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## Pregnancy and diet

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### Summary

- A pregnant woman needs to boost her nutrient intake, rather than her kilojoule intake.
  - Pregnancy creates extra demands for certain nutrients, including iron and folate.
  - Good food hygiene is particularly important during pregnancy to avoid listeria infection and salmonella risk.
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Good nutrition during pregnancy can help to keep you and your developing baby healthy. The need for certain nutrients, such as iron, iodine and folate, is increased at this time.

A varied diet that includes the right amount of healthy foods from the five food groups generally provides our bodies with enough of each vitamin and mineral each day. However, pregnant women may need supplements of particular vitamins or minerals. Consult your doctor before taking supplements.

### Healthy weight gain during pregnancy

Steady weight gain during pregnancy is normal and important for the health of the mother and baby. However, it is also important not to gain too much weight.

If you are pregnant, a good approach is to eat to satisfy your appetite and continue to monitor your weight. For women who are a healthy weight, it is recommended that you gain between 11.5 and 16 kg. Underweight women may need to gain more weight (between 12.5 and 18 kg).

If you are overweight, pregnancy is not the time to start dieting or trying to lose weight. However, it is recommended for women who are overweight to gain less weight during pregnancy (between 5 and 11.5 kg).

To maintain appropriate weight gain during pregnancy, it is important to choose healthy foods from the five food groups, and limit discretionary foods and drinks high in saturated fat, added sugars and added salt, such as cakes, biscuits and sugary drinks.

### Healthy eating for pregnant women

It is important to choose a wide variety of healthy foods to make sure that the nutritional needs of both mother and baby are met.

You can eat well during pregnancy by:

- enjoying a variety of fruits and vegetables of different types and colours
- increasing your intake of grain and cereal foods to 8-8 ½ serves a day. Choose mostly wholegrain and high fibre options
- choosing foods that are high in iron, such as lean red meat or tofu. Iron-rich foods are important for pregnant women
- making a habit of drinking milk, and eating hard cheese and yoghurt, or calcium-enriched alternatives. Reduced-fat varieties are best
- drinking plenty of water (fluid needs are about 750 to 1,000 ml extra per day)

Foods and drinks that are high in saturated fat, added sugar and salt are not a necessary part of a healthy diet and should be limited.

The table below outlines the number of serves of foods from each food group that pregnant women need to make sure they have enough energy and nutrients for themselves and for the growing baby.

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Food group	Serves required during pregnancy	Examples of one standard serve
Vegetables and legumes/beans	18 years or under: 5 19–50 years: 5	½ cup cooked vegetables ½ cup cooked or canned* beans, peas or lentils 1 cup green leafy or raw salad vegetables ½ cup sweet corn ½ medium potato or other starchy vegetables 1 medium tomato
Fruit	18 years or under: 2 19–50 years: 2	1 medium fruit, such as apple, banana, orange 2 small fruits, such as apricots, kiwi fruits or plums 1 cup diced or canned fruit (no added sugar)  <b>Or only occasionally</b>  125ml (½ cup) fruit juice (no added sugar) 30g dried fruit (such as 4 apricot halves, 1 ½ tablespoons sultanas)
Grain (cereal) foods, mostly wholegrain and/or high-fibre varieties	18 years or under: 8 19–50 years: 8 ½	1 slice bread, ½ medium roll or flat bread (40 g) ½ cup cooked rice, pasta, noodles, barley, buckwheat, semolina, polenta, burghul or quinoa ½ cup cooked porridge, 2/3 cup wheat cereal flakes, ¼ cup muesli 3 crispbreads 1 crumpet, small English muffin or scone
Lean meats and poultry, fish, eggs, tofu, nuts and seeds and legumes/beans	18 years or under: 3 ½ 19–50 years: 3 ½	65 g cooked lean meats, such as beef, lamb, veal, pork, goat or kangaroo (90–100 g raw) 80 g cooked lean poultry, such as chicken, turkey (100 g raw) 100 g cooked fish fillet (115 g raw) or one small can of fish 2 large eggs 1 cup cooked or canned* legumes/beans, such as lentils, chickpeas or split peas 170 g tofu 30 g nuts or seeds, nut/seed paste*

