

Nutrition + Pregnancy



Nutrition Australia, in collaboration with Bayer Australia, has developed the following guide for women during pregnancy, outlining dietary requirements to ensure they receive adequate nutrition for themselves and their developing baby.

This guide will help pregnant women understand the recommended Australian dietary requirements, encouraging healthy choices. Within, you will find current information to support good nutrition during pregnancy, providing easy to use advice including suggested meal and snack ideas.

Evidence shows that establishing good nutrition during the first 1000 days of life¹ (starting from conception) can positively influence life-long health. However, pregnancy is a nutritionally demanding time, and many Australian women may not be getting all the nutrients they need during pregnancy.

For instance, recent research² showed that while 61% of women surveyed online believed their diet was healthy during pregnancy, not one woman reported meeting the recommendations for all five food groups. This is why we have developed this guide as an easy reference source for pregnant women and health professionals alike.



References

1 Moore, Tim & Arefadib, Noushin & Deery, Alana & West, Sue, MA & Royal Children’s Hospital (Melbourne, Vic.). Centre for Community Child Health (2017). The first thousand days : an evidence paper. Centre for Community Child Health, Royal Children’s Hospital Melbourne, Parkville, Vic

2 Malek L, Umberger W, Makrides M, Zhou SJ. Adherence to the Australian dietary guidelines during pregnancy: evidence from a national study. Public Health Nutr 2015; 19(7):1155-6

Contents

Energy needs during pregnancy	3
Healthy snack examples	4
Quality vs quantity of food	5
What to eat and how much each day	6
Maintaining a healthy weight during pregnancy	7
Vitamin and mineral supplementation for pregnancy	8
Food safety	10
The foods to avoid...	11
and what you can replace them with	12
Mercury	13
FAQ	14



Energy needs during pregnancy

Pregnancy is such a special time in a woman's life. We know that the food you eat while pregnant affects your own health and wellbeing and the health of your developing baby. There is a lot of conflicting advice around what you should and shouldn't eat during pregnancy, and it can feel overwhelming. We hope to clear up any confusion for you, so you can enjoy a happy, healthy and stress-free pregnancy!



Healthy snack examples include:

How often have you been told that you are eating for two while pregnant? While you hear this a lot, you actually do not need to eat twice the amount of food during pregnancy.

In fact, during the first 3 months (first trimester) of pregnancy you do not need any extra kilojoules on top of your normal diet.

During the second and third trimester of your pregnancy you do need to increase your daily kilojoule intake, but probably by less than you imagine.

A couple of extra snacks across the day can be an easy way to get these additional kilojoules, especially towards the end of pregnancy when many women find it difficult to eat large meals, due to reflux or feeling full very quickly.



Sliced fresh fruit with a few spoons of yoghurt on top



A fruit smoothie made with fresh fruit, milk, yoghurt and rolled oats



A small tin of tuna with wholegrain crackers and avocado



A toasted wholegrain sandwich, filled with a small tin of baked beans and cheddar cheese



