

Helping women eat well during pre-pregnancy, pregnancy and breastfeeding

Ask

Identify women who can benefit from brief advice on nutrition during pre-pregnancy, pregnancy or breastfeeding

- ▶ Patient record prompts
- ▶ Prompts by general practice team
- ▶ Check nutrition status at each antenatal visit

Assess

Assess current nutrition status and interest in improving diet

- ▶ Nutrition assessment tool
- ▶ Identify those who would benefit from a full dietary assessment and nutrition counselling *
- ▶ Assess motivation to improve diet
- ▶ Assess barriers to healthy eating
- ▶ Identify current folate supplementation

Advise

Provide tailored advice

- ▶ Give feedback on current diet
 - Fruit, vegetable, fibre and wholegrain intake
 - Lean meat, chicken and fish intake
 - Fluid intake/caffeine intake
 - Calcium, iodine, iron, and folate intake
- ▶ Provide brief non-judgmental advice on a safe and healthy diet for women and babies
 - Ensure adequate folate supplementation
 - Discuss foods to avoid during pregnancy
- ▶ Discuss barriers to change
- ▶ Provide pregnancy specific written information, including the Pregnancy Lifescripts Guide to Healthy Eating **
- ▶ Does the woman need other lifestyle prescriptions? e.g. alcohol or smoking

Assist

Write healthy eating prescription

- ▶ Record individual details
- ▶ Jointly set realistic goals and strategies for support
- ▶ Individualise the prescription
- ▶ Provide pregnancy specific written information, including the Pregnancy Lifescripts Guide to Healthy Eating **
- ▶ Review at every visit or set review date
- ▶ Consider referral

Arrange

Arrange referral and follow up

- ▶ Refer to an Accredited Practising Dietitian (APD) when indicated
- ▶ Recruit support (family members)

***Important:** A full dietary assessment and nutrition counselling by an Accredited Practising Dietitian (APD) may be beneficial for women planning a pregnancy, pregnant or lactating women. In particular consider referral for pregnant and lactating teenagers, women with a multiple pregnancy and women with a subsequent pregnancy in a relatively short period.

****Quality information is available from the following sources:**

Pregnancy Lifescripts Guide to Healthy Eating
 Australian Breastfeeding Association (www.breastfeeding.asn.au)
 Australian Government Healthy Eating Information (www.healthycactive.gov.au/healthyweight)
 Nutrition Australia (www.nutritionaustralia.org)
 Dietitians Association of Australia (www.daa.asn.au)
 To find an Accredited Practising Dietitian phone 1800 812 942



Pregnancy Lifescripts

advice for a healthy pregnancy



Australian Government
 Department of Health and Ageing

Evidence for the benefits of healthy eating during pre-pregnancy, pregnancy and breastfeeding

Fruit, vegetable/legumes and cereal Pregnancy and breastfeeding

The NHMRC Dietary Guidelines for Australian Adults recommend that pregnant and breastfeeding women increase their intake of vegetables/legumes, fruit and cereal each day¹. For pregnant women this should include 5–6 serves vegetables/legumes, 4 serves fruit and 4–6 serves of cereal each day¹. During breastfeeding, women should further increase their daily intake by an additional serve, and aim to eat 7 serves vegetables/legumes, 5 serves fruit and 5–7 serves of cereal¹.

Folate

Pre-pregnancy and pregnancy

Folate is crucial in early pregnancy. There is strong evidence that folate supplementation prior to conception and during the first trimester significantly reduces incidence of neural tube defects^{1–3}.

The National Health and Medical Research Council (NHMRC) Dietary Guidelines for Australian Adults recommend that pregnant women increase their intake of folate-rich foods. This should include 5–6 serves vegetables/legumes/day, 4 serves fruit/day and 4–6 serves cereals/day (preferably wholegrain)¹.

Supplementation with 1 tablet containing 500 mcg/day is recommended for at least 1 month before and during the first 3 months of pregnancy⁴.

Women with a previous pregnancy with, or family history of, neural tube defect and women who are on anti-epileptic medication require supplementation with 5000 mcg/day for the same period^{5,6}.

Iron

Pregnancy and breastfeeding

Iron is required for maternal red blood cell mass and growth of the baby. However there is insufficient evidence that routine iron supplementation results in significant risks or benefits to maternal and foetal health⁷.

Teenagers, women with several pregnancies in a short period or with a multiple pregnancy are at high risk of iron depletion¹.

The NHMRC Recommended Dietary Intake (RDI)² for iron for non-pregnant women is 18 mg/day. The RDI during pregnancy is 27 mg/day. The RDI during breastfeeding is 9–10 mg/day. Once menstruation resumes it is as for non-pregnant women².

Vegetarian women may require additional iron supplementation².

Dietary sources include lean red meat, pork, poultry, fish, wholemeal bread, cereals, legumes and green, leafy vegetables. Foods rich in Vitamin C assist iron absorption.

Iodine

Pre-pregnancy, pregnancy and breastfeeding

Iodine is very important for development of the brain and nervous system for the foetus and infants (0–3 years)⁸. Iodine deficiency is considered widespread in Australia⁹. Iodine deficiency during pregnancy can cause abortion, stillbirth, congenital anomalies, and increased perinatal and infant mortality².

The NHMRC RDI of iodine during pregnancy is 220 mcg/day². The RDI during breastfeeding is 270 mcg/day².

