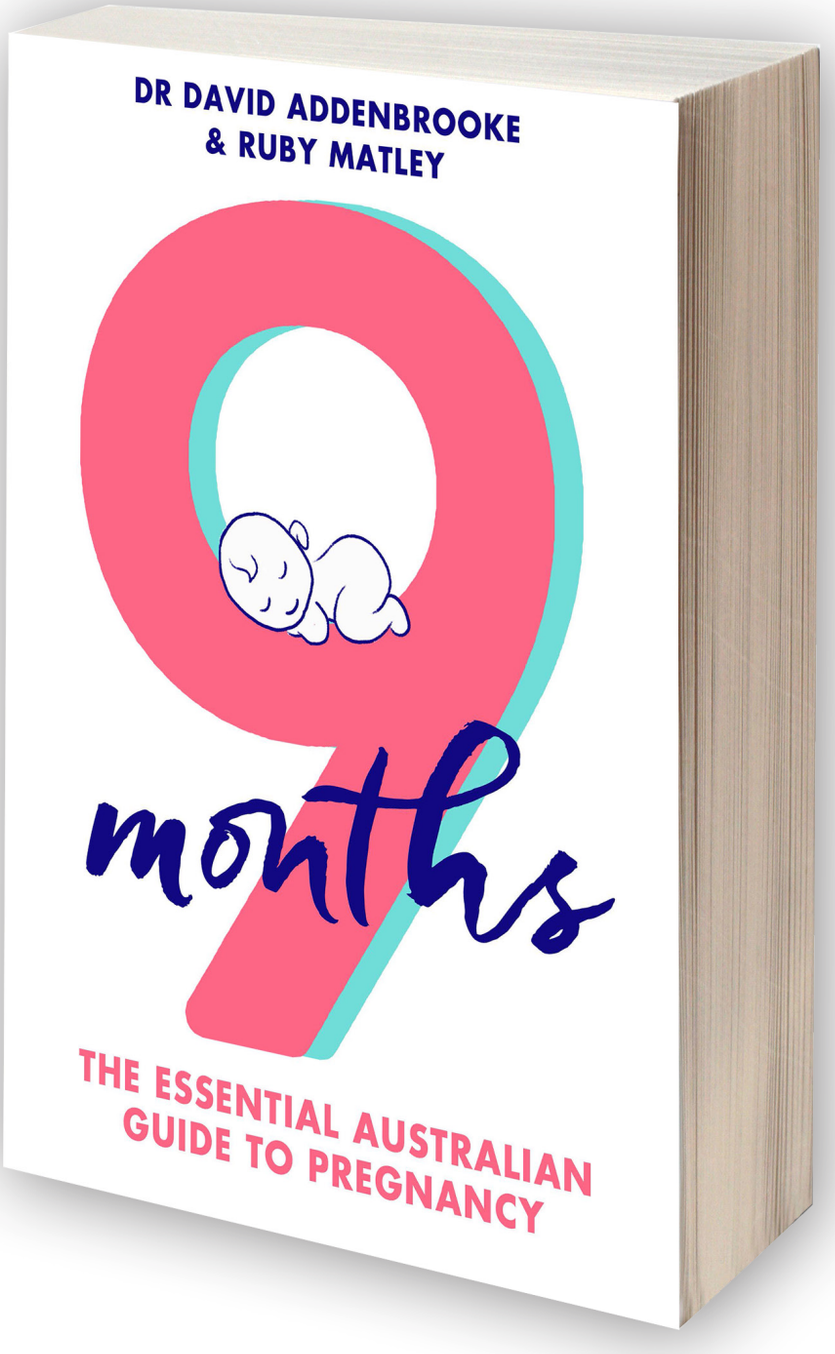


ABOUT THE BOOK

A guide to pregnancy for Australian women – from an Australian medical obstetrician and patient perspective.

'Over the course of writing this book we were told by women who were newly pregnant, pregnant for the second, third or fourth time or had recently had a baby; that they want to know that what they are experiencing is normal, and if it is not, they want to know what to do.'

Thoughtfully curated information and advice from the perspective of medical obstetrician Dr David Addenbrooke, and nutritional scientist and mother-of-two Ruby Matley, *9 Months* provides a week-by-week guide for mothers- and fathers-to-be throughout the journey of pregnancy and birth.

This is a book that gives reassurance to expecting parents and provides answers to the many questions that come up during this special time.

TRADE PAPERBACK
ISBN 9781760556464 – FEBRUARY 2019
C FORMAT – NON-FICTION – MACMILLAN AUSTRALIA
RRP $32.99AUD
For all media enquires please contact
Yvonne Sewankambo
02 9285 9178 or yvonne.sewankambo@macmillan.com.au

ABOUT THE AUTHORS

RUBY MATLEY has a Bachelor of Science (health sciences) with a passion for public health focusing on nutrition and women's health.

Ruby is a nutritional scientist and mother of two and lives with her husband on the north coast of NSW.

DR DAVID ADDENBROKE is a Specialist Obstetrician and Gynaecologist. He studied medicine at the University of NSW in Sydney. He combined his medical studies with an arts degree in English literature and graduated in 2005 with four bachelor degrees.

David then underwent intern and resident training at St George Hospital, Sydney. In 2008, he was accepted into specialist training with the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG). During specialist training, he has spent time acquiring advanced skills at The Royal Brisbane and Women's Hospital, Gold Coast University Hospital and St George Hospital (Sydney). He has also worked as a registrar in many obstetric units throughout Australia, including Hervey Bay, Sutherland, Armidale, Wagga Wagga, Bendigo, Launceston and Hobart. In 2014, Dr Addenbrooke achieved fellowship with RANZCOG and became recognised as a Specialist Obstetrician and Gynaecologist.

David lives in the Northern Rivers with his wife and four young children.

CONTENTS

FIRST TRIMESTER

The first trimester is basically a bit of a three-month mind game being played by your baby. You know you are pregnant but you can't really feel anything in there yet. You know there is a baby, but you won't be able to prove it for a while. You are excited, or scared, or surprised that it has happened. There may also be a part of you that doesn't want to go all-in with the emotions for this idea of being pregnant yet, because you know there is a chance that things may not go to plan. All of these reactions are normal.

