

Fact Sheet

Important nutrients for during pregnancy.

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During pregnancy and breastfeeding both mum and baby need good nutrition. A healthy, balanced diet is the first building block for this. Foods high in fat, salt and sugar, including processed foods and junk foods, should be avoided during your pregnancy. Instead you should have fresh healthy foods and lots of vegetables.

Organising a good diet takes extra time and planning but is definitely worth the effort. This is the period of most rapid growth and development in your child's life and your good nutrition gets her/him off to a great start.

Women who have a good diet will probably get all the nutritional goodness they and their baby need.

Even so, some additional vitamins and minerals (supplements) are recommended just to be on the safe side.

At Westmead we recommend:

- all women should take folate, iodine and Vitamin D during pregnancy (folate should begin at least a month before pregnancy)
- vegans (and some vegetarians depending on diet) should also take Vitamin B12
- some women may need to take iron (vegetarians, vegans, those with twins) or calcium (vegans, low calcium diet)
- a few women may require other supplements depending on their personal health needs

Combination pregnancy multivitamins contain many of the supplements you need and are convenient to take. However, some may also contain things you may not need (calcium) or in larger doses than you need (especially iron) that may give you side effects such as constipation or nausea (feeling sick on the stomach).

If you experience any side effects from your pregnancy vitamins, talk to your midwife, doctor or pharmacist about changing what you are taking.

If you need iron but you suffer from side effects, you should try a lower dose product. Or alternatively take iron only 2 – 3 times a week – this can provide the same benefit as daily iron.



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Folate

Folate (folic acid) is a vitamin that is needed to make DNA. Having enough folate in your body in the month before you get pregnant is especially important in avoiding some birth defects, particularly those related to the baby's spine and brain (spina bifida, anencephaly, encephalocele) which can develop in the first few weeks of life.

A diet high in folate (leafy green vegetables / salad, legumes such as peas, beans, chickpeas, lentils, also banana, avocado, vegemite) is a great start.

Folate is also present in flour and bread products, including many breakfast cereals. However, diet sources are often not enough and all women are advised to take a folate supplement before pregnancy and during early pregnancy.

The recommended daily dose is 400 – 500 micrograms for most women, starting at least one month (ideally 3 months) before pregnancy

Note that a bigger daily dose, 5000 micrograms (5 milligrams) is advised for some women such as:

- those who have had a previous baby with one of the conditions above
- overweight women with BMI > 30
- those on medication for epilepsy
- those with diabetes, inflammatory bowel disorders, thalassemia and some other disorders

Starting folate before pregnancy ensures there is enough available from the moment the baby begins. You should then continue with folate for the first 12 weeks of pregnancy.

Some women may need to stay on folate beyond the 12th week of pregnancy – your doctor or midwife will advise you.

Iodine

Iodine is a mineral needed for the thyroid (gland at the front of the lower neck) to function. Normal thyroid function in the mother is thought to be important for normal brain development in the baby.

Most foods contain little iodine but tinned salmon, seaweed, dairy foods, eggs, and iodised salt are reasonable sources. Bread (except organic bread) is also a good source as, by law, flour must now contain iodised salt rather than regular salt. So most non-pregnant women get enough iodine.

However, the increased need in pregnancy is hard to meet from diet alone. All pregnant women are advised to also take an iodine supplement.

The recommended daily dose of iodine is 150 micrograms daily for all women.

Start as soon you know you are pregnant and continue throughout breastfeeding (you can start before you get pregnant if you wish).

Vitamin D

Vitamin D helps the body absorb and use calcium. It is important for healthy bones and teeth and plays an important role in the health of other body systems. 90% of the Vitamin D in our bodies is made in our own skin from the action of sunlight. Only a small amount comes from food (eggs, oily fish, margarine, fortified milk).

A fair-skinned person in Sydney will get enough sun to make the Vitamin D she needs by having her face and arms or else her legs in the sun (direct sunlight is needed, not behind a window) for 7 minutes at 3pm in summer or for 20 minutes in the middle of the day in winter). Dark skinned people need 4 x longer.

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You are at risk of making less vitamin D than you need if you:

- spend a lot of time indoors or cover most of your body in clothing when you go out
- have darker skin
- are overweight with BMI > 30.

In pregnancy, this can mean that the baby will get less Vitamin D than it needs too.

At Westmead our advice in pregnancy is that all pregnant women should:

- try to get short periods of sunshine on their skin on a regular basis if they can
- take Vitamin D 400 IU (International Units; this equals 10mg) every day

Women at higher risk of deficiency (dark-skinned, veiled or very modest clothing, little sun exposure, BMI > 30) should take

- Vitamin D 2000 IU/day for 8 weeks
- Then take Vitamin D 1000 IU/day for the rest of pregnancy unless told otherwise by their doctor
- **Note:** Some women with serious medical conditions may be given different advice

The advice for babies is:

- all breast fed babies should take 400 IU / day. You will be advised about the products available before discharge from the hospital
- bottle fed babies receive a supplement in formula milk and therefore get enough until they are being weaned onto solids. At this time a Vitamin D supplement may be needed.

