

## Eating well on a Vegan Diet

### What does Vegan mean?

The word vegan refers to a food or material free from any animal products: no meat, milk, eggs, honey, sweets, wool, goose down, or leather. Animal-derived by products, from whey to lard to gelatin.



It is important as a vegan to meet the recommended balance of food groups shown above on The Eatwell Plate. A balanced vegan diet should consist of fruit and vegetables, starchy carbohydrates, non-dairy sources of protein, dairy alternatives and just a small amount of fatty and sugary foods.

Some nutrients can be very difficult to obtain on a vegan diet but with the precise knowledge and preparation most vegans can meet their nutritional needs. If however a vegan diet is not planned correctly, essential nutrients could be missed out like **Iodine, Calcium + Vitamin D, Iron, Omega 3 fatty acids, Vitamin B12, Zinc and Protein.**

### Iodine

Iodine is required for the production of thyroid hormones T4 and T3 which are required for regulation of metabolic rate growth and development. Main sources of iodine are derived from cows milk, yogurt, white fish and eggs.

Sufficient alternatives of iodine for vegans can be obtained from:

- Nuts (25g)
- Bread (1 slice)
- Fruit and vegetables (1 portion)

### Calcium and Vitamin D

Calcium is an essential mineral throughout life as it helps build and maintain bones and teeth. It is especially important for children, teenagers, postmenopausal women and pregnant or lactating women, to help prevent osteoporosis. Most adults need about 700mg a day.

Non-dairy dietary sources of calcium include:

- Fortified soya milk and yogurt
- Fortified almond milk + almonds
- Tofu
- Fortified breakfast cereals
- Best of both bread
- Spinach
- Baked beans

**Calcium absorption** is increased by **Vitamin D** which can be found in fortified fat spreads, breakfast cereals and soya drinks.

The action of sunlight on the skin is also an important source of Vitamin D.

A calcium and / or vitamin D supplement can be taken if dietary intake is low. Speak to your Dietitian for further advice as suitable calcium supplements can be bought over the counter or prescribed for you by your GP.

## Iron

Iron is an important mineral. It is needed to make haemoglobin, the red pigment in blood which carries oxygen around the body. Iron deficiency anaemia and tiredness can result from a lack of iron in the diet. Good sources of iron include:

- Tofu
- Cooked soybeans
- Pumpkin seeds
- Lentils
- Quinoa
- White and brown flour based foods
- Breakfast cereals fortified with iron (check the label)
- Dark green leafy vegetables (particularly spinach)
- Nuts
- Dried prunes, apricots, figs
- Yeast extract, e.g. Marmite
- Vegetable stock

## Omega 3 fatty acids

Omega 3 fatty acids play a role in every cell in the body. Omega 3 makes up cell membranes, keeps the nervous system functioning, keeps cholesterol levels in check, and staves off inflammation. Whilst there is not the same evidence for the vegetable sources of omega 3 it may still be useful to include rich sources:

- Flax seeds and flaxseed oil
- Chia seeds
- Hemp seeds
- Mustard Oil
- Rapeseed oil
- Soya oil and soya based products (tofu)
- Walnuts
- Mangoes
- Green leafy vegetables (spinach, kale)
- Winter squash (butternut squash)

## Vitamin B12

Vitamin B12 is important for the metabolism. It helps in the formation of red blood cells and in the maintenance of the central nervous system. Low levels of vitamin B12 can lead to anaemia and reduced mental function. Vitamin B12 is found naturally in a wide variety of animal sources so for vegans it can be limited.

Sources for vegans include:

- Fortified soya milks and products
- Yeast extract
- Fortified cordials
- Fortified breakfast cereals

Points to consider

- Not all manufacturers fortify their products, so check labels of your usual brands and consider swapping brands to ones that have added vitamin B12
- Vitamin B12 tablets can be taken if your dietary intake is inadequate

## Zinc

Zinc is important mineral as it is involved in digestion, carbohydrate metabolism, bone metabolism, oxygen transport and immune response. Severe deficiency results in growth retardation, failure to thrive, delayed sexual maturation, sore throat and immune defects, alopecia and neuropsychiatric symptoms. The recommended daily intake in the UK is 7.0 and 9.5 mg per day for adult women and men, respectively. You shouldn't exceed 25 mg a day as very high intakes can be harmful.

