
Patient Information

**HEALTH DURING
PREGNANCY**



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This information is general and to be used as a guide only and doesn't replace the specific advice of your obstetrician or dietitian. If it at all conflicts with other advice, please seek clarification.

Nutrition in Pregnancy

To watch a video, visit <https://youtu.be/McIVaMH15YI>



Variety

Eating a wide variety of foods from each of the food groups in our diet is important for health. This ensures you are obtaining adequate vitamins, minerals, antioxidants, nutrients and fibre. Each of the food groups provides a unique set of nutrients, therefore eliminating any one group is not recommended. It can result in nutrient deficiencies and can lead to health problems. The following table outlines the food groups and benefits each group provides. Remember this is a guide not a target.

FOOD GROUP	NUTRIENTS PROVIDED	BEST CHOICES
Breads, cereals, rice, pasta, noodles 8.5 serves/day	Carbohydrates, protein, fibre, folate, thiamine, riboflavin, niacin and iron.	Wholegrain and wholemeal varieties and those with added fibre. Low Glycaemic Index (GI) choices.
Vegetables and legumes 5 serves/day	Vitamins (incl. folate), minerals, dietary fibre, carbohydrates.	A variety of colours and types. Leave skins on for added fibre, wash well. Avocado is high in unsaturated heart healthy fats.
Fruit 2 serves/day	Vitamins (C and folate), fibre and carbohydrates.	Leave skins on for added fibre, wash well.
Milk, yoghurt, cheese 2.5 serves/day	Calcium, protein, riboflavin and B12.	Consider skim milks and no fat/low fat dairy products and alternatives (e.g. soy). Consider calcium enriched choices.
Meat, fish, poultry, nuts, eggs, legumes 3.5 serves/day	Protein, iron, iodine, niacin and vitamin B12. Red meats are good sources of iron and zinc.	Low fat meats, always remove skin and fat before cooking. Choose red meats 1-2/ week (120g serve size) and include up to 6 eggs/week. Avoid fatty meats, e.g. salami, mettwurst, sausages, fatty mince. Choose fish at least twice/week (low mercury). Choose canned fish in springwater rather than brine or oil. Avoid batter.

Reference: Australian Guide to Healthy Eating, eatforhealth.gov.au



Pregnancy Multivitamin

It is very difficult to get all of the nutrients required, especially if you have been feeling unwell, without taking a pregnancy specific multivitamin. Taking a pregnancy specific multivitamin ensures you and your baby are getting all of the nutrients you need for healthy growth and development. Nutrient requirements remain elevated throughout breastfeeding so it is important to continue taking multivitamin supplements if you choose to breastfeed, which is recommended.

Fish and Omega 3s

Consume 340g or 2 oily fish meals per week PLUS plant sources. 400mg during pregnancy and breastfeeding with the highest foetal uptake being during the 3rd trimester. Adequate intake of Omega 3 is shown to reduce the risk of premature birth and postnatal depression.

Marine Sources: Oily fish such as Australian and Atlantic salmon, canned salmon, canned sardines, mullet, bream, blue mackerel, silver perch, rainbow trout and some varieties of canned tuna (tuna steak is high in mercury) are the richest sources and are high in omega 3. Other types of fish and seafood contain smaller amounts. Deep fried fish found at take-away outlets are low in omega 3s and often cooked in unhealthy oils, therefore do not contribute to health benefits.

Animal Sources: Smaller amounts are found in free-range eggs, free-range chicken and lean red meats.

Plant Sources: Soybean and canola oil, nuts and seeds, particularly linseeds (flaxseeds) and walnuts; and dark green leafy vegetables.

Recently other foods have been enriched with omega-3s such as some varieties of bread, muffins, milks, yoghurts, bars, pizzas and ham.

Fish Oil Supplements: Taking a separate fish oil supplement during pregnancy is not recommended. Talk to your doctor before commencing fish oil supplements.