Milk, yoghurt, cheese and/or alternatives, mostly reduced fat	18 years or under: 3 ½ 19–50 years: 2 ½	1 cup (250 ml) fresh, UHT long life, reconstituted powdered milk or buttermilk ½ cup (120 ml) evaporated milk 2 slices (40 g) hard cheese, such as cheddar ¾ cup (200 g) yoghurt 1 cup (250 ml) soy, rice or other cereal drink, with at least 100 mg of added calcium per 100 ml
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\*Canned foods should preferably be with no added salt.

### No need to eat for two

During pregnancy, both you and your growing baby need extra nutrients, so eating healthy foods from the five food groups is important. During the first trimester, a woman's energy (kilojoule, kJ) intake should remain about the same as it was prior to the pregnancy, which means that extra food is not required.

During the second and third trimester, the energy needs of pregnant women increase. To meet energy and nutrient needs during this time, pregnant women are recommended to increase their intake of grain foods (an extra 2 ½ serves per day), and lean meats and alternatives (one extra serve per day).

Some suggestions to help you meet these additional energy needs include:

- a wholegrain sandwich with fillings such as roast beef, hard-boiled egg, tinned fish (see recommendations about fish below), hummus
- a small bowl of pasta with meat or bean sauce
- a small bowl of stir-fried rice with tofu.

### Folic acid (folate) and pregnancy

Folate (known as folic acid when added to foods) is a B-group vitamin found in a variety of foods. Folic acid helps protect against neural tube defects in the developing foetus, so it is important for pregnant women to make sure that they are receiving enough of this important vitamin.

For women who are planning a pregnancy, and during the first three months of pregnancy, a daily folic acid supplement that contains at least 400 micrograms of folic acid is recommended, as well as eating foods that are naturally rich in folate or are fortified with folic acid.

In Australia, all wheat flour used in breadmaking must contain folic acid (with the exception of flour used in 'organic' bread). Three slices of fortified bread (100 g) contains an average of 120 micrograms of folic acid. Breakfast cereals and fruit juices sold in Australia may also have folic acid added.

### Folate in your diet

Excellent food sources of folate include:

- asparagus
- bran flakes
- broccoli
- Brussels sprouts
- chick peas
- dried beans
- lentils
- spinach.

Very good food sources of folate include:

- cabbage
- cauliflower

- leeks
- oranges
- orange juice
- parsley
- peas
- wheat germ
- wholegrain bread.

Good food sources of folate include:

- hazelnuts
- vegemite
- parsnips
- potato
- salmon
- strawberries
- tomato
- unsalted peanuts
- walnuts.

Although liver is high in folate, it is **not** recommended for women who are, or could be pregnant, because of its high vitamin A content.

### **Iron and pregnancy**

During pregnancy, a woman's requirement for iron increases. This is because the developing foetus draws iron from the mother to last it through the first five or six months after birth.

Iron losses are reduced during pregnancy, because the woman is no longer menstruating. However, this is not enough to offset the needs of the developing foetus. It is important for women to eat iron-rich foods every day, such as meat, chicken, seafood, dried beans and lentils, and green leafy vegetables.

Animal sources of iron are readily absorbed by the body. Iron from plant sources is not absorbed as easily, but absorption is helped when these foods are eaten together with foods that contain vitamin C (such as oranges). This is important for women who follow a vegetarian diet.

The recommended daily intake (RDI) of iron during pregnancy is 27 mg a day (9 mg a day more than for non-pregnant women). Iron deficiency during pregnancy is common in Australia, and iron supplements may be needed by some women. It is important to discuss your need for supplements with your doctor, as iron can be toxic (poisonous) in large amounts.

### **Iodine and pregnancy**

Iodine is an important mineral needed for the production of thyroid hormone, which is important for growth and development. Inadequate iodine intake during pregnancy increases the risk of mental impairment and cretinism in the newborn baby.

