contact the Paediatric Dietitians on 0121 424 1674

If you require this information in another format, such as a different language, large print, braille or audio version please ask a member of staff or email [interpreting.service@uhb.nhs.uk](mailto:interpreting.service@uhb.nhs.uk)