



# GOOD NUTRITION FOR PREGNANCY

the women's  
the royal women's hospital  
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What you eat during pregnancy affects your developing baby, your own health and wellbeing and can affect your baby's health later in life.

The aims of healthy eating during pregnancy are to:

- » meet your increased nutrient needs
- » promote the health of yourself and your baby
- » achieve a healthy weight gain.

Although pregnancy increases the need for many nutrients, this doesn't mean that you have to 'eat for two'. It is the quality of what you eat that is important, not the quantity. It's not difficult to meet you and your baby's nutritional needs if you eat regular meals containing a variety of foods from the five food groups. You may need more kilojoules (calories) during pregnancy to meet the added needs of your growing baby. This varies depending on your weight and activity level but on average is equivalent to an extra snack each day.

See the *Healthy Foods Guide* and *Sample Meals Plans* at the end of this fact sheet for information on what foods to include in your daily diet and how to incorporate the recommended daily serves into your everyday meals.

## Important nutrients during pregnancy

### Protein

Protein requirements are higher during pregnancy. Most women in Australia eat generous amounts of protein so don't need to increase their intake if they are eating meat and dairy (or their alternatives) regularly.

### Folic acid

Folic acid (also called folate) is essential for blood formation and for the building of body cells. It is especially important around the time of conception and in the first trimester to help prevent some types of birth defects. It is difficult to get enough folic acid from food alone; start a daily supplement of 400 micrograms (mcg or µg) when planning a pregnancy and continue it for the first three months of your pregnancy.

Folate is important throughout pregnancy for the normal development of your baby so eat foods rich in folate such as; green leafy vegetables, salad greens, fruit, wholegrain breads and cereals, fortified breakfast cereals, legumes and nuts.

### Iodine

Iodine is needed for normal brain development in the baby. The need for iodine increases during pregnancy, but it can be difficult to get enough as most foods in Australia are fairly low in this mineral. Seafood, dairy foods, iodized salt and iodine added to bread flour help meet the needs of most of the population but this may still not be enough for pregnant women. A daily supplement which contains 150mcg of iodine is recommended. Most pregnancy multivitamins contain this dose. Supplements are also available that contain both iodine and folic acid. Kelp tablets are not recommended as they may contain too much iodine which can be harmful.

### Iron

Iron is essential for the formation of blood. During pregnancy your blood volume increases and the baby's blood tissue is also being formed, so your requirement for iron increases. Lack of iron can lead to low iron stores, tiredness and eventually anaemia. Iron is found in lean meat and meat alternatives (see *Healthy Foods Guide*) as well as as whole grains and green vegetables.

If tests have shown you are low in iron you may be prescribed an iron supplement as it is difficult to get enough iron from food alone once your iron stores are depleted during pregnancy.

### Calcium

Calcium is important during pregnancy and breastfeeding for the formation of your baby's bones. During pregnancy your body absorbs calcium from food more efficiently to help meet your baby's needs. The best sources of calcium are dairy foods. Fish with edible bones, such as canned salmon and sardines, are also a good source. There are small amounts of calcium in other foods, but on average about three-quarters of our calcium comes from dairy foods. If you drink soy or other milks, such as almond or rice milk, check the label and choose a brand with the same amount of calcium as cow's milk (at least 100mg per 100ml). Low fat dairy foods are not lower in calcium than the full fat versions.

## Vitamin D

Vitamin D helps the body absorb and use calcium. It is mostly made in the skin by the action of sunlight, but a small amount comes from food (oily fish, egg yolks, margarine, vitamin D-fortified milk). If you have darker skin, cover most of your body in clothing or spend most of your time indoors, you are at risk of vitamin D deficiency. Vitamin D deficiency can cause bone weakness and muscle pain in women and if severe, skeletal abnormalities (called rickets) in their babies. If you are at risk have your vitamin D levels checked. If low, you will be prescribed a vitamin D supplement. Your baby if breastfed will also require a liquid vitamin D supplement suitable for babies.

## Vitamin B12

Vitamin B12 is needed for blood cell, nerve and the brain development of the baby. Pregnancy and breastfeeding can rapidly deplete body stores. Women at risk should have their level checked and may need to take a supplement. If you are concerned please discuss this with your dietitian or doctor.

As this vitamin is naturally present only in foods of animal origin, vegans and vegetarians who eat few dairy foods or eggs are particularly at risk of vitamin B12 deficiency. Certain brands of soy milk and meat substitutes have added-B12 but the amount may not be enough if few other sources of B12 are eaten.

## Multivitamin supplements

Ideally the best way to meet the increased nutrient requirements of pregnancy is with a balanced diet, however if you are unable to eat well, a pregnancy multivitamin supplement can be beneficial. A multivitamin supplement can also be a convenient way of getting enough folic acid and iodine if you are not taking these supplements.

Check that any supplements you are taking are suitable for pregnancy. Ask your pharmacist, doctor or dietitian for advice.

