

# Plant based, Vegetarian and vegan diets: How to get the best nutrition

## Introduction

A plant-based diet is based on foods derived from plants, including vegetables, wholegrains, legumes, nuts, seeds and fruits, with few or no animal products. People choose a plant-based diet for a variety of reasons including concern about the treatment of animals, health reasons, environmental concerns or because of taste and social pressure. Plant-based diets are becoming more popular and if they are well planned, can support healthy living at every age and life-stage.

The term plant based diet can mean different things to different people. There are 3 main types of plant based diets:

- Lacto-ovo vegetarians - exclude meat, fish and poultry but eat dairy products and eggs.
- Lacto vegetarians - exclude meat, fish, poultry and eggs as well as foods containing them but still eat dairy products.
- Vegans – exclude all animal products, including honey, dairy and eggs. Many shop bought ready-made products may contain animal ingredients so the labels of all manufactured products do need to be read carefully

Some people may eat different combinations of these foods, for example pescetarians may avoid meat but eat fish and flexitarians may occasionally eat meat or poultry.

Plant based diets can be a healthy way of living providing a variety of sources are used as replacements for meat and fish. This leaflet will help you to choose the right foods as part of a healthy vegetarian or vegan diet.

## Meat alternatives

### Choose at least 2 servings per day

- Include beans, peas, lentils, nuts, seeds, eggs, Quorn, soya (e.g. tofu, tempeh)
- It is important to get protein from a variety of sources to get a mix of amino acids which are used to build and repair cells.
- Pulses (beans, lentils) are a low fat source of protein, fibre, vitamins and minerals. They also count as 1 of your 5-a-day.
- Examples of 1 serving: 1-2 eggs, 60g (2oz) Soya mince or tofu, ½ tin of baked beans (207g/7oz) or 3 tablespoons of kidney beans, chick peas or lentils.



## Starchy Carbohydrates

### Aim for 6 to 8 servings per day

- Include at least one serving of these foods at each meal
- Examples of 1 serving:
  - 1 slice of bread – wholemeal or granary
  - 3 tablespoons breakfast cereal or small bowl of porridge
  - 2-3 new potatoes
  - 2-3 tablespoons pasta, rice, couscous, quinoa or buckwheat (cooked).

## Dairy Products

### Aim for 2 to 3 servings of these foods each day

- Examples of 1 serving:
  - 200ml of milk or calcium enriched soya milk
  - 30g (1oz) cheese or 90g (3oz) Cottage cheese
  - 150g (5oz) or pot of yogurt or fromage frais.
- For a vegan diet choose plant based milks, yogurts and cheese. Check if enriched with calcium.

## Fruit and Vegetables

### Try to include at least 5 servings a day

- Examples of 1 serving:
  - 1 average apple, orange, banana
  - 2 pieces small fruits - plums, kiwi fruit
  - 1 cup of strawberries, raspberries or grapes
  - 1 tablespoon dried fruit
  - 1 small glass of fruit juice
  - 2-3 heaped tablespoons of vegetables.

## Fats

- Margarine, oils, nuts and seed pastes should be used in moderation as these are all high in fat.
- Use small quantities of polyunsaturated or monounsaturated oils such as sunflower, corn, rapeseed or olive oil.
- Some vegetarian foods may still be high in fat and saturated fat, such as vegetarian pasties, and deep fried foods. Limit intake of these foods.

For children use the following information for the correct portion sizes: use your child's hand to measure their portion (Carbohydrates - fist, Fruit and vegetables - one handful, Protein - palm, Cheese – thumb and spreads and oils -thumb tip)

## Are you eating enough?

### Calcium and Vitamin D intake

Calcium is important to keep bones and teeth healthy. Vitamin D is essential for the absorption of calcium. Good sources of calcium include: fortified soya, rice or oat milk, calcium set tofu, sesame seeds and 'tahini' paste, brown and white bread, dried fruit, nuts such as almonds and leafy green vegetables.

Major sources of vitamin D include: exposure to sunlight, fortified fat spreads and cereals, plant based dairy alternatives and vitamin D supplements (purchased at pharmacy or prescribed).