Meanwhile, your body is getting on with it. You may get nausea or vomit at any time of day or night. I have been corrected on numerous occasions by my patients that, it is not 'morning sickness' but 'all-day sickness'. You may feel bloated and/or constipated for no particular reason. Your heart will be beating faster than usual. You may already start to notice changes in your skin and hair. That 'pregnancy glow' is your capillaries dilating in response to the hormonal changes.

During the early stages of pregnancy, the brain, spine, neural tissues and central nervous system begin to form. The heart and organs start to develop by the end of the first trimester. The embryo will develop into a foetus over the coming weeks, and his or her little fingers, toes and eyes will begin to form.

Ruby

EARLY SIGNS OF PREGNANCY

The absence of a period is the first firm sign of pregnancy for most women. But you may experience symptoms before you have discovered you've missed a period. These include:

- Spotting
- Abdominal cramping
- Breast changes, including tenderness and enlargement
- Nausea or vomiting (otherwise known as 'morning sickness'; see page xx)
- Fatigue
- Changes in mood
- The urge to pass urine more frequently

Many symptoms experienced in the first trimester, such as fatigue and morning sickness, should subside as the pregnancy progresses, although some of the symptoms can stick around for longer and, in some cases, the entire pregnancy.

The pregnancy hormone, hCG

You may hear your doctor mention hCG, or have seen it on your pathology paperwork. HCG stands for Human Chorionic Gonadotropin, other otherwise known as the pregnancy hormone. HCG is what is detected when you use an at-home pregnancy test. The hormone is produced by the placenta and increases in the first trimester. It is detected in the urine, which is why your pregnancy test shows positive.

What I'm really thinking:

Two little lines

When I found out I was pregnant for the first time, my initial reaction was a mix of total excitement and joy as well as nervousness as to what pregnancy will be like for me and how my life would look now that I was pregnant. I remember thinking, 'Am I really going to be able to do this?!'

After discovering I was pregnant for the second time, I felt ecstatic but I was also consumed by guilt. I felt guilty that my daughter was only just one year of age and questioned whether I was going to be able to look after two small little people and give them the love and attention they deserved.

What you may be feeling

You've just found out your pregnant. Maybe you are only 6 weeks, or perhaps you're further along. Once you see those two lines on the home pregnancy test, life changes. You might feel an overwhelming sense of mixed emotion. You may be feeling delighted, thrilled, scared or anxious. Maybe this pregnancy wasn't planned or maybe you had been trying for what seemed like eternity. It isn't uncommon to have waves of different emotions, particularly in the early days of discovering that you are pregnant. When it is your first pregnancy, it is natural to have these emotions.

TIMELINE

MONTH 1

WEEK 1

Your pregnancy is dated from the first day of your last period

WEEK 3

Conception takes place between weeks 2 and 3.

WEEK 4

After fertilisation, the egg separates into an embryo and a placenta.

In the first trimester, your body experiences the most amazing changes.

WEEK 5

Your period would be due around now. Your embryo's heart is starting to take shape.

WEEK 6

Many women take a pregnancy test around now. Your embryo measures between 5 and 6 mm.

MONTH 2

WEEK 7

You may have a dating scan now.

WEEK 8

You may be experiencing fatigue and nausea. Be kind to yourself and rest.

WEEK 9

Baby's eyes and earlobes are now formed.

MONTH 3

WEEK 10

Tiny teeth buds are forming under baby's gums. You may have your first booking in appointment around now.

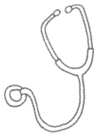
WEEK 11

Your baby's nails are forming. Your 12-week scan can take place anywhere between 11 and 13 weeks.

As the first trimester comes to a close, baby is the size of a peach.

WEEK 12

Your baby has already doubled in size! You may decide this is the time to share your news.

David 

YOU'RE PREGNANT: WHAT NEXT?

Write down the first day of your last period. This will help you and your care provider to figure out exactly how far along you are and avoid confusion from a hazy memory later on. The important date is the first day that you bled with your last period. Don't be worried if you have no idea – it may just mean you will have to rely a little more on ultrasound to get your pregnancy dates right.

Start taking a pregnancy multivitamin. The most vital component to be taking as early as possible is folic acid. This helps development of the baby's brain and spinal cord, occurring as early as four weeks in. Most pregnancy vitamins contain standard doses of other important nutritional vitamins and elements, such as vitamin D, iodine, calcium and iron. Some of the heavy elements can be hard to digest and contribute to nausea and/or constipation. If this is the case, try taking a folic acid tablet on its own at least until you are able to digest the full multi. See page XX for more on supplements.

Stop drinking alcohol. Alcohol is bad for babies. If you are planning to fall pregnant, it is best to stop before you start trying. Don't panic if you unexpectedly conceived during a time when you had been drinking or had a few drinks in the days before you knew you were pregnant. Unintentional alcohol exposure in the first trimester does increase your chance of a miscarriage, but if you stop as soon as you find out, it is unlikely that baby will suffer any long term effects. There is no evidence for a 'safe' amount of alcohol in pregnancy. For this reason, we advise complete abstinence, however most data on the side effects of drinking while pregnant comes from chronic or heavy use later in pregnancy.

If you smoke, reduce then stop your nicotine intake. Smoking while pregnant causes damage to the placenta, which is basically doing all of the work for the baby's lungs, kidneys and intestines while it is in your womb. This damage increases your risk of all sorts of bad things happening during pregnancy and is associated with smaller babies. A smaller baby due to an unhealthy placenta has an increased risk of stillbirth, separation of the placenta (called

abruption), or not tolerating labour leading to a higher chance of caesarean or operative birth. Smoking is also, obviously, bad for you. While nicotine replacement is not accepted as 'safe' in pregnancy, it is almost certainly better than smoking tobacco. Most health services agree with pregnant women using nicotine replacement as an aid to reduce or stop smoking. If you can stop cold turkey, all the better – and you will certainly have an excellent motivation.

If you take prescription medication, talk with your doctor immediately. There are some tablets that should be stopped or substituted due to a known risk for causing birth defects. There are others which may have small acceptable risks but need further discussion with your doctor depending on your condition. There are many prescription drugs that are perfectly safe to take while pregnant. It is important that you don't stop your meds without having discussed it with your doctor. This is particularly true for medications used in conditions such as epilepsy and depression, some of which can have negative effects for baby, but which can also have severe effects for the mother if stopped abruptly.

