

Information taken from:

FIRST STEPS NUTRITION TRUST



## Which important nutrients do women need in pregnancy, and why?

Below we explain which important nutrients – energy (calories), protein, carbohydrates, fibre, vitamins and minerals – women need in pregnancy, and why. And we give information about which foods and drinks they are found in.

Nutrient	Why it is needed
<b>Energy</b>	<p>Energy (calories) is needed for the growth and development of the baby. Most women do not need to have any additional energy above their normal needs until the final stage of pregnancy (weeks 27-40).</p> <p>Energy is provided by the fat, carbohydrate, protein and alcohol in the foods and drinks we consume, but the main source of energy should be from carbohydrate foods such as potatoes, rice, pasta, bread, other grains and starchy root vegetables such as yam.</p>
<b>Protein</b>	<p>Protein is needed for the growth and repair of tissues, but more is needed in pregnancy. Most adults in the UK get more than enough protein in their diets, and following the advice in this guide will ensure protein needs are met.</p> <p>Protein is found in a wide variety of foods including cereals, dairy foods such as milk, yoghurt and cheese, meat, fish, poultry, nuts, seeds, eggs, peas, beans and pulses.</p>
<b>Fibre</b>	<p>Fibre in the diet helps to prevent constipation and other bowel problems. Fibre is found in the indigestible parts of foods such as in wholemeal cereals and vegetables, beans and fruits. Oligosaccharides are a component of dietary fibre and these encourage the growth of bacteria which are beneficial to the gut. Eating a good mixed diet will encourage these good bacteria to thrive, and there is no need to take a supplement which contains prebiotics or probiotics to do this.</p> <p>Good sources of fibre include wholemeal bread, wholegrain breakfast cereals, peas, beans, lentils, vegetables, fresh and dried fruit and seeds.</p>
<b>Carbo- hydrates</b>	<p>Carbohydrates and fats provide energy and other nutrients and pregnant women need to have them in the same proportions in the diet as for all adults. If the ideas for meals and snacks in this guide are followed, these will be consumed in about the right amounts.</p>
<b>Fats</b>	

## Nutrient

## Why it is needed

## Good sources

<p><b>Vitamin A</b></p>	<p>Vitamin A is needed for eye health, cell growth and to support the immune system. Extra vitamin A is needed during pregnancy, but too much of the animal form of vitamin A (retinol) can be toxic. 700 micrograms of vitamin A a day are recommended.</p> <p>Safe sources of vitamin A can be found via carotenoids in some types of fruits and vegetables. Fish is a good source of vitamin A. Some types of animal products such as liver and liver pâté or liver sausage have high levels of vitamin A and should be avoided. Intakes of retinol equivalents greater than 3,000 micrograms a day are considered potentially dangerous in pregnancy. This level of intake is most likely to come from supplements including the use of fish oils. A cod liver oil capsule containing 1,000mg or 1g of cod liver oil is likely to contain about 800 micrograms of retinol equivalents. A teaspoon of cod liver oil (5g) will therefore exceed the upper recommended level of 3,000 micrograms.</p>	<p><b>Animal sources</b></p> <p>butter canned salmon cheese egg full-fat milk herrings kidney pilchards canned in tomato sauce smoked mackerel</p>	<p><b>Non-animal sources</b></p> <p>apricots (dried, fresh or canned) blackcurrants broad beans broccoli Brussels sprouts cabbage (dark) cantaloupe melon carrots honeydew melon mango margarine nectarine orange peach peas prunes red peppers runner beans spinach sweet potatoes sweetcorn tomatoes watercress</p>
<p><b>Riboflavin</b> Also called vitamin B2</p>	<p>An additional amount of riboflavin is needed during pregnancy. 1.4mg of riboflavin a day is recommended in pregnancy. Riboflavin helps to release energy from food and is important for eye and heart health.</p> <p>Many women get most of their riboflavin from animal sources and particularly dairy foods and so if they avoid these foods it is important that they regularly eat non-animal sources of riboflavin.</p>	<p><b>Animal sources</b></p> <p>bacon cheese eggs kidney lean meat or poultry mackerel milk pilchards salmon sardines tuna yoghurt</p>	<p><b>Non-animal sources</b></p> <p>almonds fortified breakfast cereals granary bread mushrooms soya beans spinach wheatgerm bread</p>
<p><b>Folic acid</b> 'Folic acid' is the name given to the synthetic form of the B vitamins known as folates, but is used as a general term here for this vitamin</p>	<p>Folic acid is important before pregnancy and in the first few weeks of pregnancy to prevent neural tube defects, and in later pregnancy to prevent a particular type of anaemia. 400 micrograms a day are recommended.</p> <p>Women should take a supplement of folic acid, but good sources of folic acid should also be included in any healthy diet.</p>	<p>broccoli Brussels sprouts cabbage cauliflower fortified breakfast cereals green leafy salads melon oranges</p>	<p>parsnips peanuts peas potatoes runner beans spinach tomatoes wholemeal bread yeast extract</p>

