

A Nutrition Guide for pregnancy & breastfeeding



This guide is designed to help you eat well during pregnancy and breastfeeding. With a bit of knowledge and planning, you can ensure that your vegan diet meets your nutritional needs. This guide is not designed to replace advice from health professionals. Please discuss the use of supplements with a health professional to help ensure that they are suitable for you. If you have any concerns about your diet, please ask your doctor for a referral to a registered dietitian.

Pregnancy

Getting ready

Ideally, look into pregnancy nutrition before you start trying for a baby, and ensure that you are getting the recommended intake of folic acid. A supplement containing 400 micrograms per day of folic acid is recommended whilst you are trying for a baby and during the first 12 weeks of pregnancy¹. This can reduce the risk of spina bifida and other neural tube defects.

If your weight is outside the healthy range (see healthy weight gain section for guidance), it is recommended that you take steps to get it closer to the healthy range before trying for a baby. This will help you to have a healthy pregnancy.

You can use the general information about vegan nutrition on [The Vegan Society's website](#) as a starting point for assessing your diet. Ensure that it is balanced and varied, and includes plenty of whole plant foods. Some topics deserve special attention during pregnancy, and they are discussed below.

Healthy weight gain

Keep an eye on your weight gain during pregnancy. The following table contains some recommendations about healthy weight gain that relate to your body mass index (BMI) before pregnancy. Your BMI gives you an idea of how your weight compares to the healthy range. Work out your BMI by dividing your weight (in kilograms) by your height (in meters), then dividing this number by your height (in meters).

BMI before pregnancy (kg/mg ²)		Healthy weight gain during pregnancy ² (kg)
Underweight	Less than 18.5	13 - 18
Healthy weight	18.5 – 24.9	11 - 16
Overweight	25.0 – 29.9	7 - 11
Obese	30+	5 - 9

Vitamin B12

Including a reliable source of vitamin B12 in your diet is essential for a healthy pregnancy and breastfeeding because inadequate intakes can result in serious complications. Here are some options:

- Fortified foods:
 - Eat them at least twice a day
 - Examples include some alternatives to milk products, vegan spread, nutritional yeast flakes, yeast extract and breakfast cereal
 - Daily intake of at least 3mcg (micrograms)
- Take a supplement of at least 10mcg daily or at least 2000mcg weekly

This might seem like a lot of vitamin B12 in comparison to the recommended daily intake of 1.5mcg (2mcg whilst breastfeeding)³. However, these recommendations are safe, and will help to ensure that you are getting enough. Your body absorbs vitamin B12 more efficiently in frequent small amounts, so the less frequently you get it, the more you need. No upper limits have been set for vitamin B12 intakes because no toxic effects have been identified.

Iron

This nutrient deserves special attention. If you do not get enough iron, this may lead to tiredness and anaemia. The World Health Organization (WHO) recognises that iron deficiency anaemia is a public health issue for pregnant people in all of its Member States⁴.

Make sure that your meals and snacks contain good sources of iron, including lentils, chickpeas, beans, tofu, cashew nuts, chia seeds, ground linseed, hemp seeds, pumpkin seeds, kale, dried apricots and figs, raisins, quinoa and fortified breakfast cereals. Beans, chickpeas, lentils, tofu, cashew nuts, chia seeds, ground linseed, hemp seeds, pumpkin seeds and quinoa are also good sources of protein and zinc. In the UK, 6g per day extra protein is recommended during pregnancy³.

Increasing the vitamin C content of your meals and snacks helps your body to absorb iron. Good sources of vitamin C include pepper, broccoli, cabbage, Brussels sprouts, kiwi fruits, oranges, strawberries, pineapple, grapefruit and orange juice.

Drinking tea and coffee with your food may make it more difficult for your body to absorb iron. Also, the recommended limit for caffeine in pregnancy is 200 milligrams⁵. This equates to a mug of filter coffee, two mugs of instant coffee or two mugs of tea.

Calcium and vitamin D

Eating a diet containing lots of calcium is important for building your baby's bones, and keeping your bones strong. Calcium-fortified foods and calcium-set tofu are particularly good sources, and including them in your daily diet will help you to achieve the recommended calcium intake. Other sources include kale, pak choi, okra, spring greens, dried figs, chia seeds and almonds.

