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Plant-based diets

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Content of this booklet

As with omnivorous diets, it is important to make balanced choices regarding food, follow regular meal times and eat according to your need for energy when on a plant-based diet. A carefully planned and balanced plant-based diet has the same quality of nutrients as an omnivorous diet that contains lots of vegetables.

This booklet is designed for everyone on a plant-based diet. It should not, however, replace personal guidance given by a healthcare professional. Please contact a registered nutritionist (M.Sc.) if you have any questions about nutrition.

Key points

- A carefully planned and balanced plant-based diet is suitable for the entire family.
- A vegan diet requires more careful planning to ensure the adequate intake of energy and nutrients. Particular attention must be paid to vitamin B12, calcium, vitamin D, iodine and protein.
- Everyone on a vegan diet should use vitamin B12 and iodine preparations.
- Families on a vegan diet should have a possibility of accessing the services of a registered nutritionist (M.Sc.).



Different types of plant-based diets

A plant-based diet can be planned in many ways. A carefully planned and balanced plant-based diet has the same quality of nutrients as an omnivorous diet that contains lots of vegetables. If the diet includes animal products, such as dairy products and egg, general nutrition and food recommendations can be followed in planning a plant-based diet.

Very restricted plant-based diets, such as raw food diets, do not provide enough nutrients. Because of this, they are not recommended.

Vegan diet

Vegans do not eat any products of animal origin, such as meat, fish, egg or dairy products. In order to ensure adequate intake of energy and nutrients with a vegan diet, the diet must be planned more carefully.

If you are on a vegan diet, you need to eat 5–6 full meals a day. The meals can be planned according to the vegan's plate model (Image 1):

- One third of the meal should consist of fresh and cooked vegetables.
- One third should consist of root vegetables, potatoes or a grain-based side dish.
- One third of the meal should consist of sources of vegetable protein.
- Plant-based drinks with additives are recommended during meals and water is recommended whenever you are thirsty.
- Meals should be complemented with whole-grain bread and vegetable oil-based spread.
- Berries, fruit or nuts are recommended as dessert.

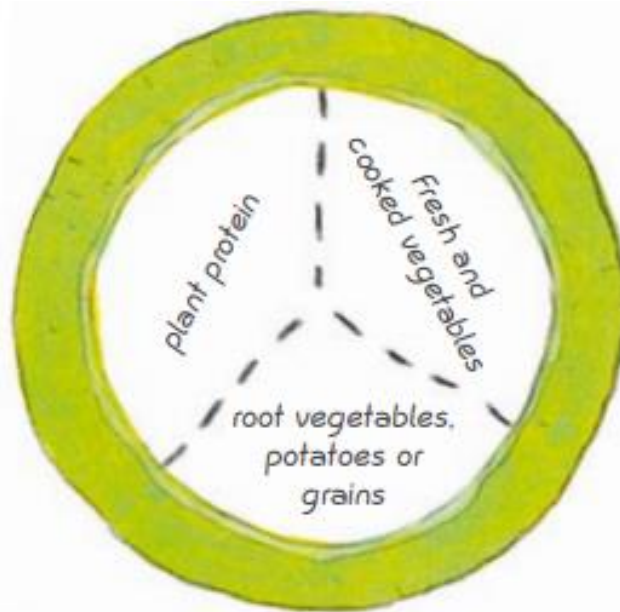


Image 1. Vegan's plate model (THL 2019).

An example of daily vegan choices can be found in Table 1.

Table 1. Daily vegan choices.

Food category	Adults	Children
Root vegetables, other vegetables, fruit and berries	5-6 handfuls	5-6 handfuls
Grain products and potato One portion is, e.g. <ul style="list-style-type: none"> - 1 slice of bread - 1 dl porridge - 1 dl of boiled pasta, rice or other grain-based side dish - 1 medium-sized potato. 	6-9 portions	At least 5 portions
Plant-based drinks with additives and yoghurt-like products	5-6 dl	4-5 dl
Legumes and vegetable protein products	2 dl	1 dl
Nuts, seeds and seed pastes <ul style="list-style-type: none"> - Linseed and sunflower seeds 	0.5 dl Max. 2 tbsp	0.25 dl Max. 1 tbsp
Vegetable oil or margarine	2-3 tbsp	1.5-2 tbsp



Sufficient diet

If you are on a vegan diet, the intake of certain nutrients can fall short of the recommendations if particular attention is not paid. Such nutrients include vitamin B12, calcium, vitamin D, iodine and protein. Animal products are significant sources of these nutrients.

Sources of protein

Healthy sources of protein suitable for a vegan diet include whole-grain products, legumes, different vegetable protein products and nuts, almonds and seeds. A combination of these ensures the intake of essential amino acids.