Since it is difficult to get enough vitamin D from food alone, everyone should consider taking a daily supplement of 10mcg/ day during the autumn and winter months. Some vitamin D supplements are not suitable for vegans. Vitamin D2 and lichen-derived vitamin D3 are suitable.

### **Iron intake**

Iron is needed for healthy blood. Good sources include: eggs, pulses (beans and lentils), fortified cereals, wholemeal bread, dark green vegetables, dried fruit, nuts and seeds. To help your body absorb iron from plant foods, include a source of Vitamin C with your meal e.g. vegetables, fruit or a glass of fruit juice. Avoid taking tea or coffee with meals as this can prevent iron absorption.

### **Vitamin B12 intake**

Vitamin B 12 is needed for growth, repair and general health. Good sources include milk, cheese, eggs, fortified yeast extracts e.g. Marmite and vegemite, fortified yeast flakes, fortified breakfast cereals and fortified soya products. To make sure you get enough vitamin B12, either eat fortified foods at least twice a day, aiming for 3mcg of vitamin B12 a day, or take a supplement: 10mcg daily or at least 2000mcg weekly.

### **Omega-3 fatty acid intake**

Omega-3 fatty acids are needed for a healthy heart. Good sources include: flaxseed oil, rapeseed oil, flax (linseed), hemp seeds, chia seeds, soya oil and soya based foods e.g. tofu, walnuts and Omega-3 fortified eggs. Aim to have the equivalent of 1 tablespoon of linseeds or 6 walnut halves per day.

### **Iodine intake**

The major sources of iodine in our diet are dairy products and fish. The iodine content of plant foods depends on the iodine content of the soil which is variable. Foods grown closer to the ocean tend to be higher in iodine. Where soils are iodine deficient, iodised salt and seaweed provide iodine. As the iodine content of seaweed is variable, and sometimes too high, you should not consume sea vegetables (seaweed, kelp, and samphire) more than once a week. An excess of iodine can also be harmful. If you are taking a supplement, discuss this with your doctor or dietitian. A non-seaweed supplement may be most reliable to meet requirements in vegans.

### **Zinc intake**

Phytates found in plant foods such as wholegrains and beans reduce zinc absorption, so it is important to eat good sources of zinc-containing foods. Eat fermented soya such as tempeh and miso; beans (soak dried beans then rinse before cooking to increase zinc absorption); wholegrains; nuts; seeds and some fortified breakfast cereals.

### Selenium intake

Plant sources of this mineral include grains, seeds and nuts. Two brazil nuts eaten daily will provide you with your daily requirement of selenium. If you are not keen on brazil nuts, a supplement may be the most reliable way to ensure good intake of selenium.

### Protein intake while following a vegan diet

Plant-based sources of protein include lentils, beans, chickpeas, seeds, nuts and nut butters (e.g. peanut butter), and tofu. Meat substitutes like vegetarian burgers, soya sausages, and other meat alternatives can be useful for those adapting to a plant-based diet and can provide a source of protein. However as with any processed foods, these can often be high in salt and fat so should be used in moderation. These products may contain animal ingredients such as eggs, milk derivatives and honey so read the labels carefully if you wish to follow a vegan diet.

### Sustainable eating

In the UK, it is estimated that well-planned completely plant based, or vegan diets need just one third of the fertile land, fresh water and energy of the typical British 'meat-and-dairy' based diet. With meat and dairy being the leading contributor to greenhouse (GHG) emissions, reducing animal based foods and choosing a wide range of plant foods can be beneficial to the planet and our health.

### Ideas for meals, snacks and desserts

#### Meals

- Vegetable and bean casserole, chilli or curry
- Shepherd's pie made from lentils, soya or Quorn
- Nut roast, lentil loaf or vegetarian sausages

#### Served with potato, bread, rice or pasta and vegetables or salad

- Sandwiches with eggs, peanut butter, Quorn slices, vegetarian paté, hummus, tahini or cheese
- Vegeburger with pitta bread and salad
- Jacket potato with baked beans, chilli bean filling or cheese
- Lentil or split pea soup with a salad filled roll.