## Foods to avoid or limit

### Listeria

Pregnant women should avoid foods that may contain listeria bacteria such as sandwich meats, soft cheeses (brie, camembert, ricotta, feta and blue cheese), soft serve ice-cream, pate, pre-prepared salads, smoked salmon, uncooked seafood and pre-cooked prawns. Freshly cooked seafood is safe. Listeria is killed by cooking food to boiling point, so, when reheating foods, make sure they are steaming hot.

### Alcohol

Not drinking alcohol is the safest option.

### Fish

Fish is a good source of omega 3 fatty acids which are needed for brain and nervous tissue development in the baby. One to three serves a week are recommended.

However, some fish may contain high levels of mercury so intake of these fish should be limited. Limit shark (flake), marlin, broadbill or swordfish to no more than one serve per fortnight and orange roughy (deep sea perch) or catfish to one serve per week and eat no other fish that week.

### Caffeine

Tea and coffee contain caffeine. These are safe to drink in moderation, for example, one to three coffees (depending on strength) or up to five cups of tea per day. Energy drinks can contain large amounts of caffeine or guarana (source of caffeine) so should be limited.

### Liver and vitamin A

Limit liver to 50g a week as it can contain more than the recommended levels of vitamin A (retinol) for pregnant women.

### Toxoplasmosis and salmonella

Raw meat and cats' faeces can carry toxoplasmosis infection. Thoroughly cook meat, wear rubber gloves if handling cat litter and wash hands after gardening or handling pets.

Avoid undercooked eggs and meat to limit risk of salmonella food poisoning, which in rare cases can affect the baby.

## How much weight should I gain?

Your recommended weight gain depends on your pre-pregnancy body mass index (BMI). To calculate your BMI divide weight (in kilos) by height (in metres) squared. Check the table below for the recommended weight gain for your BMI range.

Pre-pregnancy BMI	Recommended weight gain during pregnancy	Weight gain per month in 2nd and 3rd trimesters
Underweight BMI less than 18.5	12.5 to 18kg	2 to 2.5kg
Normal weight BMI 18.5–24	11.5 to 16.0kg	1.5 to 2.2kg
Overweight BMI 25–29	7 to 11.5kg	1 to 1.4kg
Obese BMI greater than 30.0	5 to 9kg	0.7 to 1.2kg

The average weight gain in the first three months is 0.5 to 2kg.

If you find you have gained a lot of weight early in pregnancy, aim to slow your weight gain down to the recommended monthly gain. Dieting is not recommended, instead limit intake of high fat and high sugar foods and do some daily exercise such as walking. Speak to your doctor, midwife or physiotherapist if you are unsure what type of exercise is appropriate for you.

## Where to get more information

Visit the Women's website for more information on nutrition and pregnancy.

[www.thewomens.org.au/health-information/](http://www.thewomens.org.au/health-information/)

The following fact sheets are also available for download:

- » Healthy eating when you're pregnant with twins
- » Iron & pregnancy
- » Nausea and vomiting in pregnancy (morning sickness)
- » Coping with common discomforts of pregnancy
- » Vegetarian eating and pregnancy

## Food Standards Australia New Zealand

This website has useful information for consumers. Search for 'Fish and mercury', 'Listeria and food' and 'Food poisoning'

[www.foodstandards.gov.au/consumer/](http://www.foodstandards.gov.au/consumer/)

## Eat for Health

Visit the Australian Dietary Guidelines website for advice and resources about healthy eating.

[www.eatforhealth.gov.au](http://www.eatforhealth.gov.au)

## Healthy foods guide

Use the following table as a guide to foods you should include in your daily diet and the *Sample Meal Plans* (see below) to show how to include the recommended daily serves in your everyday meals.

Food group	Daily serves	Serve size
Vegetables & legumes/beans	5	<b>A serve is around 75g or</b> <ul style="list-style-type: none"> <li>» <math>\frac{1}{2}</math> cup cooked vegetables</li> <li>» 1 cup salad vegetables</li> <li>» <math>\frac{1}{2}</math> medium potato or sweet potato</li> <li>» <math>\frac{1}{2}</math> cup cooked dried or canned beans or lentils</li> </ul>
Fruit	2	<b>A serve is around 150g or</b> <ul style="list-style-type: none"> <li>» 1 medium fruit, two smaller fruit, e.g. apricots, plums</li> <li>» 1 cup diced or canned fruit or berries</li> <li>» 30g dried fruit e.g. four apricot halves or <math>1\frac{1}{2}</math> tablespoons sultanas</li> </ul>
Grain (cereal) foods, mostly wholegrain or high fibre	$8\frac{1}{2}$	<b>A serve is:</b> <ul style="list-style-type: none"> <li>» <math>\frac{2}{3}</math> cup (30g) cereal flakes</li> <li>» 1 slice (40g) bread</li> <li>» 1 chapatti</li> <li>» <math>\frac{1}{2}</math> Lebanese bread</li> <li>» 3 crisp breads</li> <li>» <math>\frac{1}{2}</math> medium roll</li> <li>» <math>\frac{1}{2}</math> cup (75 to 120g) cooked rice, pasta, noodles, quinoa</li> </ul>
Milk, yoghurt, cheese and/or alternatives mostly reduced fat	$2\frac{1}{2}$ $3\frac{1}{2}$ if aged 18 or younger	<b>A serve is</b> <ul style="list-style-type: none"> <li>» 1 cup (250ml) milk</li> <li>» 2 slices cheese (40g)</li> <li>» 1 small carton (200g) yoghurt</li> <li>» 1 cup (250ml) soy, rice, almond or other milk with at least 100g of added calcium per 100mls</li> </ul>
Lean meat, chicken, fish, eggs, legumes/beans, nuts, seeds	$2\frac{1}{2}$	<b>A serve is:</b> <ul style="list-style-type: none"> <li>» palm sized (100g) cooked meat or chicken</li> <li>» medium fillet fish (150g)</li> <li>» 2 eggs</li> <li>» 1 cup (150g) cooked or canned legumes e.g. lentils, chickpeas, kidney beans</li> <li>» <math>\frac{2}{3}</math> cup (170g) tofu</li> <li>» handful (40g) nuts, seeds or nut butter</li> </ul>
Unsaturated oils and spreads	Optional	<ul style="list-style-type: none"> <li>» 14–20g per day (around 1–2 tablespoons)</li> </ul>