Wholegrain toast topped with peanut butter



Sliced hard-boiled eggs on wholegrain crispbreads



Hummus dip and vegetable sticks



Air popped popcorn

Quality vs quantity of food

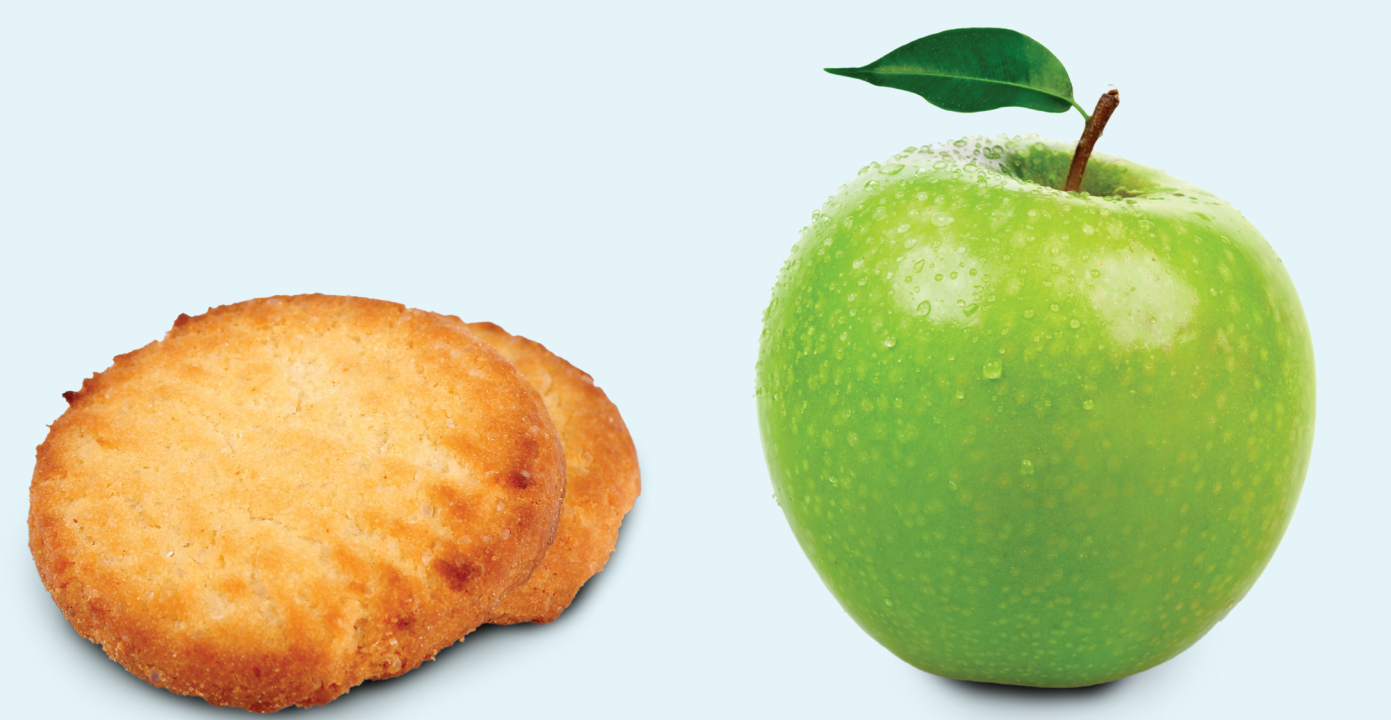
There is a lot of focus on the quantity of food during pregnancy, however you should be paying most attention to the nutritional quality of the foods you are eating.

During pregnancy you require more of certain vitamins and minerals – up to 50% for some nutrients, so choosing nutrient-rich foods that are high in vitamins and minerals is essential.

Let’s use a morning tea snack as an example of choosing nutrient-rich foods. For morning tea you could either have a piece of fresh fruit, or 2 plain milk arrowroot biscuits. These two snack options contain roughly the same number of kilojoules, so in terms of quantity they are pretty much equal.

When we consider quality however these two options are very different. By choosing a piece of fruit to snack on, you will also be getting a good dose of dietary fibre and vitamins such as vitamin C and folate. In contrast, sweet biscuits are not a good source of key nutrients, as they contain very little fibre and vitamins.

We recommend basing your meals and snacks on the core food groups each day. Occasional treats are fine, but eating a variety of foods from the core food groups will help to ensure you get all the nutrients you and your developing baby need.



What to eat and how much each day

The following table shows the number of serves each day from each food group for pregnant women aged 19-50 years*.



2 serves of fruit

- 1 medium apple, banana, orange or pear
 - 2 small apricots, kiwi fruits or plums
 - 1 cup diced or canned fruit (with no added sugar)
- Occasionally
- 125ml or ½ cup fruit juice with no added sugar
 - 30g dried fruit (i.e. 4 dried apricots, or 1 ½ tablespoons of sultanas)



5 serves of vegetables

- ½ cup cooked vegetables i.e. broccoli, spinach, carrots, pumpkin
- ½ cup cooked, dried or canned beans, peas, lentils
- 1 cup green leafy or raw salad vegetables
- ½ cup sweet corn
- ½ medium potato
- 1 tomato