<h2>Calcium</h2>	<p>Calcium is important for bone health and, although calcium needs are increased in pregnancy, the body adapts to ensure more calcium is absorbed, so higher intakes are not needed. 700mg of calcium a day is recommended for women. The exception to this is for teenagers in pregnancy where additional calcium is needed for the teenagers' own growth. A regular intake of dairy products (milk, cheese and yoghurt) throughout pregnancy will ensure that calcium needs are met. If women do not include these foods in the diet, it is important that they choose suitable alternatives.</p>	<p><b>Dairy sources</b> cheese cheese spread yoghurt fromage frais milk</p>	<p><b>Non-dairy sources</b> canned salmon dried fruit egg yolk muesli orange peas, beans and lentils pilchards, sardines soya drink fortified with calcium spinach tofu white bread/flour</p>
<h2>Iron</h2>	<p>Iron is important for the production of red blood cells and it supplies oxygen to the cells. Pregnant women are recommended to have 14.8mg of iron a day. Low iron status in pregnancy is associated with low birthweight babies and premature birth. All pregnant women will be screened at antenatal booking-in to see if they need to take an iron supplement in pregnancy. Encourage women to have this simple blood test if you think they might be anaemic. Good sources of iron include red meat, fish, peas, beans and lentils, and leafy vegetables.</p>	<p><b>Animal sources</b> beef beefburger chicken and other poultry corned beef egg herrings kidney lamb pilchards salmon sardines sausage tuna</p>	<p><b>Non-animal sources</b> baked beans blackcurrants black-eyed peas broad beans broccoli chick peas dried apricots fortified breakfast cereals lentils raisins soya beans spinach spring greens tofu weet bisks white bread wholemeal bread/ flour</p>
<h2>Iodine</h2>	<p>Iodine helps regulate metabolism and plays an important role within the thyroid in controlling many body processes. Pregnant women are recommended to have 140 micrograms of iodine a day. Too little iodine in pregnancy is associated with learning disability in infants and children. Iodine deficiency is the biggest cause of mental retardation worldwide. The main source of iodine in the UK is dairy products. Iodine can also be found in seaweed, fish and seafood. Smaller amounts can be found in meat and meat products and some types of vegetables (depending on the soil where they were grown). If someone does not have dairy products and does not eat any fish or seafood, it is very important that they have other sources of iodine in their diet (see pages 26 and 32). It is also important not to have too much iodine, and intakes should not exceed 940 micrograms a day</p>	<p><b>Dairy sources</b> butter cheese fromage frais milk ice cream yoghurt</p>	<p><b>Non-dairy sources</b> egg fish fish paste seaweed* shellfish</p> <p>* Some types of seaweed have very high concentrations of iodine and these are not recommended. See page 26 for useful sources of iodine for women who don't eat dairy foods.</p>

<p><b>Zinc</b></p>	<p>Zinc plays a role in enzyme and insulin production, and is important for the baby's health and development.</p> <p>Zinc helps to form the baby's organs, skeleton, nerves and circulatory system.</p> <p>The current recommendation for pregnant women is for 7mg of zinc a day.</p> <p>Some women may have too little zinc in their diet if they don't eat well and if they don't regularly have foods such as meat, fish, eggs, milk, pulses, nuts or cereal foods.</p>	<p><b>Animal sources</b></p> <p>bacon canned sardines canned tuna or pilchards cheese cold cooked meats corned beef eggs ham kidney lean meat milk poultry sausages shrimps and prawns</p>	<p><b>Non-animal sources</b></p> <p>beans and lentils brown or wholemeal bread nuts plain popcorn sesame seeds tofu wholegrain breakfast cereals, such as puffed wheat, branflakes or weet bisks</p>
<p><b>Long chain poly-unsaturated fatty acids</b> Often called omega 3 fatty acids</p>	<p>Pregnancy causes physiological changes in women, which mean that many nutrients and other dietary components are absorbed more efficiently, or taken from the mother's stores, so that the developing infant will not be deprived of nutrients.</p> <p>There are some components – such as long chain polyunsaturated fatty acids (or omega 3 fatty acids), and choline – that the body can make itself in small amounts, but which it is helpful to have sufficient of in the diet during pregnancy. This is to ensure stores are not depleted and that the infant has sufficient for brain and cell development.</p>	<p>oil-rich fish, such as salmon, trout, herring, mackerel, sardines and pilchards</p>	
<p><b>Choline</b></p>	<p>If women eat a variety of meals and snacks as recommended in this resource, it is likely that they will get enough choline and long chain polyunsaturated fatty acids to meet their needs.</p>	<p>eggs lean meat some vegetables, such as green leafy vegetables and peas tomato paste tofu pulses nuts and seeds</p>	