Vitamin D is also important for bone health. Use a daily supplement to meet the recommended intake of 10mcg (micrograms)⁶. Vitamin D3 from lichen and vitamin D2 are vegan-friendly. Please note that the 20mcg vitamin D content of The Vegan Society's VEG 1 supplement is safe for pregnancy and breastfeeding.

Iodine

It is important that your diet contains a reliable source of iodine, which is needed for brain development. In the UK, 140mcg (micrograms) of iodine is the recommended daily intake for adults³. However, the WHO recommends an intake of 250mcg per day for pregnancy and breastfeeding in countries where salt is not routinely iodised, including the UK⁷. The iodine content of plant foods is variable and generally low. Although seaweed contains a lot of iodine, the content is variable. Some types contain too much, and some types may be contaminated. Topping up your dietary intake using an iodine supplement is the most reliable option for ensuring that you get enough during pregnancy.

Omega-3 fats

Make sure that you are getting enough omega-3 fat during pregnancy. The essential omega-3 fat is alpha-linolenic acid (ALA). Our bodies can make ALA into other omega-3 fats, including eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). DHA and EPA are needed for your baby's brain, nerves and eyes.

Good sources of ALA include chia seeds, ground linseed, hemp seeds and walnuts. To meet the ALA recommendations of the WHO⁸ and European Food Safety Authority (EFSA)⁹, you would need to eat about a tablespoon of chia seeds or ground linseed, two tablespoons of hemp seeds or six walnut halves daily. Some experts suggest that vegans should eat double the recommended amount of ALA¹⁰. For instance, you could include a tablespoon of ground linseed and six walnut halves in your daily diet.

Many factors affect how much EPA and DHA is made by our body. For instance, eating a lot of omega-6 fat is thought to reduce the amount of ALA that is converted. The following tips may help your body make ALA into EPA and DHA¹⁰:

- Use vegetable (rapeseed) oil instead of oils containing a lot of omega-6 fat, such as sunflower, corn or sesame oils

- Take care with the serving sizes of seeds containing a lot of omega-6 fat, such as sunflower and pumpkin seeds

The WHO and EFSA have recommended dietary intakes of EPA and DHA^{8,9}. Vegans consume almost no EPA and DHA from natural sources, and we require research into the health benefits of omega-3 fat supplementation for vegans. Some experts recommend that pregnant vegans take a supplement containing DHA (or DHA and EPA) from microalgae instead of doubling their intake of ALA. A daily dose of about 300 milligrams has been suggested¹⁰.

Morning sickness

If you struggle with morning sickness at any point during your pregnancy, you may find these tips useful:

- Eat little and often
- If the smell of cooking is making you feel sick, stick to cold food
- Lower fat and plain foods may be tolerated better
- Eat something dry after you have woken up, such as toast or crackers
- Try ginger-flavoured foods and drinks
- If you cannot manage solids, try to drink nourishing liquids, such as juice and fortified soya milk and, if it goes on for longer than a day, seek advice from a health professional

Indigestion

The following tips might help you to manage indigestion:

- Eat small, frequent meals
- Eat at a table
- Eat slowly and chew well
- Stay upright after eating
- If you get indigestion during the night, avoid eating within three hours of bedtime, and prop up your head and shoulders using pillows, or tilt the top of your mattress upwards
- Try to avoid anything that seems to trigger the indigestion

Constipation

If constipation is a problem during your pregnancy, make sure that you are getting both fibre-rich foods and plenty of fluid to help keep your bowels moving. Also, gentle activity may be helpful.

Food safety

Food safety during pregnancy is important. [The NHS Choices website](#) is a useful source of information.

Beyond food

Keeping active during your pregnancy has benefits for you and your baby. Ask your midwife for information about suitable activities and classes where you can meet other mums-to-be.

Smoking and alcohol should be avoided during pregnancy.