If you have chronic illness, it is also a good opportunity to see your doctor. Many illnesses will be affected by pregnancy. Some particularly important conditions include diabetes, high blood pressure, thyroid disorders, epilepsy, blood clotting disorders, auto-immune conditions and mood disorders. While it is ideal that pre-conception planning is undertaken in these circumstances, you can certainly be prepared and catch up after getting pregnant.

Tell the people you are comfortable telling. A pregnancy is a very personal and private thing for a woman, and also for the partner. It can be beneficial to have somebody to be able to talk to about your pregnancy. There are no right or wrong answers about who to tell, just what feels right to you. The reason many women and couples wait until after 12 weeks is because of the rate of pregnancies that fail in this time. Across all women in all age groups, roughly 1 in 5 pregnancies will not continue past the first trimester. There are many factors that influence this, one of which is age. The miscarriage rate for a woman in her early 20s is around 1 in 10, and that of a woman in her 40s can be higher than 1 in 2. Whilst a pregnancy is a private and personal experience, a miscarriage can be even more so. In the case of an early pregnancy loss, having someone to share your feelings

with can be important, but it is probably not something most couples would want to share with everybody.

See a doctor or midwife. In addition to helping you plan the rest of the pregnancy and birth, seeing a doctor or midwife in the first trimester is important to start some screening tests. There are a number of blood tests that all pregnant women are routinely advised to have. Some of the tests are relevant to all women, such as knowing your blood group and making sure that you are not anaemic. Most doctors and hospitals recommend additional screening for some infectious diseases which can impact on the developing baby. A lot of these are fairly uncommon in Australia, such as HIV, however these are particularly important in women who have recently been living in high risk countries or situations. In addition to this universal screening, many doctors also choose to check for additional nutritional factors, such as your vitamin D and iron stores, or baseline organ function tests such as liver, kidney and thyroid function. In addition to giving you a request for these blood tests, you can also have an initial discussion about how and where you want to have your baby.

Get an ultrasound. These days, most couples tend to associate the first ultrasound with confirmation that they are really, truly, pregnant. It is a normal way to feel and there is definitely something validating and powerful in that moment when you first see the heartbeat flickering on the screen. For a lot of women, it is that moment when it becomes *real*. However, it is not something that is absolutely required in the first trimester.

Live your life. There is nothing you should or shouldn't be doing when it comes to normal day-to-day physical activity. It is perfectly safe to exercise, swim, work and have sex when you are in the early stages of a pregnancy. Studies have shown that women who spend the first trimester on strict bed rest are no more or less likely to miscarry than women living normal activities. However, the women on strict bed rest were more likely to develop other negative physical or emotional effects, such as depression or clots in the legs.

Calculating your due date

To calaculate your due date, add 280 days to the first day of your last period (assuming a 28-day cycle).

Ruby

LOOKING AFTER YOURSELF IN THE FIRST TRIMESTER

For many women, the first trimester can appear to crawl along at a snail's pace when all they want is for it to pass quickly, not only to leave the early nausea and fatigue behind, but also to reach the 12-week mark (at which pregnancy is generally considered to be 'safe'). The first trimester can be draining for these reasons, so it is a time to be kind and gentle to yourself. Aim to do things that will help reduce your stress levels, and if that means lying on the sofa and reading a book or watching a movie, then do it! Allow yourself to rest if you are feeling fatigued and be sure to nourish your body with healthy food. Here are some ideas for giving yourself some 'you time':

- Read. It doesn't have to be pregnancy or parenting related. There is nothing better than getting lost in a book for a while and escaping from our everyday worries.
- Go for a long walk, or head to the park.
- Start a pregnancy journal. You could jot down questions or concerns you may be having. How you are feeling or what you are most excited about. Could write down baby names you love or cravings you've been having. Your journal could be something you look back on down the track to remember your pregnancy.
- Enjoy a mint and ginger tea.
- Listen to calming music.

SOME THINGS YOUR PARTNER/SUPPORT PERSON CAN DO:

- Make her cups of ginger tea to help ease the nausea.
- Encourage her to rest.
- Attend to the antenatal appointments with her (if possible).
- Be positive and validate what she is experiencing. She may have some mood changes throughout pregnancy, particularly in the early months when her body and hormones are changing.

What I'm really thinking:

The early weeks

I experience such a mix of emotions in those early days – excitement, love, empowerment, nerves and disbelief. I was horrifically nauseous for the first 12 weeks. I keep crackers by my bedside and ginger tea constantly brewing to give me some relief, although the nausea seems to be linger for weeks. I feel anxious more than ever before and have moments where my heart would race. I don't know if it was the hormones or the waiting game. I was bloated and felt uncomfortable. Around the 7-week mark, the fatigue kicked in and I had a little bit of spotting that lasted around 1 week.

I was so unbelievably happy when I found out I was pregnant, yet so nervous at the same time. I felt a little overwhelmed by keeping this big secret, with the constant reminder that I still had another 8 weeks to keep it quiet. I'm not one to share things easily and I felt that by not sharing the news until we were over the 12 week hurdle was the best option for me. Don't get your hopes up, don't get too excited, I kept telling myself. Realistically though, from that moment we discover we are pregnant, we start to envisage life with this little being. We calculate the due date and keep it close to our heart.

What you may be feeling

You might be feeling elated with a slight nauseous feeling upon waking in the morning. Maybe you got full-blown morning sickness and spend half the day in the bathroom. You might be feeling bloated or have some light cramping. Many of the early pregnancy symptoms are unpleasant, but at the same time they are a part of the pregnancy experience and they don't last forever.

Your body starts to go through changes. You may be starting to experience some of those symptoms everyone talks about. You may be feeling fatigued, bloated, nauseous at certain (or all!) times of the day, or emotional. You might have had some spotting or light cramping, all which are common in early pregnancy. Throughout the first trimester, you may have times where you are feeling vulnerable, uneasy or anxious. You may also experience times where you are full of love and gratitude as you embrace the changes to come and the greatness of growing a baby.