3.5 serves of meats and alternatives

- 65g cooked lean meats such as beef, lamb, veal, pork (90-100g raw)
- 80g cooked lean poultry such as chicken or turkey (100g raw)
- 100g cooked fish fillet or one small can of fish (refer to guidelines in page 13 regarding mercury)
- 2 eggs
- 1 cup cooked or canned legumes/beans such as lentils, chickpeas or split peas
- 30g nuts, seeds, peanut or almond butter, tahini
- 170g tofu



2.5 serves of dairy

- 1 cup (250ml) milk
- 1 cup (250ml) soy, rice almond or other cereal-based milk, with at least 100mg of added calcium per 100ml
- ¾ cup (200g) yoghurt
- 2 slices or 40g hard cheese i.e. cheddar



8.5 serves of grains

- 1 slice bread
- ½ medium bread roll or flat bread/wrap
- ½ cup cooked rice, pasta, noodles, buckwheat, polenta, semolina, quinoa
- ½ cup cooked porridge
- 2/3 cup wheat cereal flakes
- ¼ cup muesli
- 1 small English muffin or scone.
- 3 crispbreads
- 1 crumpet

*Pregnant women aged 18 years and under require 3.5 serves of dairy daily and 8 serves of grains daily.

Maintaining a healthy weight during pregnancy

It is difficult to know how much weight to expect to gain during pregnancy. However, maintaining a healthy weight is very important for you and your baby both in the short and long term. It is best to talk to your GP, obstetrician or healthcare professional, as every woman is different and they will be able to give you individual advice. Generally speaking, the ideal weight gain during pregnancy depends on your pre-pregnancy body mass index (BMI), as shown below. If you are unsure what your pre-pregnancy BMI is, your doctor can calculate this for you.

Try to remember pregnancy is not a time for strict ‘dieting’. If you or your health professional believe you are gaining too much weight there are ways you can manage this without depriving yourself of food. For example, you could introduce some moderate exercise (with advice from your doctor or other health professional).

Pre-Pregnancy BMI	Total Weight Gain throughout pregnancy
Underweight (<18.5)	12.5-18.0kg
Normal Weight (18.5-24.9)	11.5-16.0kg
Overweight (25.0-29.9)	7.0-11.5kg
Obese (>30)	5.0-9.0kg

Adapted from Institute of Medicine (2009).

Vitamin and mineral supplementation for pregnancy



Even when choosing nutritious foods, it can be difficult to get enough of all the essential nutrients you need from your diet alone. Therefore we recommend taking a pregnancy multivitamin supplement each day in addition to a healthy diet.

Why is it important?

A daily pregnancy multivitamin is not a replacement for a healthy diet; rather it supports a healthy diet to help you meet your increased nutrition needs during pregnancy. There are many key nutrients that have an important role during pregnancy, and many that you require more of during this time.

Folate:

Folate is a B-vitamin which is particularly important prior to conception and during the first trimester of pregnancy. Folate has an essential role in the formulation of your baby’s neural tube in the very early weeks of pregnancy. The neural tube later develops into the brain and spine. Foods that are high in folate include green leafy vegetables, legumes, fruit, and bread/cereals, so try to include these foods in your diet. Australian Guidelines recommend taking a folic acid-containing supplement (or a pregnancy multivitamin containing folate) at least four weeks before you start trying for a baby. This will ensure your folate levels are high enough to help protect against neural tube defects.

Reference: The Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

Iodine:

Iodine is another important nutrient, as mild to moderate deficiency during pregnancy can impact your baby’s hearing and physical development, and has been linked to learning difficulties. Foods high in iodine include seafood (but be mindful of the seafood to avoid and those to have in moderation during pregnancy as discussed on page 13), and bread. In addition to eating foods high in iodine, it is recommended that women who are planning a pregnancy, pregnant, or breastfeeding take an iodine supplement daily (or a pregnancy multivitamin containing iodine).

Reference: The Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

Iron:

You require 50 percent more iron during pregnancy, which can be hard to obtain from your diet alone. Your doctor will monitor your iron levels closely, as iron deficiency during pregnancy is actually quite common. Include plenty of iron-rich foods such as red meats, green leafy vegetables and grains in your diet daily. Your pregnancy multivitamin will also help you to meet your iron requirement.