Fibre

There are 6 steps to minimising constipation during pregnancy:

1. Enough dietary fibre (approx. 30g/day)
2. Enough exercise
3. Enough fluid (min. 1500ml/day)
4. Food-based fibre supplements (e.g. prunes, pear juice, bran)
5. Commercial fibre supplements (e.g. Benefibre, Metamucil)
6. Bowel medications

Calcium or iron supplements, or certain medications including antidepressants, narcotics, non-magnesium antacids and calcium channel blockers, can cause constipation. It is important not to put off going to the toilet as this can make the situation worse. Including a probiotic daily is also beneficial for bowel health and may reduce your risk of mastitis.

Allergy/Intolerance

If you have a family history of food allergy or intolerance it is not necessary to avoid these foods throughout pregnancy. You should maintain your usual dietary restriction if you have a pre-existing food allergy or intolerance.

Exercise

The level of exercise you do determines any further energy requirement. As you get heavier, the energy demand of exercise increases, so it is important to fuel activity to ensure your baby continues to grow and develop.

Take Caution With:

Mercury is a heavy metal that can build up in fish and may cause developmental delay in utero. Limit your intake to:

- 1 serve per fortnight of shark, swordfish, broadbill, marlin and no other fish that fortnight OR:
- 1 serve of sea perch, orange roughy or cat fish per week and no other fish that week OR:
- 2-3 serves of any fish or seafood not listed above



Tinned tuna is safe to eat and contains very little mercury. For more information visit www.foodauthority.nsw.gov.au/consumer/life-events-and-food/pregnancy/mercury-and-fish

Caffeine and Herbal Teas

Caffeine is a stimulant and in large amounts (more than 300mg/day) can be harmful to your baby. There is an increased risk of miscarriage or a low-birth-weight baby with high caffeine consumption particularly if you are a smoker or drink alcohol. It is best to limit your daily caffeine intake to less than 200mg.

Beverage	Volume of fluid (mL)	Caffeine content (mg)	Beverage	Volume of fluid (mL)	Caffeine content (mg)
Tea			Energy drinks		
Instant	236	26	Red Bull	250	80
Iced	236	47	Rock Star	473	151
Green	236	25	V	350	109
Oolong	499	55	Mother	500	160
Brewed	236	47			
Coffee			Soda		
Brewed	236	108	Coca-cola	354	35
Instant	236	57	Diet Coke	354	45
Espresso	44	77	Pepsi Max	354	69
Drip	236	145	Pepsi Cola	354	38
Decaf brewed	236	6	Mountain Dew	354	54
Decaf instant	236	3			
Hot chocolate	236	3-13mg			
Milk chocolate	100g bar	20mg			

Reference: www.energyfiend.com Aust / NZ beverage content

Energy drinks are not recommended during pregnancy as they may contain very high levels of caffeine. There are no standards regulating how herbal teas are made or what they contain. Herbal teas are best avoided, as their safety cannot be guaranteed. For further information refer to the website www.cafhs.sa.gov.au.



Alcohol

Alcohol can harm your baby's development, resulting in life long damage, with the risk of foetal alcohol syndrome. Alcohol is best avoided if you are planning to fall pregnant and during pregnancy. For further information visit www.health.gov.au/health-topics/alcohol/alcohol-throughout-life/alcohol-during-pregnancy-and-breastfeeding

Sugar and Artificial Sweeteners

For women who are pregnant or breastfeeding it is important to select a sweetener that does not cross the placenta. The following types are able to be consumed in small quantities if desired: **Acesulfame K, Alitame, Aspartame (Equal) and Sucralose (Splenda)** and avoid cyclamates, phenylalanine and saccharin artificial sweeteners.