EATING WELL

The aim during pregnancy is to nourish your body and your baby without limiting food groups. There are so many misconceptions or myths when it comes to foods that should be avoided during pregnancy. Do not worry if you are unable to follow the ideal pregnancy diet due to nausea or vomiting that may be persisting after the first trimester. Your baby will be getting all their nutrients from you. I remember asking David while pregnant with my daughter will my baby be at risk if I am not eating the 'perfect' diet. He put my mind at ease by explaining that babies are like parasites and they take the nutrients from you first!

Your body has an incredibly important job and taking care of your health is paramount during pregnancy. There is no need to follow any strict diets. It is a good idea to incorporate the essential nutrients and vitamins into your daily diet so that your baby can receive these for development and growth.

We all get busy and sometimes, the easy option is to get food on the run or eat whatever is in the fridge. A few tips for ensuring you eat a healthy diet during pregnancy

- Meal preparation – preparing meals over the weekend for the following week or food shopping for snacks and dinners so that you are reducing eating out or eating unhealthy options.
- Making larger quantities at dinner time and having them stored in the freezer.
- Having healthy snacks at work or with you during the day (see page xx).
- Preparing a vegetarian meal once or twice a week to incorporate eggs, legumes and more vegetables into your weekly diet.

Of course, you're allowed to indulge from time to time – after all, you are pregnant!

YOUR DAILY NEEDS

During your pregnancy, it is recommended that you increase your consumption of grains to a total of 2.5 servings per day and an extra serving of protein and dairy-based foods to ensure you and your baby

receive adequate nutrients, minerals and vitamins. To increase your nutrient intake, choose foods that are nutrient-dense rather than high calorie foods. Avoid processed foods and energy dense foods such as fried foods, foods high in sugar such as soft drink, chocolate, and baked goods such as cakes and slices.

Protein

Protein is found in foods such as lean meats, chicken, seafood, eggs, dairy products, nuts and legumes. Not only will protein assist in your baby's growth and development, particularly during the third trimester, protein rich foods are also high in B12 vitamins and healthy fats. Consuming protein will also assist in feeling satisfied after meals.

Food suggestions to add to your diet to ensure you are having adequate protein include chicken, lean beef and eggs.

Unprocessed grains, nuts and seeds (8–8.5 serves per day)

Unprocessed grains help to maintain blood sugar levels and are rich in fibre, which is beneficial for your bowel and bowel movements, particularly if you are suffering from constipation. Foods such as brown rice, quinoa, buckwheat and oats are unprocessed grains. Nuts and seeds such as almonds, cashews, walnuts, peanuts, sunflower seeds and sesame seeds are in excellent sources of fibre and healthy fats.

Vegetables (5 serves per day)

The truth is vegetables are truly great for our health, pregnant or not, and are rich in so many essential vitamins and minerals as well as many being high in fibre. It is fundamental that you try to consume an abundance of vegetables during pregnancy. The great thing about vegetables are that they can be eaten and cooked in so many ways that makes it easy to incorporate a variety into your everyday diet. Use different vegetables in cooking such as root vegetables like potato, carrots, pumpkin, sweet potato, beetroot, celery and green leafy vegetables like broccoli, spinach, lettuce, Chinese vegetables and asparagus. Don't forget to add avocado, tomato, cucumbers and mushrooms to your shopping list.

Fruit (2 serves per day)

Fruit is high in antioxidants and nutrients such as vitamin C, potassium and folic acid. Fruits contain fibre, some higher in others such as bananas, apples and oranges which may be beneficial if you are suffering from constipation.

Dairy (2.5 serves per day)

Dairy products, including yoghurt, milk and cheese, are high in calcium. Dairy products are also good sources of B12 vitamins, protein and healthy fat. It is also recommended that you limit saturated fats, typically found in packaged and processed foods. They are also found in animal-based forms (fatty cuts of meat, cream, butter and full fat cheeses and milk) and plant-based forms (margarines, coconut oil and palm oil).

VITAMINS AND MINERALS

There are several vitamins and minerals that are essential for pregnancy.

Iron

Iron is important for your baby's growth. There is a risk of developing anaemia during pregnancy. Most pregnancy multivitamins contain iron, however, eating iron rich foods can also assist in maintaining healthy iron stores during pregnancy. Vitamin C plays a role in absorption of iron in the body. Animal sources of iron, which are absorbed most efficiently, include red meats, including lean beef and lamb; white meats, including chicken and pork; and fish such as salmon, tuna and white fish (barramundi or snapper). Plant-based sources include beans (kidney beans, lentils and chickpeas); tofu and nuts.

If you are vegan or vegetarian, you may want to take an iron supplement. It is highly likely your GP, midwife or obstetrician may recommend having bloods taken to see your iron stores and if supplementation may be beneficial throughout your pregnancy. These blood tests may be repeated later in pregnancy to ensure you are not anaemic. The Royal Australian New Zealand College of Obstetrics and Gynaecology suggest that 60mg or more is taken during pregnancy to prevent anaemia.

Calcium

This is important for healthy bones and teeth and is vital during pregnancy. Vitamin D aids in the absorption of calcium. Calcium rich foods are also sources of B12, which is important for your baby's neurological development and metabolic health.

Foods that contain calcium are milk, cheese and yoghurt. Yogurt contain live-active lactobacillus cultures, is good for those who are lactose intolerant and contains protein.

If you are allergic to dairy, there are other ways of having calcium that you can integrate into your diet to ensure you are getting the daily recommended intake. These include soy or almond milk. Be sure to check that they are calcium fortified, which most of the time will be labelled on the products packaging. Fish such as salmon and sardines, tofu, nuts and seeds including almonds, brazil nuts and sesame seeds. Dark green leafy vegetables are also sources of calcium.

Zinc

Zinc is essential during pregnancy for baby's growth. Research has shown there may be links to issues with immunological development, growth and congenital abnormalities with low zinc in pregnancy. Most prenatal vitamins contain zinc. Meats such as beef, lamb, pork and chicken and fish contain the highest levels of zinc. Legumes such as beans and pumpkin seeds and dairy products including cheese, yoghurt, milk and eggs are also food sources that contain zinc.

Vitamin B12

Your pregnancy multivitamin (see page xx) most likely contains vitamin B12, although there is no harm in consuming foods that contain vitamin B12 such as milk, milk products and eggs. Vitamin B12 in pregnancy is essential for the neurological function of your baby and the development of the central nervous system.