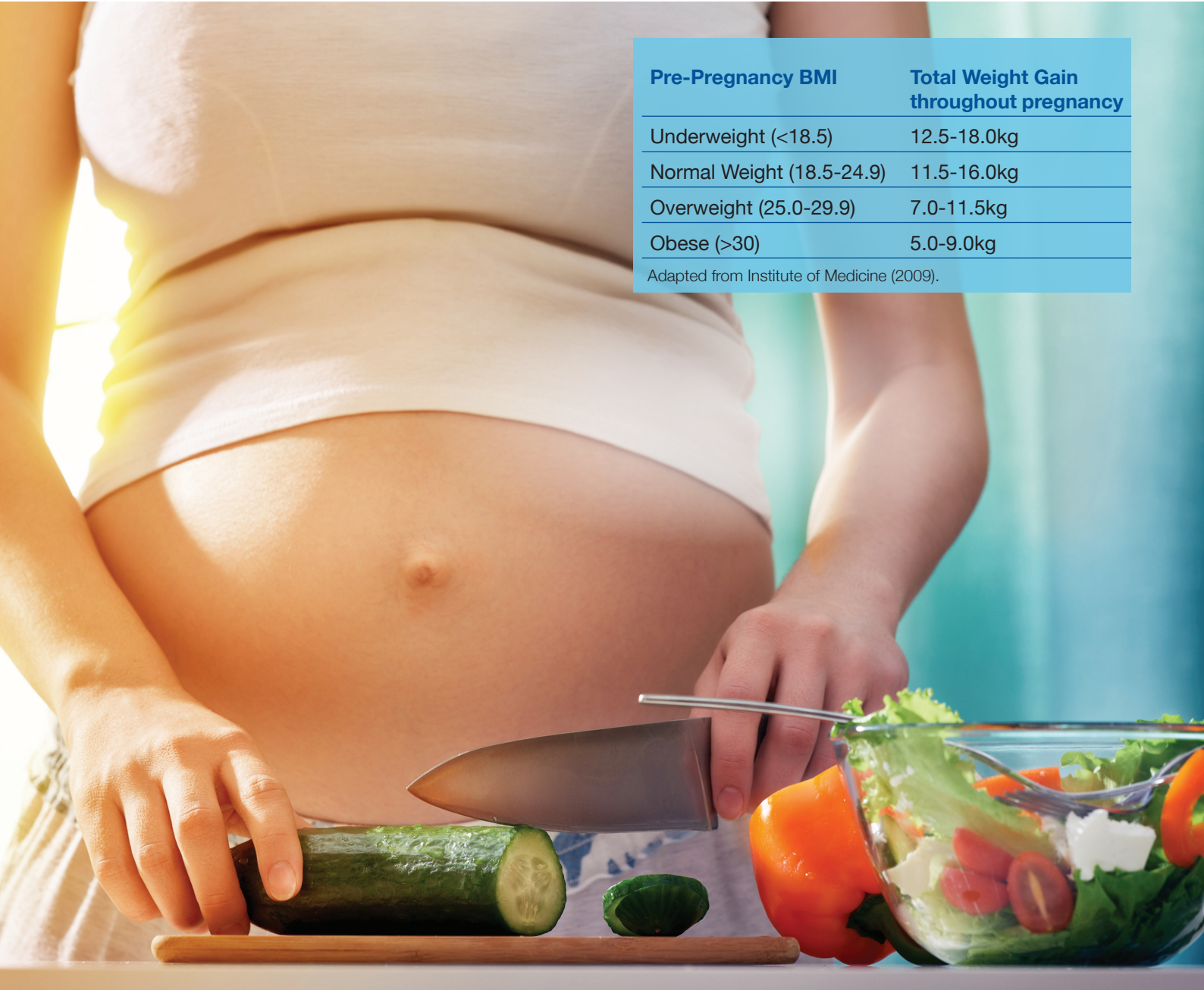
Vitamin D:

Vitamin D is another important nutrient during pregnancy, and many women may actually have low levels prior to becoming pregnant. Some groups of women may require additional supplementation, for instance women with dark or veiled skin or sun-avoidant office workers. Discuss this with your doctor, as they will be able to monitor your levels and determine whether you need supplementation.