#### Desserts

- Fresh, stewed or tinned fruit in natural juice with yoghurt, ice cream or sorbet
- Fruit crumble (include some wholemeal flour or oats)
- Baked apple filled with dried fruit and served with custard.

#### Snacks

- Fresh, tinned fruit or dried fruit (apricots, prunes) and nuts
- Glass of milk, pot of yoghurt or fromage frais
- Pitta bread or vegetables (carrots, cucumber) with hummus
- Fruit cake, date slice, banana cake, flap jack or cereal bar



## Plant based cooking

### Cooking hints

- Dried beans, peas or whole lentils will cook much more quickly if soaked in water overnight.
- Drain the soaked pulses and place in a large pan with plenty of water.
- Bring to the boil and cook the pulses at boiling temperature for 10 minutes. Simmer until cooked.
- Cooking times may vary according to the type of beans, the quantity being cooked and how old the beans are.
- Pressure cooking reduces the time taken, however **beans must be boiled for 10 minutes beforehand.**
- Cooked pulses can be frozen.
- You may like to try the tinned, ready cooked varieties, (choose beans canned in water).
- Add seasoning after cooking as salt, tomatoes and lemon juice will toughen the pulses.

### Food labelling

There is now guidance from the Food Standards Agency for manufacturers to follow when labelling products vegetarian or vegan. Many manufacturers will state whether a food product is suitable for a vegetarian or vegan diet. However, the vegetarian and vegan society also have trademark logos which appear on the labels of approved foods.



### Plant based meals on a budget

Planning in advance and shopping carefully can help you to eat a vegetarian diet on a budget.

- Write a list before shopping to prevent impulse purchases.
- Buy foods that are in season as these may be cheaper.
- Buy frozen and tinned fruit and vegetables as these can be cheaper and last longer. Choose tinned fruit in juice not syrup.
- Take advantage of reduced price items as they can be frozen on day of purchase until needed.
- Prepare meals in bulk and freeze the extra portions for another day.

To help you vary your diet, look out for new recipes online or purchase one of a wide variety of vegetarian cookbooks available. Alternatively, libraries may hold a range of vegetarian cookbooks.

## Frequently asked questions:

### Do Vegetarians and vegans need vitamin supplements?

Most of the nutrients you need can be obtained through a healthy balanced diet. If your diet is not balanced you could be missing out on vital nutrients and may need a supplement. The most reliable way to ensure a good intake of B12 and iodine is from taking supplements

### Are Quorn products suitable for vegans?

No. All Quorn products contain a small amount of egg white and most contain milk ingredients.

### Can children and babies eat a plant based diet?

If you are bringing up your child on a diet without meat or without any food from animals, they will need two or three portions of vegetable protein or nuts every day to give them enough protein and iron. Children under 5 years old should not be given whole nuts. You can give your baby **nuts** and peanuts from around 6 months old, as long as they are crushed, ground or a smooth **nut** or peanut butter. You also need to make sure they get enough calcium, vitamin B12 and vitamin D. Multivitamin supplements containing Vitamins A, C and 10mcg Vitamin D are important in vegetarian and vegan children between 6 months and 5 years old.

Well-planned plant based diets can support healthy living at every age and life-stage. Include a wide variety of healthy whole foods to ensure your diet is balanced and sustainable.

## Useful addresses

The Vegetarian Society  
Parkdale, Dunham Road  
Altrincham, Cheshire  
Tel: (0161) 925 2000  
[www.vegsoc.org.uk](http://www.vegsoc.org.uk)

The Vegan Society  
33-35 George Street  
Oxford  
OX1 2AY  
[www.vegansociety.com](http://www.vegansociety.com)

Contact details:

### Nutrition and Dietetic Services

Tel: (01225) 824398 (RUH) , Tel: (01225) 833916 (St Martin's)

Royal United Hospitals Bath NHS Foundation Trust  
Combe Park, Bath BA1 3NG 01225 428331 [www.ruh.nhs.uk](http://www.ruh.nhs.uk)

Please contact the Patient Advice and Liaison Service (PALS) if you require this leaflet in a different format, or would like to feedback your experience of the hospital. Email [ruh-tr.PALS@nhs.net](mailto:ruh-tr.PALS@nhs.net) or telephone 01225 825656.