## Weeks 27-40 (the last trimester of pregnancy)

Nutrient	Why it is needed	Good sources	
<b>Energy</b>	An additional amount of energy (calories) is needed during the final stage of pregnancy (weeks 27-40) to make sure the baby arrives at a good weight. Low birthweight is associated with more problems at birth, in the first few months and in later life. An extra 200kcal per day is recommended.	The best sources of energy are those that also provide other nutrients, for example: – starchy foods such as potatoes, bread, pasta and rice – dairy foods such as milk and yoghurt – eggs.	
<b>Vitamin C</b>	An additional amount of vitamin C is needed during the final stage of pregnancy to increase intakes to 50mg a day. Vitamin C is one of the building blocks for skin and also acts as an antioxidant and protects cells from damage. Eating a range of the meals and snacks shown in this resource will ensure enough vitamin C is consumed.	apples blackberries blackcurrants broccoli Brussels sprouts cabbage canned guava cauliflower grapefruit green and red peppers (raw) green beans kiwi fruit mango nectarines orange (and orange juice) peaches peas potatoes raspberries satsumas spinach spring greens strawberries tomato watercress	
<b>Thiamin</b> Also called vitamin B1	An additional amount of thiamin is needed during the final stage of pregnancy to increase intakes to 0.9mg a day. Thiamin helps to release energy from food and plays an important role in the development of the baby's nervous system.	<b>Animal sources</b> chicken and other poultry eggs lean meat pork, bacon and ham	<b>Non-animal sources</b> fortified breakfast cereals nuts oatcakes potatoes white or brown bread wholemeal bread

# Important vitamins that all pregnant women should take as a supplement

## Folic Acid

Folic acid is needed before pregnancy and in the first few weeks of pregnancy to prevent neural tube defects, and may help to prevent cleft lip and palate. In later pregnancy, folic acid is needed to prevent a particular type of anaemia. While it is possible to get enough folic acid from the diet if you eat well, **it is currently recommended that all women take a supplement of 400 micrograms of folic acid a day when planning a pregnancy, or as soon as they find out they are pregnant, and that they take it for at least the first 12 weeks of pregnancy.** For those women who have poor or erratic diets that are low in good sources of folic acid such as green leafy vegetables and wholegrain cereal, it is prudent to continue taking the supplement throughout pregnancy. **Healthy Start vitamins** for pregnant women provide 400 micrograms of folic acid, 10 micrograms of vitamin D and 70 milligrams of vitamin C.

Eating a range of meals and snacks as recommended in this guide will also help to ensure adequate folic acid intake.

### Who might need a higher dose of folic acid?

If there is any family history of neural tube defects (spina bifida or anencephaly), if women are taking some anti-epileptic drugs, if they are diabetic, have coeliac disease or are obese, they are likely to be advised to take a higher-dose supplement of folic acid of about 5 milligrams a day during the first 12 weeks. If you think a particular woman should be taking this higher dose of folic acid, encourage her to check with her GP.

## Vitamin D

Vitamin D during pregnancy is very important for bone development in both the pregnant woman and the child, but needs cannot be met through diet alone. Most adults make the majority of their vitamin D through the action of summer sunlight on the skin. Women who are at particular risk of low vitamin D status include those who have darker skin, who rarely go outside, who cover their skin with clothing or sunscreen, who avoid animal foods or who have a very poor diet.

**It is currently recommended that all pregnant (and breastfeeding) women should take a supplement of 10 micrograms of vitamin D every day.**

Healthy Start vitamins contain 10 micrograms of vitamin D and can be taken throughout pregnancy and while breastfeeding. Women who may be at particular risk of low vitamin D status should be given the vitamins at the first point of contact and should be encouraged to take them regularly