When to start taking the supplement

We recommend you start a pregnancy multivitamin daily 1 month prior to conception, or as soon as you find out you are pregnant, and continue this for your entire pregnancy. If you experience nausea and/or vomiting, take your supplement at the time of day you feel the best.

Breastfeeding is also a demanding time, during which women require additional nutrition. We recommend you speak to your doctor or healthcare professional about your new needs once your baby is born. This may include continuing to take a supplement to help ensure you are getting enough nutrients.





Food safety

It is particularly important to take special care when preparing and storing your food during pregnancy. There are also certain foods which must be avoided.

There are hormonal changes that occur during pregnancy that lower your immune system. This makes it more difficult for your body to fight off illness and infection, placing you at greater risk of food poisoning. Many women understandably feel quite stressed about this and there is a lot of conflicting information available. You can lower your risk by following good food safety practices and avoiding certain high-risk foods.

To help you ensure your food is safe, we've outlined the risks to be aware of, foods to avoid and suitable replacement options (see following page).

Listeria:

Listeria is a type of bacteria found in certain foods. It can cause a serious infection called Listeriosis, which may only cause mild symptoms in the mother but can have devastating effects on an unborn child, with some cases resulting in miscarriage, still birth and premature birth.

Salmonella:

Salmonella food poisoning can cause serious illness, with severe nausea and vomiting sometimes resulting in miscarriage. Raw or undercooked, runny eggs and undercooked meats can contain salmonella, so it is important to avoid these.

Toxoplasmosis:

Toxoplasmosis is an infection caused most commonly by touching cat faeces (i.e. when cleaning the cat litter), or from contaminated soil in the garden. Often the infection does not cause any symptoms at all, but exposure in pregnancy can be serious. You can also be at risk from consuming undercooked or raw meat. Wear gloves when gardening and minimise contact with cats and cat litter.

General good food safety practices to follow:

- Wash fruits and vegetables well.
- Wash hands before preparing food, and ensure all preparation surfaces and utensils are cleaned thoroughly.
- Keep leftovers in the refrigerator only until the next day, and reheat until food is steaming hot.
- Do not eat food that is past its 'use by' or 'best before' dates.



The foods to avoid...

and what you can replace them with:

If you have any doubts about a food, or are concerned whether it has been stored and prepared safely or not – then best to avoid it and not take the risk!

FOOD TO AVOID			SAFER ALTERNATIVES		
	Soft cheeses, i.e. brie, camembert, feta, ricotta, blue cheese, dips that include these cheeses.			Hard cheeses i.e. cheddar. Soft cheeses are safe in dishes that are cooked to steaming hot and eaten straight away i.e. spinach and ricotta cannelloni.	
	Soft serve ice cream.			Store-bought ice cream that is stored correctly in the freezer.	
	Unpasteurised dairy products.			Pasteurised dairy products.	
	Pre-packaged salads and fruit, including from sandwich/salad bars and buffets.			Buy whole lettuces and wash and prepare yourself at home. Buy fresh fruit and make your own fruit salad at home.	
	Sprouted seeds such as alfalfa, bean and snow pea sprouts.			Sprouts that have been thoroughly cooked through in dishes.	
	Paté, meat or fish pastes.			Hummus dip, tinned tuna or salmon.	
	Chilled seafood i.e. oysters, sashimi and sushi, smoked ready-to-eat seafood, and cooked ready-to-eat prawns.			Freshly cooked seafood and fish in keeping with the recommendations on mercury on page 13. Canned seafood (including tuna, salmon and sardines).	
	Raw or undercooked eggs and items containing these i.e. a runny poached egg, homemade or café mayonnaise/aioli, desserts containing raw eggs.			Hard boiled eggs, scrambled eggs. Store bought mayonnaise/aioli and follow storage instructions Baked cakes, muffins and desserts etc.	
	Rare or medium-cooked meats.			Meat cooked all the way through.	
	Cold deli meats from delicatessens, sandwich bar or buffets and sliced ready-to-eat packaged deli meats i.e. salami, ham.			These meats are safe if cooked thoroughly until steaming hot, and eaten straight away i.e. on a pizza. Do not eat cold.	
	Cold cooked ready-to-eat chicken.			Whole roast chicken, freshly cooked and eaten straight away while hot. Do not eat the stuffing.	