Vitamin B12

Vitamin B12 is very important for the development of a healthy brain and healthy nerves in you and your baby. Vitamin B12 is only found in animal products (meat, chicken, seafood, eggs and dairy).

Only a small amount of Vitamin B12 is needed every day (about 3 micrograms) and women who eat these foods should have all they need. On the other hand, vegans and some vegetarians are likely to have very little Vitamin B12 in their diets.

These women therefore need a Vitamin B12 supplement or to increase their intake of foods that are fortified with Vitamin B12 – such as some soy milk products and some meat alternatives.

Calcium

Calcium's key function is to make sure that teeth and bones are strong. This is important for mother and baby. The best source of calcium is dairy foods (milk, cheese, yoghurt), fish with edible bones such as canned salmon or sardines, and fortified soy.

Most women will get enough calcium in their diet. If your diet is low in calcium, you should take a supplement of 1000 mg / day of calcium.

Note that adequate amounts of Vitamin D are needed to make sure the calcium in your diet is absorbed into your body so be sure to get out in the sunshine and to take the Vitamin D supplement as recommended above.



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Iron

Iron is essential for the development of new red blood cells. During pregnancy your own blood volume increases plus your baby is developing blood tissue, so your iron requirements increase.

Most women go into pregnancy with good iron stores in their body and cope well with the increased requirements by having a good diet. However some women go into pregnancy with low iron stores and these women can develop iron deficiency anaemia in pregnancy.

Common reasons for low iron stores are:

- heavy periods
- having a baby within 12 – 18 months of a previous baby (no time to make up the iron used in the last pregnancy); this is especially so if you lost a lot of blood at the time of birth
- low iron diet (more common in vegetarians)

High Iron Foods

- high iron foods are red meat, pork, poultry and seafood; beans and lentils; nuts and seeds; leafy green vegetables; wholegrain bread, brown rice and iron-fortified breakfast cereals.

Note: iron absorption is:

- increased by Vitamin C (citrus fruits, kiwi fruit, capsicum, berries, raw tomato)
- reduced by calcium (milk, cheese, tinned salmon) and tea/coffee/wine - so have these foods/drinks in between meals rather than with meals.

At the beginning of pregnancy, and at 28 weeks, you will have some blood tests including a check for anaemia (low haemoglobin).

- if your haemoglobin is normal (> 110 g/L in early pregnancy, > 105 g/L in late pregnancy) and you have a healthy diet with enough iron, you probably don't need to take an iron supplement - exceptions to this are if you are having twins or you are a vegetarian
- if your haemoglobin is low, we will do a blood test to confirm that the result is due to iron deficiency (there are other causes of anaemia); if it is, you will benefit from an iron supplement.

Iron Supplements in Pregnancy:

There are lots of iron supplements available and they contain different amounts of iron. If you are not anaemic, a lower dose of iron should be enough; however, if you have iron deficiency anaemia you will need a higher dose.

Some women get nausea and constipation (occasionally diarrhoea) from iron and the higher the dose the more likely this is to occur:

- if this happens to you, try a lower dosage
- or else take your iron only 2 – 3 times a week - this gives about the same benefit as daily iron



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Important point about haemoglobin: Remember that nature intends a pregnant woman's blood to get 'thinner' and her haemoglobin to fall. This has important benefits for both mother and baby - it is not a good idea to try and take the haemoglobin back to the upper non-pregnant range. For example, a haemoglobin level above 130 g / L in pregnancy is probably too high.

There is concern that levels above this may make the blood too 'thick' to circulate well through the placenta and that this might affect the baby's growth. Speak to your doctor or midwife about the iron dose that is right for you.

Vitamin K

Vitamin K is important for regulating blood clotting. Clotting is important, for example, in stopping the bleeding that occurs when you cut your finger. A Vitamin K deficiency could mean that the bleeding takes much longer to stop.

However, very few women are low in Vitamin K and routine supplements are not recommended. Good sources of Vitamin K in the diet include spinach, brussel sprouts, broccoli, green salad vegetables and plant oils such as canola.

Even though pregnant women mostly have enough Vitamin K, newborn babies often have low levels. Usually this causes no harm, but rarely a baby can have bleeding into her/his brain resulting in brain damage or even death.

Because of this rare chance and to keep your baby healthy, we strongly recommend that she/he should have an injection of Vitamin K immediately after birth.



Vitamin A, C, E

There is no benefit in taking supplements of these vitamins and, in fact, they may be harmful (especially Vitamin A)

Vitamin B group

Folate (B9) and B12 belong in the B group of vitamins. There is no evidence to support taking additional B group vitamins.

We welcome further feedback on this brochure as a way of continually improving our service.

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