In order to ensure sufficient intake of protein, you should use

- whole-grain products, such as bread, porridge or whole-grain side dishes, at every meal
- legumes, such as peas, lentils and beans or vegetable protein products, at least twice a day
- plant-based drinks with additives at meals
- nuts and seeds on a daily basis.

Vitamin B12

As plant-based products do not contain vitamin B12, vegan diets must always be complemented with vitamin B12 preparations (Table 2). Eating seaweed, mushrooms and fermented products does not ensure adequate intake of vitamin B12.

Calcium and vitamin D

Good sources of calcium and vitamin D suitable for a vegan diet include plant-based drinks with various additives and yoghurt-like oat and soy products. The recommended amount of plant-based drinks and liquid plant-based products is about 5–6 dl a



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day. Rice drinks are not recommended for children under 6 as the only drink at meals due to its high heavy metal content.

Other sources of calcium suitable for a vegan diet include tofu, legumes, nuts and seeds as well as brassica vegetables and dark green vegetables. A wide variety of these sources of calcium should be included in a vegan diet. If necessary, the diet can be complemented with a calcium preparation.

In addition to plant-based drinks with additives, vitaminised vegan margarines contain vitamin D. Children, young people and expectant and breastfeeding mothers are recommended to use a vitamin D preparation all year round.

Table 2. Nutritional supplements for vegans.

Vitamin or mineral preparation	Dose	Target group
Vitamin B12	2 µg a day	Everyone on a vegan diet
Vitamin D	10 µg a day	Pregnant and breastfeeding mothers on a vegan diet
Iodine	150 µg a day	Everyone on a vegan diet
Calcium	500 mg a day	People on a diet with few sources of calcium or food products with added calcium
	1,000 mg a day	People on a diet with no sources of calcium or food products with added calcium

Iodine

Sources of iodine in a diet include dairy products, fish, egg and iodised salt. Not all plant-based drinks with additives contain iodine. Because of this, all people on a vegan diet are recommended to use a nutritional supplement that contains iodine.



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The iodine content of seaweed products can be very high. Because of this, they are not recommended if the iodine content is unknown or more than 600 µg a day. Seaweed products may also contain heavy metals.

Essential fatty acids

The intake of essential fatty acids in a vegan diet can be ensured by using vegetable oils and vegan margarines. A sufficient amount of essential fatty acids can be ensured by using 2–3 tbsp of canola oil or 60–70% margarine.

Nuts and seeds also contain essential fatty acids. The recommended maximum daily intake of linseed, sunflower and other oil-producing plant seeds is 2 tbsp and 1 tbsp for adults and children, respectively. Infants and expectant and breastfeeding mothers are not recommended to use these due to their high heavy metal content.

Vegan diet during pregnancy and breastfeeding

The sufficiency and diversity of your diet should already be paid attention to when planning pregnancy. The growth and development of the child are largely affected by your nutrition prior to pregnancy.

During pregnancy and breastfeeding, the need for many nutrients increases. Pregnant and expectant vegan mothers should pay particular attention to a sufficient and diverse diet and the use of essential nutritional supplements. Pregnant and expectant vegan mothers are recommended to use nutritional supplements that contain vitamin D, vitamin B12 and iodine. Furthermore, all women planning pregnancy are recommended to use a folic acid product.



Children's vegan diet

Exclusive breastfeeding is recommended to all infants under 4–6 months and partial breastfeeding to all children less than one year old. There are no formulas or weaning products suitable for a vegan diet available in Finland. Because of this, regular formulas and weaning products must be given to the infant if the vegan mother does not breastfeed. Plant-based drinks are not suitable alternatives for breast milk.

According to the nutrition and food recommendations, solid foods can be introduced to the child's diet when they are 4–6 months old. Legumes, nuts and almonds are suitable options for the diet when solid foods are introduced. Legumes should be added to purees by increasing the size of the portion slowly. Adding legumes slowly to the diet helps the baby's intestinal system get used to them. Nuts and almonds must be ground before offering them to children.

Plant-based drinks with additives can be used in cooking once the child is 10 months old. Plant-based drinks with a variety of additives are suitable drinks at meals for children over one year old. Children over one year old can start following the same carefully planned vegan diet as the rest of the family.

Vitamin D preparations are recommended to children on vegan diets in accordance with general recommendations. The diet of children over one year old can be complemented with nutritional supplements that contain vitamin B12 and iodine. A registered nutritionist (M.Sc.) can help in assessing the doses of essential nutritional supplements.

Text content: Riikka Suorajärvi-Bron, registered nutritionist (M.Sc.)

Sources: Eating together - food recommendations for families with children. THL 2019.

Cover image: Pixabay

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