Foods that are good sources of iodine include seafood and seaweed (including nori and kelp), eggs, meat and dairy products. Iodised salt also includes iodine. It is important to avoid adding salt at the table or in cooking, but if you do, make sure it is labelled iodised.

Due to the re-emergence of iodine deficiency in Australia, iodised salt is now added to all commercially sold bread in Australia and New Zealand, with the exception of organic and unleavened bread.

Pregnant and breastfeeding women have increased iodine requirements. Iodine supplementation of 150 micrograms per day is recommended for women planning a pregnancy, throughout pregnancy and while breastfeeding.

## **Vitamin A and pregnancy**

Although vitamin A requirements do increase during pregnancy, vitamin A supplements are rarely recommended for pregnant women. This is because an excessive intake of vitamin A may cause birth deformities.

The best way to make sure that you are getting enough vitamin A is through food sources like milk, fish, eggs and margarine.

## **Multivitamin supplements and pregnancy**

Multivitamin supplements may be recommended for some groups of pregnant women, including:

- vegans and vegetarians
- teenagers who may have an inadequate food intake
- substance misusers (of drugs, tobacco and alcohol)
- pregnant women who are already very overweight and who are trying to prevent excessive weight gains.

Always be advised by your doctor before taking vitamin or mineral supplements.

## **No need for extra calcium during pregnancy**

Until 2006, Australian dietary recommendations advised increased calcium intake during pregnancy and breastfeeding. This advice has since been revised. Although the baby has a high requirement for calcium during the third trimester of pregnancy, (as it starts to develop and strengthen its bones), the mother's increased capacity to absorb dietary calcium means that there is no need for extra intake.

The recommended dietary intake for non-pregnant women (1,000 mg a day for women aged 19 to 50 years and 1,300 mg a day for adolescents or those aged over 51) remains unchanged during pregnancy and breastfeeding. Dairy foods (such as milk, cheese and yoghurt) and calcium-fortified soy milk are excellent dietary sources of calcium.

## **Dangers of dieting while pregnant**

Some women fear the extra weight gain of pregnancy and may decide to eat sparingly to avoid putting on body fat. Restricted eating or crash dieting in any form while pregnant can seriously compromise your health and that of your baby, and is not recommended during pregnancy.

## **Pregnancy in adolescence**

Pregnant adolescents need more of some nutrients than adult women, because they are still growing themselves. Adolescents may give birth to smaller infants, because they are competing with the growing foetus for nutrients.

It is important for pregnant adolescents to make sure they are getting enough iron. Calcium intake is also important, because young women have not yet reached their peak bone mass, and inadequate calcium intake may increase the risk of osteoporosis developing later in life.

Pregnant adolescents should eat around 3 ½ serves of milk, yoghurt, cheese or calcium-fortified alternatives each day to make sure they are meeting their calcium needs.

## **Constipation during pregnancy**

Constipation is a common occurrence during pregnancy. To help with constipation, enjoy a wide variety of foods that are high in fibre, such as vegetables, legumes, fruit and wholegrains and drink plenty of water.

## **Nausea and vomiting during pregnancy**

Nausea and vomiting, especially 'morning sickness', are common during pregnancy, particularly in the first trimester.

Some suggestions that may also help include:

- Eat some dry bread, biscuits or cereal before getting up in the morning. Get up slowly, avoiding sudden movements.
- Drink liquids between rather than with meals to avoid bloating, as this can trigger vomiting.

- Avoid large meals and greasy, highly spiced foods.
- Suck on something sour like a lemon.
- Relax, rest and get into the fresh air as much as possible. Keep rooms well ventilated and odour free.
- Try food and drinks containing ginger, such as ginger tea, as these sometimes relieve nausea.

### **Heartburn and pregnancy**

Heartburn is common in pregnancy because, as the baby grows, there is more pressure on the abdomen. Small, frequent meals may help, compared to larger meals.

Try to avoid:

- eating late at night
- bending, lifting or lying down after meals
- excessive consumption of tea or coffee.