Zinc sources for vegans include:

	Per portion
• Fortified breakfast cereals	0.9mg
• Nuts	0.7mg
• Wholemeal bread	0.7mg
• Beans	0.4mg

## Protein

Protein is an important component of every cell in the body. The body uses protein to build and repair tissues. Protein is also used to make enzymes, hormones, and other body chemicals. Deficiency in protein can lead to a number of symptoms including weight loss, thinning of the hair, pale skin, slow wound healing, oedema and sleep difficulty.

There are several good non-animal sources of protein listed below. Aim for 2-3 servings a day:

- Pulses (100-125g or 4-5oz)  
- beans (e.g. kidney, butter, haricot, soya, blackeye, aduki, mung),  
peas (including chickpeas), lentils
- Soya products  
- milk (1/3 pint or 200ml), yogurt style (1 pot), cheese (25-50g or 1-2oz), mince / tofu (100g or 4oz)
- Nuts and seeds (50-60g or 2oz)
- Quinoa (185g serving gives 8g protein)

Cereals and cereal based products (breads, breakfast cereals, flour, pasta) also contain some protein and can help meet your daily requirements.

# Vegan recipes

## Mini Black Bean Burgers (serves 4)



### Ingredients

- 1 teaspoon coconut oil
- 2 medium sweet potatoes
- 1 can black beans
- 1 handful cilantro
- ½ cup sundried tomatoes
- 170 grams organic tomato paste (1 small can)
- 4 garlic cloves
- 1 teaspoon fresh rosemary
- ½ cup oats
- 1 medium onion
- Salt and pepper
- 2 Tablespoon olive oil, divided

### Method

- 1) For the burgers, soak the sundried tomatoes in warm water for approximately 45min -1 hour. Remove and pat dry.
- 2) Slice the sweet potatoes in half and rub flesh with coconut oil. -Roast flesh side down for 400F/205C for 25 min or until tender. Let potatoes cool, peel and add to large mixing bowl along with 1 Tablespoon olive oil and tomato paste.
- 3) Chop cilantro, rosemary, onion, sundried tomatoes, and mince garlic. Add to the mixing bowl with potatoes.
- 4) Grind the oats until a rough flour is formed, and add to potato mixture.
- 5) Using a potato masher, mash the mixture until potatoes are broken down and ingredients are mixed well.
- 6) Add beans and mash another few times, its fine that the beans get smashed a bit!
- 7) Roll 10-12 balls with the mixture and press to flatten into patties.
- 8) Heat a Tablespoon of olive oil in a frying pan and add burgers. Fry on each side for approximately 3-5 minutes and then serve with bread and salad.

## Japanese style slow cooked tofu

### Ingredients

- 1/4 cup white miso paste
- 1/4 cup tamari or low sodium soy sauce
- 2 tbsp sesame oil
- 2 tbsp water
- 1 tbsp agave
- 2 tbsp organic peanut butter
- 2 small packages (or 1 pound) extra firm tofu, drained and cut into 1/2 inch slices
- 1 bunch of fresh spinach leaves
- 2 tbsp sesame seeds, toasted
- 1 green onion, thinly sliced (optional)

### Method

- 1) Combine the miso, tamari, sesame oil, peanut butter, water and honey in a medium size bowl.
- 2) Carefully coat each slice of tofu in the sauce and lay it in the slow cooker
- 3) Pour the sauce over top of the tofu.
- 4) Cover and cook on low for about 4 hours, or until the tofu is hot all the way through.
- 5) Just before serving, add the spinach to the slow cooker, cover and cook for about 10min.
- 6) Carefully remove the spinach and slices of tofu from slow cooker and place few slices on plates.
- 7) Garnish with the sesame seeds and green onion.

For more information and advice visit:  
[www.nhs.uk/livewell](http://www.nhs.uk/livewell) - search for "vegan"  
[www.vegansociety.com](http://www.vegansociety.com)  
[www.onegreenplanet.org](http://www.onegreenplanet.org)  
[www.peta.org](http://www.peta.org)