Breastfeeding

The WHO recommends that babies are exclusively breastfed until they are six months old, and breastfeeding continues until they are at least two years old¹¹. This table shows you some of the potential benefits of breastfeeding¹²:

Potential benefits of breastfeeding	Potential benefits for babies
<ul style="list-style-type: none">Lower risks of breast and ovarian cancer, postnatal depressionLower rate of osteoporosis later in lifeHelps with return to weight before pregnancy	<ul style="list-style-type: none">Breastmilk is tailor-made for your babyLower risk of constipationLower rates of infection, sudden infant death syndrome, some childhood cancers, and diabetes later in life

Eating well will help you to make good quality breastmilk for your baby. You may need to make some changes to your pregnancy diet. It is also important to drink plenty of fluid.

Protein and zinc

During breastfeeding, 11g per day of extra protein is recommended, compared to 6g per day extra during pregnancy³. Once you have been breastfeeding for six months, the need for extra protein reduces to 8g per day³. Good sources of protein include beans, lentils, chickpeas, soya products, peanuts, cashew nuts, pistachio nuts, chia seeds, ground linseed, hemp seeds, pumpkin seeds, buckwheat, quinoa and wild rice.

Eating beans, chickpeas, lentils, tofu, cashew nuts, chia seeds, ground linseed, hemp seeds, pumpkin seeds and quinoa will also help you to meet the recommended intake of zinc. An intake of 7mg (milligrams) per day is recommended during pregnancy. During breastfeeding, an intake of 13mg per day is recommended until your baby is four months old, and then 9.5mg per day until you stop breastfeeding³. Sprouting beans, chickpeas and lentils may help

to increase zinc absorption¹³. During pregnancy, sprouts should be cooked before consumption¹⁴. You can find more information about safe sprouting on the [NHS Choices website](#).

Calcium

In the UK, the recommended daily calcium intake for breastfeeding is 1250mg (milligrams), compared to 700mg for pregnancy³. It is likely that you will need to add extra sources of calcium to your diet once you start breastfeeding. Here are some examples of calcium-rich foods:

Amount of food	Calcium content ^{15,16,17} (mg)
100g uncooked firm calcium-set tofu	350
200ml fortified plant milk	240
2 slices of bread fortified with extra calcium	242
125g calcium-fortified soya yoghurt	150
80g cooked kale	120
30g dried figs	75
30g almonds	72
Tablespoon of chia seeds	69

Vitamins B12 and D, iodine and omega-3 fats

Following the advice in the pregnancy section about vitamin D, iodine and omega-3 fats will help to ensure that your breastmilk contains plenty of these nutrients.

Summary

Pregnancy

- Eat plenty of foods rich in iron, such as lentils, chickpeas, beans, tofu, cashew nuts, chia seeds, ground linseed, hemp seeds, pumpkin seeds, kale, dried apricots, dried figs, raisins, quinoa and fortified breakfast cereal
- Eat plenty of calcium-rich foods daily, such as calcium-fortified foods and calcium-set tofu
- Ensure a reliable intake of vitamin B12 from fortified foods or a supplement
- Ensure a reliable iodine intake by using a supplement

- Whilst trying for a baby and during the first 12 weeks of pregnancy, take a daily folic acid supplement
- Take a daily supplement containing vitamin D
- Consider microalgae omega-3 fat supplementation
- Limit caffeine to 200 milligrams per day, which equates to a mug of filter coffee, two mugs of instant coffee, or two mugs of tea
- Follow advice about food safety during pregnancy
- Keep active
- Monitor weight gain

Breastfeeding

- Drink plenty of fluid
- Breastfeeding requires extra protein and zinc, so make sure that your meals contain good sources, such as beans, chickpeas, lentils, tofu, cashew nuts, chia seeds, ground linseed, hemp seeds, pumpkin seeds and quinoa
- The calcium requirement for breastfeeding is nearly 80% more than the general requirement for adults, so it is strongly recommended that you include plenty of calcium-rich foods in your daily diet, such as calcium-fortified foods and calcium-set tofu
- Ensure a reliable intake of vitamin B12 from fortified foods or a supplement
- Ensure a reliable iodine intake by using a supplement
- Take a daily supplement containing vitamin D
- Consider microalgae omega-3 fat supplementation