Vitamin D

We mostly get our vitamin D from sunlight however, you can take it as a supplement. Calcium helps the body to absorb vitamin D. Getting sun exposure during pregnancy is not only good for your immune function and bone health but also beneficial for your baby.

It is a great idea to get out into the sunshine every day, even if it is only for a few minutes, while ensuring you are sun smart and avoid going out during the hottest time of the day.

Pregnancy supplements

Folate, otherwise known as Folic Acid. Scientific research has shown that folate reduces the risk of neural tube defects in babies, such as spina bifida and anencephaly. Folate is a B vitamin and can be found in fortified foods such as bread and cereals. I suggest taking folate if you are planning to become pregnant and during pregnancy. Most pregnancy or prenatal vitamins that are available at the pharmacy will contain folate. The recommended dose by RANZOG for folate intake is at least 0.4 mg daily to aid the prevention of neural tube defects (NTD). You can check what quantity you are taking by looking at the labelling on your prenatal vitamins.

Iodine is a trace mineral. It is found in several plants and animal foods. It is an essential part of our diet, although this may be the first time you've heard about it. During pregnancy iodine plays a vital role in your baby's brain development and nervous system. Iodine can be found in dairy products such as milk, cheese and yoghurt. It can also be found in fish, some fruits and vegetables and of course, iodized salt. The recommendation by the RANZOG is that if you are pregnant, breastfeeding or planning to become pregnant you should take an iodine supplement of 150 mg daily. Most, if not all, women's pregnancy multivitamins have iodine in them. Check the ingredients list on the back to see if it includes iodine when you purchase your pregnancy multivitamin.

Omega-3 fatty acids are particularly important for foetal brain development and retina. The best form of Omega-3 fatty acids is through the consumption of seafood, particularly fish.

What I'm really thinking:

Healthy eating in pregnancy

I didn't know if I was getting all these nutrients, essential vitamins and minerals that were recommended. Nourishing my body has always been important to me and eating a wide variety of foods in pregnancy without limiting myself anything (especially chocolate) was my goal. In the first trimester, I couldn't stomach much of anything other than toast and herbal tea. As the nausea subsided, I started to get creative with my meals. I tried to eat fish twice a week, eliminate drinking out of plastic water bottles and tinned cans that contain BPA (found in plastics) and choose healthy foods to snack on during the day. Some days, I did feel like eating for two. I seemed to be ravenous and constantly seeking out my next meal.

What you may be feeling

You may be feeling that the 'should eat' and 'shouldn't eats' lists are a minefield. Maybe all you feel like eating at the moment is yoghurt, chicken schnitzel or ice blocks. You may be unsure as to whether your diet is providing all the essential nutrients necessary for you and your baby.

- Give yourself a break. Eat what you feel like, everything in moderation and steer clear of the unsafe foods.
- Take your vitamins to ensure you are getting those essential vitamins and minerals for your babies' development and growth.
- Keep it simple. You don't need to go out and spend lots of money on special foods or 'superfoods'.
- Spend ten minutes planning your meals before heading to the supermarket. It is a good way to see written down on paper in front of you what proteins, meat, vegetables and fruits you have incorporated into your weekly diet and may help to find anything your missing or something you could simply add in.

IDEAS FOR HEALTHY SNACKING

- Handfuls of nuts and seeds. I love to soak and oven bake pumpkin seeds with a little bit of tamari – these make a great on the go snack.
- Fruit – always. Keep your fruit bowl stocked. Poach some rhubarb or the apples that are looking a little brown, and add this to your breakfast in the morning or with some Greek yogurt as a snack.
- Yoghurt. Greek yogurt with some fruit and a sprinkle of almond meal is quick and easy.
- Eggs. Remember to cook them well or ask for well down if your dining out. Eggs on toast is an easy quick breakfast, otherwise a quiche or pie is a great recipe that incorporates eggs.
- Wholegrain crackers or bread with avocado or cheese.
- Hummus with vegetables.
- Wholegrain bread toasted sandwich with cheese, avocado, tomato, baby spinach.
- Tuna or chicken salad with lots of vegetables to get a wholesome protein packed lunch or light dinner especially for those later months when you don't feel like a hearty meal.
- Fish in a bag. It's not as bad as it sounds. Place a piece of fish and some of your favourite vegetables and then wrap into baking paper with some tamari or lemon and place in the oven until cooked through. An easy, fresh and healthy meal.
- Edamame, also known as soybeans. A quick and easy snack and delicious too.

Should I be eating for two?

There is very much this notion of eating for two during pregnancy. You may feel hungrier than usual and may have food preferences throughout the duration of your pregnancy, both of which are okay. There is no need to increase your intake of food by two, though. There are a few essential nutrients including calcium, protein, iron, iodine and folate in which play vital roles in the growth and development of your baby but eating a diet that is nutrient dense, rather than larger quantities or portions of food, will ensure you are receiving adequate amounts of these nutrients.

FOOD SAFETY IN PREGNANCY

Bacterial food-borne illnesses like listeria and salmonella need antibiotics, as well as support for the mother with hydration and fever management. Food safety during pregnancy is important, but should not be something that makes you feel anxious. Taking some simple precautions over the next 9 months will keep you and baby safe. Food-borne illnesses such as listeria and salmonella are the ones commonly talked about when it comes to food safety in pregnancy. By taking a few steps might help to reduce the risks.

Toxoplasmosis

Toxoplasmosis is an infection caused by the parasite Toxoplasma Gondii. It is important that women take precautions to not contract the infection while pregnant, as this is because if the parasite crosses the placenta it can affect the unborn baby. Take these steps to avoid toxoplasmosis:

- Wash hands after touching any raw meat
- Cook meat thoroughly
- Do not eat rare or medium rare meat dishes
- Wash vegetables thoroughly
- Wear gloves while gardening
- If you own a pet cat, ask someone else to handle the litter trays and ensure they are cleaned daily.

Salmonella

Salmonella is a bacterium you may have heard of linked to food poisoning. We can become infected with salmonella through contaminated food and water, which may cause similar symptoms that you experience with the flu, such as vomiting, nausea, cramps, diarrhoea and fever. Both eggs and chicken are the most likely causes of salmonella infection, so when cooking, make sure they are thoroughly cooked through.

