

Nutritional information for vegan women who are planning a pregnancy, are pregnant or breastfeeding

In general, it is ideal to look into pregnancy nutrition before you start trying for a baby, especially as a vegan. Starting pregnancy with adequate nutritional needs also reduces the risk of deficiencies during pregnancy. In addition, starting pregnancy in a healthy weight range is ideal for all women, in order to reduce the risk of pregnancy complications related to being over- or underweight.



As plant-based diets increase in popularity, quality evidence on their effects on pregnancy and breastfeeding is still lacking, however they can be considered safe in pregnancy, if attention is given to the following vitamin and trace element requirements¹². This is because those

following a plant-based diet are at a higher risk of deficiency¹.

Folic acid

Whilst you are trying for a baby and during the first 12 weeks of pregnancy, a folic acid supplement containing 400 mcg/day is recommended, to reduce the risk of spina-bifida and other neural tube defects in your baby³⁴.

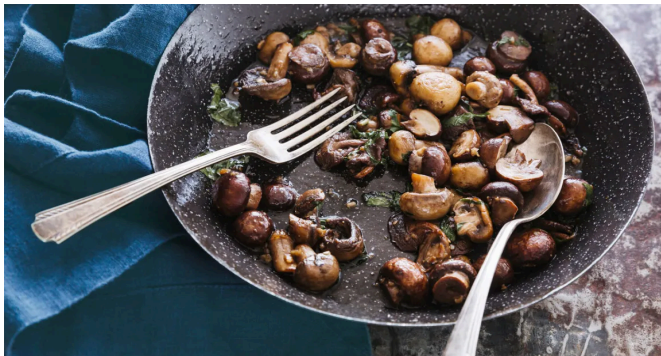
Calcium

Including plenty of calcium rich food sources during pregnancy and breastfeeding is important for both your baby's bone development and keeping your bones healthy^{5,6}. Calcium requirements increase further during breastfeeding and you will need to add

extra sources of calcium to your diet once you start breastfeeding^{5,6}. Rich sources of vegan calcium which should form part of the diet include edamame, calcium-fortified plant milks, soybeans and soy-containing foods such as tofu, tempeh^{7,8}. Other sources include sesame seeds, almonds, chia seeds and leafy greens such as kale, spinach, collard greens and bok-choy^{7,8}.

Vitamin D

Vitamin D during pregnancy is also important your overall bone health, immune function and calcium absorption. Adequate vitamin D status may also reduce the risk of pre-eclampsia and low birth weight, when compared to those who are deficient⁹. Our bodies are able to produce vitamin D upon exposure to Ultra Violet rays from the sun, however, you should avoid prolonged sun exposure without the use of sunscreen, particularly during hot summer months since your skin is more sensitive and more prone to sunburn and skin pigmentation during pregnancy¹⁰.



Apart from Vitamin D-fortified cereals and plant milks, the only good vegan source of vitamin D is mushrooms which were exposed to light when growing (not grown in the dark) since they absorb vitamin D from sunlight. Unfortunately, most

commercially grown mushrooms are grown in the dark, however leaving them in the sunlight for some time may help improve their vitamin D levels¹¹.

Vitamin D from plant sources is not well absorbed, it is therefore recommended that all pregnant and breastfeeding women take a vitamin D supplement of 10 mcg/day (note that not all vitamin D supplements are vegan-friendly)^{12,13}. Look for supplements containing both vitamin D2 and D3^{12,13}.

Iodine

It is important that your diet contains a reliable source of iodine, which is needed for brain development since deficiency may result in damage to your baby's developing brain¹⁴. The World Health Organisation says that iodine deficiency is the most

important preventable cause of brain damage since even in mild to moderate iodine deficiencies in pregnancy, there has been evidence of lower IQ, reading and learning skills in children at 8-9 years of age ¹⁴ ¹⁵. It is important that iodine stores are adequate before entering pregnancy due to important brain development in early pregnancy ¹⁴.

Vegan foods, apart from seaweed and kelp, contain no or only minimal amounts of iodine. However, amounts of iodine in these foods are variable and can be very high and cause toxicity ¹⁶ ¹⁷. Even though 500ml of fortified plant/day provides adequate iodine intake in non-pregnant women, it is advised that while trying for



a baby, during pregnancy and breastfeeding, vegan women take a supplement containing 140 mcg/day (make sure supplements are not seaweed or kelp based) ¹⁸.

Vitamin B12

Including a reliable source of vitamin B12 in your diet is essential for a healthy pregnancy and breastfeeding. The only vegan dietary sources of vitamin B12 are fortified foods such as plant milks, nutritional yeast and cereals ¹⁹. Therefore, all vegans (even if not pregnant) are advised to take a supplement containing 10µg/day ²⁰.

Iron

Iron requirements increase during pregnancy and breastfeeding and if you do not get enough iron, it may lead to extreme tiredness and anaemia ²¹. Make sure to include good sources of iron in meals and snacks, which include lentils, chickpeas, black-eyed beans, soybeans, tofu, several nuts and seeds (including pumpkin, sesame, hemp and flax seeds) and fortified cereals.



Increasing the vitamin C content of your meals and snacks helps your body to absorb iron. Good sources of vitamin C include citrus fruits such as oranges, lemons, pineapple, grapefruit and kiwi, peppers and broccoli ^{22,23}. Drinking tea and coffee with your food may make it more difficult for your body to absorb iron and should therefore be avoided ²². However, iron from plant sources is not absorbed as well as that obtained from animal sources ^{22,23}.

Iron supplementation is recommended during pregnancy and breastfeeding, with doses of 30-60 mg/day of elemental iron to prevent iron-deficiency anaemia ²⁴.

Omega-3

You should also make sure that you are getting enough omega-3 fat during pregnancy. The essential omega-3 fat is alpha-linolenic acid (ALA), which our bodies can make into other omega-3 fats, including eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) ²⁵. DHA and EPA are needed for the development of your baby's brain, nerves and eyes ²⁵. Good sources of ALA include chia seeds, ground linseed, hemp seeds and walnuts. Unfortunately, your body's ability to convert ALA is limited and only about 5% of ALA is converted to EPA, while less than 0.5% is converted to DHA ²⁶.

Therefore, since vegans consume almost no EPA and DHA from natural sources, and some experts recommend that pregnant vegans take a 200mg supplement/day containing DHA (or DHA and EPA) from microalgae instead trying to increase ALA consumption ²⁷.

Zinc



Zinc is important for your baby's growth and development, as well as milk production and ^{28,29}. Therefore, during pregnancy and particularly in the first 4 months of breastfeeding, zinc requirements increase, and food sources rich in zinc should be included in meals and snacks. These include wholegrain products, tofu, nuts, boosts zinc absorption ^{2,28,29}. enough protein, boosts zinc absorption ^{2,28,29}.

In summary, well-planned vegan diets, with supplementation as needed, can fulfil your nutritional needs during pregnancy and breastfeeding. However, always speak to your health care provider before taking supplements to ensure their safety for your specific needs.

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