Iodine supplementation of 100–200 mcg/day during pregnancy and breastfeeding has been suggested by some experts^{10,11}. However, there has been no formal recommendation for iodine supplementation during pregnancy by the NHMRC and there are no published data on the effect of iodine supplementation on long term maternal and child outcomes¹¹. Women with high iodine intakes from other sources do not require supplementation. Any recommendation for iodine supplementation does not

apply to women with pre-existing thyroid disease, who should be referred for specialist advice¹⁰.

There are no demonstrable benefits for both the woman and her baby of daily intake above 500 mcg/day, and there is little data on the safety of daily intake above 1000 mcg/day¹⁰.

Iodine content of most food is low; the primary source is foods of marine origin². One thick slice of bread baked with iodised salt contains about 18 mcg, 1 cup (250 mL) of cow's milk contains about 46 mcg and 80 g of canned salmon contains about 28 mcg¹².

Additional iodised salt and herbal supplements that contain sea weed and kelp are not recommended^{11,12}.



Calcium

Pre-pregnancy, pregnancy and breastfeeding

Available evidence does not support additional dietary intake of calcium during pre-pregnancy, pregnancy and breastfeeding¹. The NHMRC Dietary Guidelines for Australian Adults recommend 2 serves of low-fat milk, yoghurt or hard cheese and/or alternatives such as calcium fortified soy products¹.

Vitamin D

Pre-pregnancy, pregnancy and breastfeeding

Maternal deficiency of Vitamin D can affect the foetus, and adequate intake is important for developing and maintaining strong bones¹.

Pregnant and breastfeeding women who receive regular exposure to sunlight do not need supplementation.

Women with limited exposure to sunlight (such as dark skinned and/or veiled women) may need a supplement of 10 mcg/day^{2,13,17}.

Other vitamins

Pre-pregnancy, pregnancy and breastfeeding

Available evidence does not support additional dietary intake of vitamins¹⁴⁻¹⁸ (except folate⁴) for most women. Multivitamins are not recommended due to the potential for excess intake of some vitamins that can pose a risk in high doses (e.g. Vitamin A, D and B6).

Caffeine

Pre-pregnancy, pregnancy and breastfeeding

Large amounts of caffeine (e.g. 5–10 cups/day of coffee) have been associated with miscarriage, chromosomal and congenital birth defects and Sudden Infant Death Syndrome¹⁹.

Advise women during pregnancy and breastfeeding to avoid or limit caffeine to less than 250 mg/day^{19,20}. Although occasional use appears to have little effect on the infant during breastfeeding, it is recommended that breastfeeding women restrict caffeine to similarly low levels²⁰.

Approximate caffeine guide²¹:

- ▶ instant coffee 60–80 mg/cup
- ▶ brewed coffee 60–140 mg/cup
- ▶ energy drinks 80 mg/can
- ▶ tea 10–50 mg/cup
- ▶ coca cola 48.75 mg/can
- ▶ milk chocolate 20 mg/100g bar

Limit consumption of high mercury fish

Pre-pregnancy, pregnancy and breastfeeding

Fish is an excellent source of protein and iodine, low in saturated fats and high in omega-3 fats (good for brain development and function and for cardiovascular health)¹.

Excessive exposure by the foetus to mercury may affect attention, learning and memory. Food Standards Australia and New Zealand (FSANZ) advises pregnant women and women planning pregnancy to continue to eat fish while limiting exposure to species containing high levels of mercury²².

Many lower mercury species are available. 1 serve equals 150g.

- ▶ Tinned tuna and salmon are safe to eat 2–3 times each week.
- ▶ Women should limit servings of orange roughy (deep sea perch) or catfish to 1 serve/week with no other fish consumed that week.
- ▶ Women should limit servings of shark fish (flake), swordfish/broadbill or marlin to 1 serve/fortnight with no other fish consumed that fortnight²².

Food borne infections

Pre-pregnancy and pregnancy

Two infections which can be contracted from eating contaminated food, toxoplasma and listeria, are of particular importance during pregnancy. Toxoplasmosis is caused by a parasite found in raw meat and cat faeces²³. Listeria is found in contaminated meat, fish and dairy products²⁴.

Both have been linked with miscarriage, preterm birth and stillbirth^{23,24}. Effects of toxoplasmosis on unborn babies can also include nervous system damage, mental retardation, liver damage and eye problems²³.

Women should be advised on safe food handling such as washing hands after handling raw meat and before eating; cooking foods, especially meat, thoroughly; washing fruits and vegetables well to remove traces of soil; and washing cooking implements and cutting boards thoroughly^{1,23,24}. The risk of toxoplasmosis can also be reduced by limiting contact with cats and litter trays²³.

High risk foods to avoid include cold meats, raw/rare meats, cold cooked chicken, paté, uncooked or smoked seafood, leftover foods, pre-prepared salads, soft serve ice-cream and soft cheeses^{1,23,24}.



Recommended reading and references

Recommended reading

National Health and Medical Research Council. *Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes*. Canberra: Australian Government; 2006.

National Health and Medical Research Council. *Dietary Guidelines for Australian Adults*. Canberra: Australian Government; 2003.

Dietitians Association of Australia
(www.daa.asn.au)

Food Standards Australia New Zealand
(www.foodstandards.gov.au)

References

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