Type	Product Name	Form	Comments	Commonly found in
Aspartame (951)	Equal, Hermestas Gold, Nutrasweet	Liquid, Powder, Tablet	Sweetness lost when heated. Add at the end of cooking process	Yoghurts, desserts, ice-cream, diet drinks, cordial, lollies, gums
Acesulfamine (950)	Hermesetas Gold, Sunnett	Powder	Add at the end of cooking process	Diet drinks (Pepsi Max), Fruche
Sucralose (955)	Splenda	Liquid, Powder, Tablet	Suitable for use in cooking – retains sweetness.	Jam, yoghurt, diet drinks
Alitame (956)	Aclame	N/A	Used in commercial products	Processed foods and soft drinks, prepared cakes
AVOID – cross the placenta				
Saccharine (954)	Sweetex, Sugarella, Sugarine, Hermesetas Original, Lite n Low	Liquid, Tablet, Powder	Bitter when heated. Add at the end of cooking process	Diet (low joule) cordials, soft drinks and jellies
Cyclamate (952)	Sucaryl	Liquid, Tablet	Bitter when heated. Add at the end of cooking process	Diet (low joule) cordials, soft drinks, jams, jellies and lollies



Morning Sickness

A healthy, balanced diet ensures you are receiving all of the nutrients you need. As soon as you are feeling well it is best to cut out any unhealthy habits that helped you through this period of feeling nauseated. If your sickness is restricting your intake significantly, or for a prolonged period, speak to your obstetrician about anti-nausea medications. If you are not managing fluids, you may need hospitalisation to make sure you don't become dehydrated.

Tips to help reduce nausea:

- Don't let your stomach get too empty, an empty stomach can exacerbate nausea
 - Keep a snack at your bedside for the early hours / nibble before you get out of bed.
 - Eat small amounts every two hours
 - Utilise nourishing fluids such as low fat milk and juices between meals.
- Avoid a drop in blood sugar levels
 - Eat more nutritious low GI carbohydrate foods to help prevent a dip in blood sugar.
 - Add nuts and seeds to cereals / yoghurt.
- Eat less fatty and sugary foods.
- Avoid meal preparation / strong smell of food where possible.
- Keep hydrated, carry water (or a flavoured beverage if better tolerated) with you all of the time.
- Rest when you are tired. Nausea is exacerbated by tiredness / exhaustion.



Reflux/ Heartburn

Reflux may require prescription medication for better management; speak to your obstetrician if you are having persistent pain and discomfort or if your nutritional intake is becoming affected by reflux.

Tips to reduce heartburn:

- Eat small, regular meals
- Avoid fatty, fried or spicy foods
- Avoid tea, coffee, cola drinks, chocolate drinks and alcohol
- Sit up straight while eating and for 30mins after
- Do not bend after meals or wear tight clothes
- Sleep propped up on a couple of pillows

Safe over the counter / supermarket medications to try include:

- Mylanta
- Quick Eze chewable tablets
- Avoid any preparations containing aluminium, aspirin (alka-seltzer) or sodium bicarbonate



Listeria Risk

Listeria is a bacterium that can be present in food and cause serious illness and miscarriage in pregnancy. Good food and hand hygiene is important to prevent contamination. Look out for a fever and cold and 'flu like' symptoms more than typical loose bowel 'gastro like symptoms'.

Recommendations:

- Wash and dry your hands before preparing food
- Wash cookware and utensils well after use
- Make sure hot food is hot, above 60°, and cold food is cold, below 5°
- Eat only fresh cooked foods, not leftovers (8 hour rule = eat within 8 hours of making it)
- Wash raw fruits and vegetables well
- Store foods in the coldest part of the fridge and check temperature regularly
- Thaw ready to eat food in the fridge or microwave not room temperature on bench tops
- Return foods that should be in the fridge as quickly as possible
- Ensure all food is fresh and within its use-by date
- Also: Wash hands after touching animals or animal droppings, wear rubber gloves under garden gloves



Safer eating during pregnancy

Red = Don't eat. Yellow = Eat with caution. Green = OK to eat.