You may also like to try sleeping with your bedhead raised a few inches. You can do this by putting a folded blanket or pillow under your mattress.

### **Alcohol during pregnancy**

There is no known safe level of alcohol consumption for women who are pregnant. Consuming alcohol during pregnancy increases the risk of miscarriage, low birth weight, congenital deformities and effects on the baby's intelligence.

The Australian Guidelines to Reduce Health Risks from Drinking Alcohol recommend that the safest option for pregnant women is not to drink alcohol at all.

If you find it difficult to decrease or stop drinking alcohol during pregnancy talk to:

- your doctor or midwife
- your local community health service
- an alcohol or other drug helpline in your state or territory.

The [\*\*\*Australian guidelines to reduce health risks from drinking alcohol\*\*\*](#) provide more information.

### **Listeria infection and pregnancy**

Listeria infection, or listeriosis, is an illness usually caused by eating food contaminated with bacteria known as *Listeria monocytogenes*. Healthy people may experience no ill-effects from listeria infection at all, but the risks are substantial for pregnant women. The greatest danger is to the unborn baby, with increased risk of miscarriage, stillbirth or premature labour. A listeria infection is easily treated with antibiotics, but prevention is best.

Some foods are more prone to contamination with listeria than others and should be avoided if you are pregnant. They include:

- soft cheeses, such as brie, camembert and ricotta – these are safe if served cooked and hot
- precooked or pre-prepared cold foods that will not be reheated – for example, pre-prepared salads, pate, quiches and delicatessen meats like ham and salami
- undercooked meat, chilled pre-cooked meats, pate, meat spread
- raw seafood, such as oysters and sashimi or smoked seafood, such as salmon (canned varieties are safe)
- unpasteurised foods
- pre-prepared or pre-packaged cut fruit and vegetables
- soft-serve ice cream.

The organism that causes listeria infection is destroyed by heat, so properly cooked foods are not a risk.

### **Salmonella and pregnancy**

Salmonella is a cause of food poisoning that can trigger miscarriage. The most likely sources of salmonella are raw eggs and undercooked meat and poultry.

## Good food hygiene

Good food hygiene is the best way to reduce the risk of salmonella and listeria infections. Suggestions include:

- Always wash your hands before and after preparing food.
- Keep your kitchen surfaces clean.
- Do not let uncooked food contaminate cooked food.
- Wash fruit, vegetables and salad before eating.
- Cook food thoroughly.
- Keep pets away from kitchen surfaces.
- Wear rubber gloves when handling cat litter trays or gardening.
- Store food at correct temperatures.

## Mercury in fish

It is suggested that pregnant women eat two to three serves of fish every week for the good health of themselves and their developing baby. However, pregnant women or women intending to become pregnant within the next six months should be careful about which fish they eat. Some types of fish contain high levels of mercury, which can be harmful to the developing foetus.

When choosing fish, pregnant women should:

- **limit to one serve (150 g) per fortnight** – billfish (swordfish, broadbill and marlin) and shark (flake), with no other fish eaten in that fortnight  
OR
- **limit to one serve (150 g) per week** – orange roughy (deep sea perch) or catfish, with no other fish eaten that week  
OR
- **eat two to three serves per week** – of any other fish or seafood (for example, salmon or tuna).

Note: 150 g is equivalent to approximately two frozen crumbed fish portions.

Women should not be worried if they've had the odd meal of fish with high levels of mercury. It is only a potential problem when that type of fish is eaten regularly, which causes a build-up of mercury in the mother's blood.

## Where to get help

- Your doctor
- Midwife
- Obstetrician
- Dietitians Association of Australia Tel. 1800 812 942

## Things to remember

- A pregnant woman needs to boost her nutrient intake, rather than her kilojoule intake.
- Pregnancy creates extra demands for certain nutrients, including iron and folate.
- Good food hygiene is particularly important during pregnancy to avoid listeria infection and salmonella risk.

**This page has been produced in consultation with and approved by:**

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