To reduce your chances of contracting salmonella, it is recommended you avoid raw or soft-cooked eggs, such as poached eggs, deli meats, sushi, sashimi and unpasteurised cheeses and milk products.

Listeria

Listeria, otherwise known as listeriosis, is an infection caused by the bacteria *Listeria monocytogenes.* It is a rare infection that can be passed from a pregnant woman to her unborn baby. It can be contracted through uncooked food or foods that haven't been stored or handled correctly. Listeria infection is determined through a blood test. Symptoms may include muscle aches, headache, nausea, diarrhoea, fever, and/or drowsiness or confusion. If contracted, it requires hospitalisation and is treated through intravenous antibiotics. To avoid food-borne illnesses:

- Cook meat and eggs thoroughly
- Wash vegetables and fruit
- Follow correct storage and handling of food such as putting food in the fridge, checking use-by and best before dates, heating food to correct temperatures, being wary of cross-contamination and washing your hands and fresh food thoroughly.

FOOD CRAVINGS

Food aversions and food cravings are relatively common during pregnancy. There are no concerns as far as consuming foods that you just cannot resist as long as they are safe foods. All I yearned for the first four months of my pregnancy was sauerkraut, pickles and citrus fruits. Cooking a meal was an accomplishment, where meals that I would normally enjoy made me feel physically sick. The cravings started to settle down around 5–6 months, although there were certainly times in the later months where requests of strawberries and liquorice were high on the list. Towards the end of the pregnancy, I 'emotionally' ate, seeking foods that contained sugar. I blame this on the fatigue and looking for a pick-me-up in the afternoon.

You may have heard of pica, which is the persistent craving of a non-food substance that may occur during pregnancy, which may include dirt, clay, paper or chalk among other non-food substances. Although pica isn't common, if you have these cravings, it is important not to consume these substances as a health precaution, and speak with your midwife or doctor.

Dealing with allergies

You should continue to avoid allergenic foods while pregnant and treat as per your action plan. There is no need to avoid allergenic foods such as peanuts, tree nuts, milk, egg and fish while pregnant or breastfeeding. There is no sufficient evidence to suggest that avoiding allergenic foods while pregnant will decrease your babies risk of developing a food allergy.

WHAT SHOULD I AVOID?

Alcohol

There is currently no research or data on a 'safe amount' of alcohol that can be consumed while pregnant so, to err on the side of caution, it is best to avoid it completely. There is so much confusion around alcohol consumption during pregnancy, particularly when it comes to low-level drinking such as having the occasional drink during the nine months. Know that your friends and family members will all have a different opinion on the matter, but you must make the decision you are comfortable with. Heavy alcohol consumption during pregnancy is harmful for a developing foetus. Foetal alcohol spectrum disorders and foetal alcohol syndrome are problems that can develop from drinking alcohol during your pregnancy. Foetal alcohol syndromes can range from behavioural issues, developmental, physical and lifelong as a result of alcohol consumption during pregnancy.

Cigarettes

Smoking has adverse effects on the wellbeing of the foetus. If you are a smoker, quitting prior to becoming pregnant or in early pregnancy will give your baby the best start to life. Smoking while pregnant increases the risk of miscarriage and stillbirth. Carbon monoxide, nicotine (the addictive stuff) and other poisons contained in cigarettes are passed through your blood stream, which reaches your baby. There are several quit smoking programs available that can assist you throughout your pregnancy (see page xx).

Raw fish

Fish is an important part of a healthy balanced diet. The food authority suggests that caution be taken care when consuming

fish, particularly seafood such as raw sushi, sashimi and oysters or pre-cooked prawns and smoked salmon, due to the increased risk of listeria.

Unpasteurised cheeses

You may have heard or read that pregnant women should avoid consuming soft cheeses, as un-pasteurised milk products such as soft-ripened cheeses or mouldy cheeses, including camembert and blue cheese, are more likely to be contaminated with listeria if not properly handled or stored. The good news is most of the cheeses we purchase from the supermarket are pasteurised, and if you store and handle them correctly at home, this makes the risk considerably low. Be sure to consume these products in moderation and purchase them from a reputable store or supermarket.

Feta cheese, if store-bought, has a very low risk and is safe for pregnant women to consume. Other cheeses that are safe to consume during pregnancy include cream cheese, ricotta, cottage cheese, parmesan and other shelf-bought cheeses.

Caffeine

Coffee is part of the daily ritual for many of us. This is probably a question you will be asked friends and family members. Yes. You can certainly have that morning coffee. Caffeine should be consumed in moderation. The recommendations are that pregnant women don't consume more than 200 mg of caffeine per day. To put it in perspective, that is equivalent to 1 cup of strong coffee or approx. 3 cups of black tea. Great news is you don't have to give up your morning coffee. It is important to note that energy drinks and other products contain caffeine, so if you drink other forms of caffeinated drinks, you may need to limit these. There is no research to suggest that consuming caffeine during pregnancy causes birth defects.

Some beauty products

There are a few ingredients that can be found in beauty products that should be avoided during pregnancy. These include:

Vitamin A (retinol): A lot of anti-ageing cosmetics, acne creams and some sunscreens contain retinol, a vitamin A formula which may be harmful to use

Research has shown that Vitamin A taken orally such as Isoretinol (also known as roaccutane), a medication given for people with

severe cystic acne, causes major birth defects if taken during pregnancy. Although there has been some research on topical Vitamin A and its absorption on the skin, there is not enough research specific to pregnant women using it topically. Therefore, most health professionals will suggest that retinol/vitamin A-based cosmetics during pregnancy should be avoided. It is a good idea to read through the ingredients in your bathroom cabinet to check if any of your usual creams, serums or sunscreens contain vitamin A or retinol, just to be on the safe side.

Hydnoquinone: Hydnoquinone is used for pigmentation as a skin whitening agent including melasma (darkening of the pigment in the skin that occurs during pregnancy). However, it should not be used during pregnancy. Dermatologists will recommend that you wait until after you have ceased breastfeeding before using hydnoquinone for melasma as the absorption through the skin is high. There is a lack of data and sufficient evidence on absorption and effects of skin whitening creams that contain hydoquinone during pregnancy and is therefore advised it not be used during pregnancy for safety.