Food	Examples	What to do
MEAT, POULTRY & SEAFOOD		
Processed meats	Ham, salami, luncheon, chicken meat etc.	DON'T EAT unless in a fully cooked dish
Raw meat	Any raw meat, raw chicken or other poultry, beef, pork etc.	DON'T EAT
Poultry	Cold chicken or turkey e.g. used in sandwich bars	DON'T EAT
	Hot take-away chicken	Purchase freshly cooked, use immediately, store leftovers in fridge and use within a day of cooking
	Home cooked	Ensure chicken is cooked thoroughly, use immediately – store any leftovers in fridge and use within a day of cooking
Paté	Refrigerated paté or meat spreads	DON'T EAT
Seafood	Raw seafood	DON'T EAT
	Ready-to-eat chilled peeled prawns	DON'T EAT
	Cooked fish and seafood	Cook until steaming hot, eat while hot, store leftovers in the fridge and use within a day of cooking
Sushi	Store-bought	DON'T EAT
	Home-made	Don't use raw meat or seafood, eat immediately
Cooked meats	Beef, pork, chicken, mince	Cook thoroughly, eat while hot
DAIRY & EGGS		
Cheese	Soft and semi-soft cheese e.g. brie, camembert, ricotta, fetta, blue etc.	DON'T EAT unless in a fully cooked dish e.g. spinach and ricotta cannelloni
	Processed cheese, cheese spreads, cottage cheese, cream cheese etc.	Store in the fridge, eat within two days of opening pack
	Hard cheese e.g. cheddar, tasty cheese	Store in the fridge
Ice cream	Soft serve	DON'T EAT
	Packaged frozen ice cream	Keep and eat frozen



Food	Examples	What to do
Milk	Unpasteurised (raw)	DON'T DRINK OR USE
	Pasteurised	Keep refrigerated, drink within use-by-date
Other dairy	Cream, yoghurt	Check use-by-date, keep refrigerated
	Custard	Don't eat unless heated until steaming hot
Eggs		Cook thoroughly
VEGETABLES & FRUIT		
Salads	Pre-prepared or pre-packaged salads e.g. from salad bars, smorgasbords	DON'T EAT
	Home-made	Wash and dry salad ingredients well just before making and eating salads, store any leftover salads in fridge and use within a day of preparation
Fruit	All fresh fruits	Wash and dry well before eating
Vegetables	All fresh vegetables	Wash and dry well just before eating raw or wash before cooking
	Frozen vegetables	Cook; don't eat uncooked
Parsley	Home-grown and store bought	Don't eat raw; can use in cooked dishes
Bean Spouts	Alfalfa sprouts, broccoli sprouts, onion sprouts, sunflower sprouts, clover sprouts, radish sprouts, snowpea sprouts, mung beans and soybeans.	DON'T EAT either raw or cooked
OTHER FOODS		
Leftovers	Cooked foods	Store leftovers covered in the fridge, eat within a day and always reheat until steaming hot
Canned foods	Tinned fruit, vegetables, fish etc.	Store unused portions in the fridge in clean, sealed containers and use within a day
Stuffing	Stuffing from chicken or poultry	Don't eat unless cooked separately and eat hot
Hummus	Store-bought or home-made	Store in fridge, eat within 2 days of opening/making

Reference: Food Standards Australia, foodstandards.gov.au



Easy meal ideas to take to work or order in a food court or restaurant

- Tinned meats or fish in a sandwich or on crackers with fresh salad fillings and hard cheese
- Cheese and salad sandwich with avocado (from home not a salad bar)
- Tinned / carton soup and a roll
- Toasted sandwich - baked beans or tinned spaghetti, cheese and tomato
- Frozen meals e.g. Lean Cuisine – heated through from frozen or thawed in the fridge
- Fruit salad with yoghurt, nuts and muesli
- Nut or muesli bars and a piece of fruit and tub of yoghurt
- Breakfast cereal with added fruit, nuts, seeds
- Hot potato with beans, cheese, pineapple
- Savoury muffin – watch out for ricotta cheese
- Hot pasta – caution with the temperature of Bain Maries
- Hot pastries – pie, pastie etc although not a healthy choice
- Burger items at McD / KFC etc– although not a healthy choice, avoid the salad items

At a restaurant the safest choices are soup and bread, pasta or risotto, curry or roast of the day. When ordering dessert be careful of mousse or cheesecake as they can contain uncooked egg.