For health and weight control most people will need to limit foods that are high in added fats and sugars, such as cakes, biscuits, pastries, high fat takeaway foods and sugar-sweetened soft drinks and juices. While these are fine in small amounts, in large amounts they can cause excess weight gain or take the place of more nutritious foods.

## Sample meal plans

Including the recommended daily serves from the five food groups (see *Healthy Foods Guide*) in your diet is not as difficult as it seems. By making the right choices you can easily achieve your daily targets. We have created these sample meal plans to show which food groups and how many serves can be found in typical daily meals.

Meal	Food	Portion size	Food group and number of serves
Breakfast	Muesli with reduced fat milk	60g muesli 1 cup (250ml) reduced fat milk	2 grain serves 1 milk/yoghurt/cheese serve
	Wholegrain toast	1 slice	1 grain serve
Morning snack	English muffin	1 small	1 grain serve
Lunch	Sandwich with tuna and salad	2 slices bread small can tuna 1 cup salad vegetables	2 grain serves $\frac{1}{2}$ meat or alternative serve 1 vegetable serve
	Reduced fat yoghurt Apple	small tub yoghurt (200g) 1 medium	1 meat or alternative serve
Afternoon snack	Unsalted nuts	40g ( $\frac{1}{4}$ cup)	1 meat or alternative serve
Dinner	Pasta with beef mince and red kidney beans	$1\frac{1}{4}$ cups of cooked pasta 100g cooked mince $\frac{1}{4}$ cup kidney beans $1\frac{1}{2}$ medium tomato $\frac{1}{2}$ onion	$2\frac{1}{2}$ grain serves 1 meat or alternative serve $\frac{1}{2}$ vegetable serves $1\frac{1}{2}$ vegetable serves $\frac{1}{2}$ vegetable serves
	Green salad	$1\frac{1}{2}$ cups green leafy salad	$1\frac{1}{2}$ vegetable serves
Supper	Apricots and reduced fat yoghurt	1 cup stewed/tinned apricots 100g ( $\frac{1}{2}$ small tub) yoghurt	1 fruit serve $\frac{1}{2}$ milk/yoghurt/cheese serve

## Sample meal plan for vegetarians

Meal	Food	Portion size	Food group and number of serves
Breakfast	Wholegrain breakfast cereal, with reduced fat milk	60g cereal 1 cup (250ml) reduced fat milk	2 grain serves 1 milk/yoghurt/cheese serve
	Toast with peanut butter	1 slice 1 tablespoon (20g) peanut butter	1 grain serve $\frac{1}{2}$ meat or alternatives serve
Morning snack	Crackers and cheese	3 crisp bread 1 slice cheese (20g)	1 grain serve $\frac{1}{2}$ milk/yoghurt/cheese serve
	Apple	1 medium apple	1 fruit serve
Lunch	Sandwich with egg and salad	2 slices wholegrain bread 1 egg $\frac{1}{2}$ cup lettuce	2 grain serves $\frac{1}{2}$ meat or alternative serve $\frac{1}{2}$ vegetable serve
	Reduced fat yoghurt	small tub yoghurt (200g)	1 milk/yoghurt/cheese serve
Afternoon snack	Banana	1 medium banana	1 fruit serve
	Unsalted nuts	40g ( $\frac{1}{4}$ cup)	1 meat or alternative serve
Dinner	Lentil curry with rice	1 cup lentils $\frac{1}{2}$ onion 1 tomato 1 cup cooked rice	1 meat or alternative serve $\frac{1}{2}$ vegetable serve 1 vegetable serve 2 grain serves
	Cooked vegetables	$1\frac{1}{2}$ cups vegetables	3 vegetable serves
Supper	Wholemeal crackers with hummus	2 crackers 2 tablespoons (45g) hummus	$\frac{1}{2}$ grain serve $\frac{1}{2}$ meat or alternatives serve

For more information and tips on planning healthy meals visit the Eat for Health website.

[www.eatforhealth.gov.au/eating-well](http://www.eatforhealth.gov.au/eating-well)

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