Botox: When it comes to anti-aging treatments such as Botox or fillers, it is advised that you do not have these done while pregnant. There is not enough sufficient medical research or safety data into the effects of Botox and fillers in both pregnant and breastfeeding women and therefore, health professions will advise that you avoid these.

Saunas and steam rooms

There is a lot of misinterpretation around this topic. The recommendations say that use of saunas and steam rooms should be avoided while pregnant. This is also the case with *hot* baths (baths that are so hot that your skin turns pink). There are no specific guidelines that indicate what an exact temperature is safe for a bath, and a safety first and sensible approach should be followed.

A warm bath is perfectly safe and a great way for you to relax, and one you will appreciate as your growing bump gets bigger and you begin to get aches and pains. Baths can help you relax – put some music on, read a book or magazine, switch your phone off and light a candle.

Can I dye my hair?

Many women choose not to continue to dye their hair during pregnancy and it is very much a personal decision. There is no scientific evidence to suggest that using hair dye during pregnancy will cause any harm to your unborn baby. However, it is suggested that women wait until after the 12 weeks of pregnancy before dying their hair, just to be on the safe side. If you are exposed occupationally (hairdressing or beauty therapist), it is a good idea to reduce your exposure by using safety measures such as wearing gloves, having good ventilation and safeguarding storage and disposal of chemicals.

ANTENATAL CARE

Throughout your pregnancy, you will receive care from several different health professionals. In Australia, there are a number of paths you can take when it comes to birthing your baby. It isn't uncommon to think that the only route is to go through a public hospital and have midwife care. This is a great option; however, it isn't your only one, particularly if you have private health insurance. Depending on your specific requirements, it is a good idea to explore your options and what is best suited to you.

If you are a patient with private health insurance, or a self-funded patient choosing to have an obstetrician, you will receive a referral from your GP, and then see your obstetrician for the duration of your pregnancy. If you are a public patient, or a patient choosing to either birth in the public hospital or through a birthing centre, you will first visit your GP, who will run all the necessary tests such as bloods, arrange for NIPT if you choose to have it, any vaccinations you may need throughout your pregnancy and referrals to health specialists should you need to see them. You will visit the birthing centre at the antenatal outpatient clinic at your nearest public hospital from around the 12 week mark. Regular check-ups will be done through the outpatient service, primarily with midwives.

There is so many conflicting opinions when it comes to birth. Should it be in a hospital? Can I have my baby in a birthing centre?

Public or private? Should I have an obstetrician, or should I consult a midwife? Can I have a water birth? From my personal experience, I think the right choice is the one that resonates with you most. Choose the support that feels most right for you and your baby, whether having a midwife or doctor, and ensure they will support your pregnancy and birth choices.

YOUR OPTIONS

One option is to birth in a private hospital, or in a public hospital as a private patient, with a private obstetrician of your choice. It can be a strange task when finding the right obstetrician for you. Maybe you're lucky and already have a gynaecologist who you trust, I spoke with friends, family members, my GP and work colleagues to get suggestions.

When choosing a private obstetrician, do your research. Look at their website or contact their rooms to ask about fees, which hospitals they work out of, waitlists and whether they are taking on new patients. Ask friends, family members and colleagues who they would recommend. Sometimes meeting the OB/GYN is the best indication of whether they are right for you.

If you want to have the obstetrician of your choice but don't have private health insurance, you can be a self-funded patient. This means you can birth in a public hospital but are required to pay any out-of-pocket expenses yourself, straight to the obstetrician.

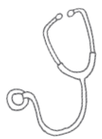
If you choose to go through the public system, you will routinely see a midwife for antenatal care and, at times, an obstetrician such as if your baby is breech towards the end of your pregnancy, or if there are any complications or concerns. When going through the public health system, you can choose to either go through the birthing centre or the midwife care.

To go through the birthing centre, your pregnancy must be low-risk, which means if you're pregnant with multiples or have any conditions or complications, this will not be an option for you. The birthing centres do not have access to pain medications such as epidurals and C-sections are not performed. The birthing centre is run primarily by midwives and if there are complications, you will be transferred to the nearest hospital that has the necessary medical equipment and facilities.

For midwife care, you will meet with you at scheduled intervals throughout your pregnancy, usually starting around 12 weeks onwards. They will provide you with support, guidance and advice on pregnancy and birthing options. Some public teaching hospitals have what they call a 'caseload', or midwife care program. This is one-on-one care where you have one midwife for the duration of your pregnancy. The continuity of care helps build self-confidence and provide reassurance and support to reduce anxiety and empower women throughout pregnancy. It is typically for women with low-risk pregnancies who are choosing to have a natural birth with no intervention. When you contact your local hospital, ask if this is available and how you can get involved.

If you have a GP who you trust and knows you, you may choose to have GP/shared care arrangement with the hospital. You can also have shared care with your GP and the midwives through the public system. This means that you will have regular check-ups with the GP and routine appointments with the midwives. Some women like to do this as they already have a rapport with their GP and feel comfortable having them for support and advice throughout the pregnancy.

David



YOUR PREGNANCY TEAM

In a perfect system, 'continuity of care' should involve the whole team of GP, midwife and obstetrician.

The GP

This is often the first person you will see after a positive pregnancy test. If you have a regular GP, they will have a good idea about your general health and any things to be careful of in pregnancy for you in particular. A GP referral is also needed to access a lot of the care options available for pregnancy, as well as some of the initial tests. Many GPs have a lot of experience in managing pregnancy, and some

even deliver babies regularly, often referred to as GP Obstetricians. When the GP is involved in your care throughout the pregnancy, this is called GP shared care.

GP Obstetricians are more common in rural Australia and remote areas. These doctors are mainly trained as general practitioners but have a special interest in obstetrics without having completed full training as a specialist. Some of them have a huge amount of experience, but have usually done at least a year of additional training in a hospital with specialist obstetricians.

Even if they won't be at your birth, your GP remains a valuable member of the team looking after you. In particular, their more general focus gives them a bigger picture of your health. They can help put together advice from multiple different specialists and care providers who might be involved if you have additional health challenges.

Midwives

Midwives form a core part of the staff in hospital maternity units. In Australian public hospitals, midwives do most of the straightforward births. The notion of midwives being 'nurses who deliver babies' is a false one though. Midwifery has become quite distinct to nursing, and most newly qualified midwives actually have no nursing background at all.