Summary of Recommendations

- ✓ Eat a healthy, balanced diet including all food groups. Include healthy snacks or small frequent meals if easier
- ✓ Include enough fibre and fluid
- ★ Remember: Quality of diet is more important than quantity
- ✓ Take a daily pregnancy multivitamin supplement
- ✓ Eat 2-3 serves of fish per week but avoid those high in mercury
- ✗ Limit caffeine intake
- ✗ Avoid foods that could contain Listeria
- ✗ Don't drink alcohol during pregnancy or breastfeeding



Comfort in Pregnancy

To watch a video, <https://youtu.be/n3ADWtiKXdY>



Safe and comfortable exercise

- Exercise during pregnancy should ideally be low impact to protect joints and ligaments.
- Pregnant women should exercise at a low to moderate intensity, to protect baby from overheating. You should feel warm in the face but not hot.
- Exercise programs should include both strength and flexibility components. Pilates and Yoga both encourage good postural awareness with a focus on abdominal and pelvic floor muscle control.
- Pregnant women should modify their abdominal exercises to protect their spine and abdominal wall. Sit-ups or abdominal curls are not recommended once your abdominal muscles start to separate.
- Drink fluids regularly and exercise in a well ventilated environment to avoid overheating.
- After 20 weeks pregnant, stop exercising flat on your back.
- Aim to keep exercise sessions 30-60 minutes per session. Allow extra time for your body to warm up and cool down. At least 10 minutes for each phase is a good guide.

How hard should I be exercising?

During recreational exercise you should be able to hold a conversation. If you become breathless to the extent that you can't get more than a few words out at a time, then you are likely exercising too intensely.

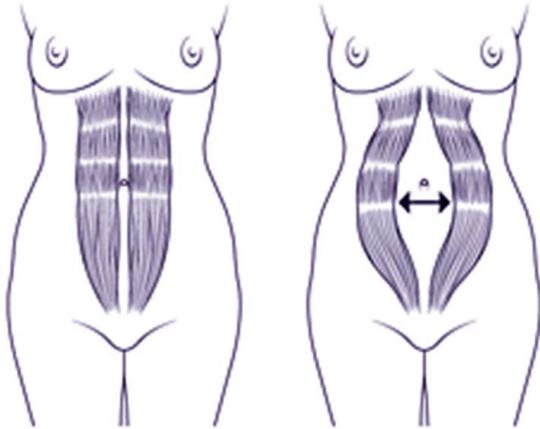
If you experience symptoms such as palpitations, a racing pulse, shortness of breath, dizziness, pain, vaginal fluid loss, excessive fatigue or feel uncomfortable, consult your obstetrician or a women's health physiotherapist regarding the suitability of your exercise program.



Abdominal Muscles

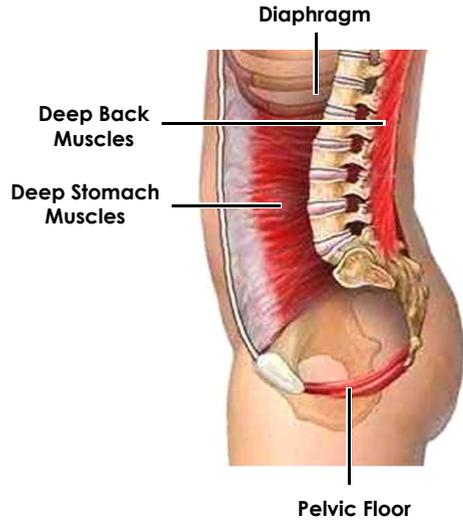
The abdominal muscles provide trunk stability, organ support, and share the workload of the back muscles to protect and move your trunk. During pregnancy, the long muscles also known as your rectus abdominis or six-pack muscles, separate to allow more room for the baby to grow. This common occurrence, known as rectus diastasis, is seen as a midline bulge when doing a sit up type movement.

To protect your abdominals from further separation, avoid sit ups and twisting actions.



Core Muscles

Your core muscles are a group of muscles comprising of your pelvic floor muscles, deep tummy muscles, deep back muscles and your diaphragm. They provide stability to the trunk and pelvis, and protect our internal organs. Activating your core muscles involves drawing in the lower portion of your tummy and drawing up your pelvic floor. This action can help improve lower back and pelvic girdle pain.



