

# Planning A Vegan Diet: Getting The Nutrients You Need

*To celebrate World Vegan Day, our Associate Coach Ann-Marie Bunyan gives her advice on planning a vegan diet...*

A 'plant-based' diet is a diet based mainly on plant-based foods such as wholegrains, vegetables, fruits, nuts and healthy oils. Animal products are still included but less frequently. A vegetarian diet is one that doesn't include any meat, seafood or poultry. There are some variations of vegetarianism such as lacto-ovo-vegetarian whereby an individual doesn't eat meat, poultry fish or animal flesh of any kind but eggs and dairy are included. A vegan diet completely excludes all animal derived products and by-products including meat, fish, eggs, dairy, honey and gelatine.

There are plenty of health benefits associated with eating more plant-based foods such as an increased consumption of fibre and prebiotics helping to keep the gut healthy, as well as an increase in antioxidant nutrients. In addition, including more plant-based foods to the daily diet may help a person to maintain a healthy body weight. However, because vegan diets exclude all animal products, a poorly planned vegan diet can decrease a person's intake of essential nutrients such as vitamin B12, omega 3 fatty acids and iron.

Although research is limited, it has been suggested that vegan diets tend to be lower in protein, calcium, zinc and vitamin B12.



Certainly, plant-based foods are limited in certain micronutrients such as vitamin B12, iron, vitamin D and iodine. These nutrients are essential for energy production, making red blood cells, for keeping bones and muscles healthy and for thyroid function. Understanding how to get a healthy balanced vegan diet can help you to get all the nutrients that you need. It is important to consider both macronutrient and micronutrient intake; the following outlines some key nutrients you may wish to consider.

## The Macronutrients You Need

### Protein

Individuals following a vegan diet often tend to consume less protein compared with vegetarian and non-vegetarian diets. Those consuming a vegan diet may wish to consider the quality and quantity of the protein they consume. Plant-based proteins have a lower digestibility compared to animal-based proteins and therefore vegans may need to consume a greater amount of protein each day compared to meat eaters to make up for this.

Plant-based sources of protein do not contain all of the essential amino acids and contain less Branched Chain Amino Acids (BCAAs) compared to animal protein sources, which can limit the making of new proteins.

A variety of protein sources such as grains, nuts, seeds, legumes (beans, peas, lentils) should be consumed throughout the day to make sure that all essential amino acids are present and that there is an adequate intake of BCAAs. Soy products such as tofu, tempeh and soy milk are a good source of vegan protein, whereas some other alternative plant-based milks such as almond milk tend to be very low in protein.

### Fat

Dietary fat is an important component of the diet. Fat is a source of energy; it helps with the absorption of fat-soluble vitamins (ADEK) and it is important for the brain.

Whilst vegan diets tend to be lower in saturated fats compared to meat-containing diets, they can be lacking in the omega-3 fatty acids EPA and DHA due to the exclusion of fish, seafood and eggs. EPA and DHA are important for functions of the brain and heart health. Some plant-based foods such as flax seed, hemp seed, chia seed and walnuts provide a plant-based omega 3 source (ALA) which is converted to EPA and DHA. However, this is an inefficient process. DHA and EPA can be obtained from microalgae oil and some foods are fortified with DHA.

## The Micronutrients You Need

### Iron

Iron is important in the process of making red blood cells. Although vegan diets are often high in plant-based iron, this type of iron is less well absorbed compared to iron from meat sources.

Iron absorption can be increased by eating foods rich in vitamin C alongside the foods containing iron. Dried beans, dark green leafy veg, dried fruit (such as prunes and figs), and fortified breakfast cereals are good sources of plant-based iron.

### Vitamin B12

Vegans have an increased risk of vitamin B12 deficiency because their diet lacks animal and dairy products. Chronic B12 deficiency can lead to irreversible neurological damage. Vitamin B12 is only present in products of animal origin or fortified foods, and there aren't any reliable plant sources of vitamin B12. For example, spirulina and tempeh contain inactive forms of vitamin B12 which cannot be used in the body by human beings.

In addition, the body has limited capacity to absorb oral B12 supplements. To ensure you get enough B12, [the Vegan Society](#) recommends vegans should either: get at least three micrograms of B12 per day by eating at least two or three fortified foods each day OR take a daily B12 supplement which provides at least ten micrograms (or weekly providing 2000 micrograms). Fortified foods may include plant milks, soy products and some breakfast cereals. Nutritional yeast flakes can be used in vegan recipes, and yeast extract such as marmite is fortified with vitamin B12.

### Calcium

Vegans potentially consume less calcium compared to those that consume animal-based foods, and may therefore be at an increased risk of poorer bone health. Tofu, tahini and some fortified foods contain calcium. There is a small amount of calcium in oranges, and vegetables such as broccoli and kale contain calcium. However, vegetables such as spinach and arugula contain oxalates which can hinder calcium absorption.

### Iodine

Iodine is an essential trace element and is needed to make thyroid hormones. Excessively high or excessively low amounts can both result in thyroid dysfunction. It is difficult to know how much iodine is in plant foods. It can vary depending on the soil it has been grown in. Seaweed is a source of iodine. However, the amount of iodine in seaweed can be variable.

Therefore, seaweed is not a reliable source due to the potential risk of high intakes. Some breads, potatoes and iodised table salt can be a source of iodine. When consuming vegetables, it is advisable to cook them as some vegetables contain goitrogens (such as broccoli, cabbage and cauliflower). This can reduce iodine utilisation in the body if large amounts are consumed. Although it is unlikely a person would consume excessive amounts, ensuring that these vegetables are cooked can destroy many of the goitrogenic compounds.

### Planning Your Vegan Diet

With a well-planned varied vegan diet, you can get most of the nutrients that you need. Ensure that you:

- Eat a variety of foods daily such as grains, nuts, seeds, legumes (beans, peas, lentils)
- Eat at least 5 portions of fruit and vegetables each day
- Include dairy alternatives such as soy yoghurts
- Include fortified foods such as breakfast cereals and yeast extracts in order to obtain key nutrients such as B12