Mercury

Fish contains many nutrients including protein, healthy fats and iodine, making it a nutrient-rich food. During pregnancy however, it is important to be mindful of eating too much of certain types of fish that are high in mercury. Mercury is a naturally-occurring element that is present in seafood. If you consume too much, it can build up in your system and affect your baby’s developing nervous system.

Certain fish have higher levels of mercury than others. We recommend that you enjoy a serve of freshly cooked fish 2-3 times a week, while sticking to the below recommendations.

Pregnant Women 1 serve = 150g		
2-3 serves per week of any fish and seafood not listed at right	OR	1 serve per week of orange roughy (deep sea perch) or catfish, and no other fish that week
	OR	1 serve per fortnight of flake (shark) or billfish (swordfish/broadbill and marlin) and no other fish that fortnight

Food Standards Australia and New Zealand.

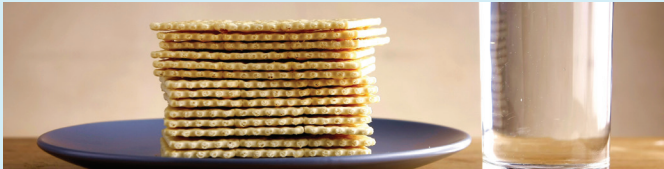


FAQ



1. Can I drink any alcohol during pregnancy?

We recommend not consuming any alcohol while pregnant, as this is the safest option for you and your baby.



2. Are there any foods that might help manage my morning sickness?

The following strategies might help ease your morning sickness symptoms:

- Try having smaller, more frequent meals throughout the day. Avoid large meals and very spicy or greasy foods.
- Keep some dry crackers and a glass of water next to your bed. Eat those and sip water before getting out of bed.
- Some women find drinking fluids easier to keep down than a meal. Try making smoothies and sip slowly.
- Remember to drink plenty of water. Ginger tea may also be helpful.
- Stay away from strong food smells and use the exhaust fan when cooking to minimise these.
- If you are finding your symptoms difficult to manage, speak with your pharmacist or doctor. There are medicines available (including without a prescription) that can help ease your symptoms.

References

National Health and Medical Research Council, Australian Government Department of Health and Ageing, New Zealand Ministry of Health. Nutrient Reference Values for Australia and New Zealand. Canberra: National Health and Medical Research Council; 2006. Available at: <https://www.nrv.gov.au/>

National Health and Medical Research Council (2013) Australian Dietary Guidelines. Canberra: National Health and Medical Research Council. Available at: <https://www.eatforhealth.gov.au/>

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. Vitamin and mineral supplementation and pregnancy. East Melbourne, Vic: RANZCOG, 2015 [Accessed Dec 2018]

Food Standards Australia and New Zealand (FSANZ). Available at: <http://www.foodstandards.gov.au>

IOM (Institute of Medicine) and NRC (National Research Council). 2009. Weight Gain During Pregnancy: Re-examining the Guidelines. Washington, DC: The National Academies Press. Available at: https://www.ncbi.nlm.nih.gov/books/NBK32813/pdf/Bookshelf_NBK32813.pdf

NSW Government Food Authority. Available at: <http://www.foodauthority.nsw.gov.au/foodsafetyandyou/life-events-and-food/pregnancy/foods-to-eat-or-avoid-when-pregnant>

Victoria State Government. Available at: <https://www2.health.vic.gov.au/about/publications/factsheets/Listeria---the-facts>



3. How much caffeine is safe to have per day?

Caffeine is safe to drink in moderate amounts. Discuss with your healthcare professional for individual advice regarding an appropriate caffeine intake for you as this can vary. Generally depending on the strength of the drink, 1-2 espresso style coffees, or 2-3 cups of instant coffee or 3-5 cups of tea is considered safe. Choose decaffeinated options when possible and be mindful of the caffeine content of certain soft drinks. We recommend avoiding all energy drinks.



4. What if I follow a vegetarian or vegan diet? How do I make sure I get all the nutrients I need?

If you follow a vegetarian or vegan diet you may require additional supplements along with your daily pregnancy multivitamin. It is best to discuss this with your doctor or dietitian as they will determine what supplementation is appropriate for your individual needs.