Back Pain and Pelvic Girdle Pain

Lower back pain and pelvic girdle pain are common during pregnancy as your body changes. Protect your back and pelvic joints with the following strategies.

- Keep your core muscles strong and activate them when bending or lifting.
- Avoid uneven loading of your pelvis to protect your pelvic joints from excessive stress and strain.
- Sit down to put pants and shoes on.
- When getting in and out of the car, try getting both legs out first, then standing up. Avoid stepping out with one leg at a time.
- When getting in and out of bed, roll onto your side keeping your hips, knees and shoulders in line. Then drop both legs off the edge of the bed and use both arms to push up into sitting.
- Pace your activities, take frequent breaks and rest as needed.
- Consult a women's health physiotherapist early to get a personally tailored treatment and advice if you experience ongoing pain.

Comfortable Sleep

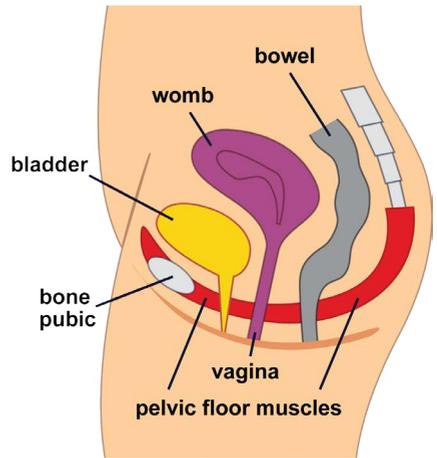
Some women experience difficulty finding a comfortable position for sleep during pregnancy. From the second trimester onwards, it is recommended that you sleep on your side. Consider using pillows to support your tummy, knees and back during rest. There are many pregnancy pillows available, although regular pillows can be used – be guided by what feels comfortable for your body.

As your belly gets bigger, you may find it more comfortable to support your tummy with a pillow. Try using a wedge shaped or folded pillow under your tummy for support. Pillows can also be used between the knees for support. If you experience lower back pain or buttock pain, use a thicker pillow between your knees to keep your top leg in line with your hip. If you experience pubic pain, use a smaller pillow to minimize the separation of the joint.



Pelvic Floor Muscles

The pelvic floor is a group of muscles that stretch over the base of the pelvis. The pelvic floor attaches to the pubic bone and the tail bone. It holds up the bladder, uterus and bowels keeping the organs protected within the bony pelvis. The bladder outlet, vagina and back passage all pass through the pelvic floor muscles. These muscles close around the openings of the bladder, bowels and vagina and assist us with bladder and bowel control.



Pelvic Floor Exercises

Start by relaxing the muscles in your tummy, bottom and thighs.

- Imagine stopping the flow of urine and holding it.
- Next, tighten the muscles around the vagina and back passage and draw upwards.
- Try holding this action for a few seconds while breathing easily. Note how many seconds you can hold this before your muscles start to shake, which is a sign of pelvic floor fatigue.
- Relax the muscles fully and allow 5 seconds to rest.
- Repeat the exercise a few times but only as long as you can feel the muscles contracting well.
- As you get more confident with the exercises, try tightening a little stronger. Try doing these exercises 2-3 times a day. Aim to hold for 5-10 seconds each time and do up to 8-10 repetitions at a time.
- As your baby gets heavier, you may find you cannot hold the muscles for as long, or do as many repetitions. However, try and use these muscles when it counts ie. when there is more downward pressure on the pelvic organs such as during coughing, sneezing, squatting and lifting.

If you are unsure you are doing the pelvic floor exercises correctly, seek help from a women's health physiotherapist.

- Further Information

If you would like more information about diet, an Accredited Practising Dietitian (APD) has the qualifications and expertise to provide you with reliable, up to date dietary and nutritional advice.



To find an APD near you, use the Dietitians Association of Australia web site: www.dietitiansaustralia.org.au OR call on 1800 812 942.

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References: Food Standards Australia New Zealand: www.foodstandards.gov.au
'Glycaemic Index' by Diabetes Australia (2006)
Australian Breastfeeding Association: www.breastfeeding.asn.au
Child and Family Health Service SA: www.cafhs.sa.gov.au

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