Other resources

- NHS advice about food safety during pregnancy: <http://www.nhs.uk/conditions/pregnancy-and-baby/pages/foods-to-avoid-pregnant.aspx>
- If you need advice on talking to people about your vegan pregnancy, read our blog: <https://www.vegansociety.com/whats-new/blog/yes-i-am-going-raise-my-baby-vegan>
- Try Cooking Vegan by dietitian Vesanto Melina and chef Joseph Forest for nutritionally analysed recipes for all ages

References

1. NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (2008) *Maternal and child nutrition* available at: (<https://www.nice.org.uk/guidance/ph11/resources/maternal-and-child-nutrition-1996171502533>) (viewed 29-SEP-2016)
2. INSTITUTE OF MEDICINE (2009) *Weight Gain During Pregnancy: Re-examining the Guidelines* available at: <http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2009/Weight-Gain-During-Pregnancy-Reexamining-the-Guidelines/Report%20Brief%20-%20Weight%20Gain%20During%20Pregnancy.pdf> (viewed 29-SEP-2016)
3. COMMITTEE ON MEDICAL ASPECTS OF FOOD AND NUTRITION POLICY (1991) *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom*, London: HMSO

4. WORLD HEALTH ORGANIZATION (2008) *Worldwide prevalence of anaemia 1993–2005* available at:
http://apps.who.int/iris/bitstream/10665/43894/1/9789241596657_eng.pdf (viewed 29-SEP-2016)
5. FOOD STANDARDS AGENCY (2008) *Food Standards Agency publishes new caffeine advice for pregnant women* available at:
<http://tna.europarchive.org/20111116080332/http://www.food.gov.uk/news/pressreleases/2008/nov/caffeineadvice> (viewed 29-SEP-2016)
6. SCIENTIFIC ADVISORY COMMITTEE ON NUTRITION (2016) *Vitamin D and Health* available at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/537616/SACN_Vitamin_D_and_Health_report.pdf (viewed 29-SEP-2016)
7. ANDERSSON, M, DE BENOIST, B, DELANGE, F AND ZUPAN, J (2007) *Prevention and control of iodine deficiency in pregnant and lactating women and in children less than 2-years-old: conclusions and recommendations of the Technical Consultation*, Public Health Nutrition 10(12A):1606–1611
8. FAO (2008) *Fats and fatty acids in human nutrition* available at:
<http://foris.fao.org/preview/25553-0ece4cb94ac52f9a25af77ca5cfba7a8c.pdf> (viewed 02-AUG-2016)
9. EFSA (2010) *Scientific Opinion on Dietary Reference Values for fats, including saturated fatty acids, polyunsaturated fatty acids, monounsaturated fatty acids, trans fatty acids, and cholesterol* available at:
http://www.efsa.europa.eu/sites/default/files/scientific_output/files/main_documents/1461.pdf (viewed 02-AUG-2016)
10. DAVIS, B AND MELINA, V (2014) *Becoming Vegan: Comprehensive Edition*, Summertown: Book Publishing Company
11. WORLD HEALTH ORGANIZATION (2016) *Exclusive breastfeeding* [online] available from:
http://www.who.int/nutrition/topics/exclusive_breastfeeding/en/ (viewed 30-SEP-2016)
12. SHAW, V, ed (2015) *Clinical Paediatric Dietetics*, Wiley-Blackwell: Singapore
13. SANDBERG, AS (2002) *Bioavailability of minerals in legumes*, British Journal of Nutrition 88(S3):281-285
14. NHS CHOICES (2016) *Sprouted seeds safety advice* [online] available from:
<http://www.nhs.uk/Livewell/homehygiene/Pages/sprouted-seeds-advice.aspx> (viewed 03-FEB-2016)
15. PUBLIC HEALTH ENGLAND (2015) *Composition of foods integrated dataset (CoFID)* [online] available from: <https://www.gov.uk/government/publications/composition-of-foods-integrated-dataset-cofid> (viewed 26-SEP-2016)
16. UNITED STATES DEPARTMENT OF AGRICULTURE (2016) *Food Composition Databases* available from: <https://ndb.nal.usda.gov/> (viewed 26-SEP-2016)
17. ALLIED BAKERIES (2017) *Burgen Soya & Linseed* available from:
<http://www.burgenbread.com/breads/soya-linseed/> (viewed 24-FEB-2017)