Increasingly, midwives are becoming independent practitioners. Some are now able to offer full care for low-risk pregnant women from beginning to end. Midwives often have a very wholistic view of pregnancy and childbirth. A lot of independent midwives have a more 'glass half-full' approach to pregnancy management, with a focus on the normal. Doctors can sometimes fall into the trap of a 'glass half-empty' approach, by keeping the focus on risks. Indeed, the first visit with an obstetrician is commonly referred to as a 'risk assessment'.

There are many models of care that midwives are involved in. Most hospital-employed midwives work on 8–10 hour shifts, so that during the course of labour, it is not unusual to be cared for by two or three different midwives. Over the last couple of decades, many 'caseload' midwifery units have been developed in Australian hospitals. These midwives often work in the units referred to as 'birth centres'. The core philosophy of these units is to try to keep the same midwife (or small group of midwives) involved from beginning to end. This principle

of 'continuity of care' is an important one in pregnancy management, as it has consistently been proven to give better outcomes for women and their babies. This continuity may be from a midwife, GP or obstetrician. The development of trust and consistency of advice from one practitioner is thought to be where a lot of the benefit lies.

Unfortunately, when issues arise during a pregnancy or labour, midwife continuity sometimes has to defer to medical care. Midwives in Australia do not deliver babies by vacuum, forceps or Caesarean section. If an assisted birth is required, this is one circumstance when midwives will ask an obstetrician or other hospital doctor to attend. All registered midwives in Australia are required to have the facility to access medical advice and care for women who fall outside of strict guidelines during the course of their pregnancy as well. This is a common source of disappointment for some women, when they become excluded from midwifery-led care.

Even if you have a private obstetrician, midwives will usually still be involved in monitoring you during labour and are able to manage a wide variety of emergency situations if the need arises.

Obstetricians

Obstetricians are able to manage the full spectrum of pregnancies and births, from the perfectly normal, through to those with serious complications. As mentioned, obstetric training does have a focus on risk minimisation, which sometimes requires medical intervention. The key to a good obstetrician is knowing when to intervene, and when to 'sit on your hands', as a colleague once advised me.

One of the greatest rewards in private practice is the fact that most pregnancies and births I manage are 'normal' and I expect things to go well. This is a bit of a contrast to my training in public hospitals, where usually the doctor is only called when things are no longer normal. As a trainee, it felt like a typical day if I introduced myself to a couple only moments before performing an emergency forceps delivery of the baby. When I have gotten to know the couple over the 6 to 9 months prior, we have developed mutual trust and an understanding of birth goals.

A good obstetrician will be able to see you through everything your pregnancy or birth can throw at them, no matter what. A good obstetrician should also not intervene just for the sake of it.

Hospital Doctors

While it is true that obstetricians and GPs work in hospitals and do a lot of the patient care for pregnant women, there is a lot of variation in the experience and skill level of doctors staffing maternity units in Australian public hospitals. I have listed a few of the doctor types that you may come across as a patient in an Australian hospital to make it easier to understand where they fit into your care, and what background and experience they may have.

Intern – This is a doctor who has been out of medical school for less than one year. Interns tend to rotate through different specialties. They may have an interest in obstetrics or may find it the most boring thing in the world.

Resident – Often referred to as RMO, or in some states as SHO, is a year or two above an intern. These doctors are generally a bit more confident with basic patient care and are starting to develop an interest towards a certain specialty (including general practice or obstetrics). Many residents will have to complete 6 months of obstetric training on their way to general practice or another specialty. Residents are often relied on in public hospitals to do initial basic assessments on pregnant patients, and they are the most common staff who repair vaginal tears after birth in a lot of public hospitals.

Registrars – Are often in formal training to become a specialist obstetrician. In Australia, current registrar training to become a specialist is 6 years after acceptance into a program. For this reason, there is quite a bit of variation in experience between registrars, depending on how long they have been in training. In Australian public hospitals, most Caesareans, vacuum and forceps deliveries are performed by registrars.

Career Medical Officer – Or CMO. These are doctors who have not formally trained to be either a GP or specialist obstetrician but have continued to work in public hospitals, often for many, many years. CMOs can often have a similar amount of experience to some obstetricians, especially with procedural skills, but have never sat the formal examinations or training requirements to become a specialist.

Support Persons

This is potentially the most important help you can get. A professional pregnancy support person is often referred to as a doula. Most support people are free though, and readily available (whether they like it or not). The most common (non-professional) people in the room during labour are partners, mothers, mothers-in-law, sisters, friends, fathers, brothers etc. The most important part though is not to have too many. There is nothing more off-putting for a woman in labour than a crowd of spectators.

It is often suggested that you limit in-labour support people to two at a time. Having some people available to take relief shifts may also be useful. Common tasks for the support person may include massages, fetching drinks and snacks, putting down towels . . . The most important job is just being there. Physical presence of a loved one during labour provides solidarity and motivation for the labouring woman. Sometimes, they may even be able to stand in as an advocate for plans made during the labour if the woman is exhausted, in distress or otherwise not able to speak for themselves.

WOMEN HAVE BEEN BIRTHING BABIES FOR THOUSANDS OF YEARS. WHY IS IT THAT NOW THEY NEED A DOCTOR AND A HOSPITAL TO DO IT?

This is an argument that is often used to point out the ‘interventional’ trend in modern birth. It is true that, as birth has become something which is more commonly done in a hospital, it has become more common for women to use medication for pain relief, or to undergo assisted births like Caesarean or vacuum delivery.

The counter-argument is that, for thousands of years, people accepted that it was not unusual to lose babies or mothers in childbirth. There is also little data to compare rates of bladder and bowel incontinence suffered by women in the past, or emotional trauma carried from bad births. In Australian hospitals, deaths related to childbirth are very rare. The odds of a woman dying as a result of having a baby are around 1 in 10,000. The risk of a baby dying near the due date is 1 in 1000. A lot of this is due to modern surveillance and the ability to intervene when needed.

However, it is true that when you draw a line somewhere with an intervention to prevent a tragedy, you want to draw that line with a

fairly safe margin. This means that a proportion of women will end up having an intervention done as a precaution, when it might have been okay without.

There is a growing movement towards women birthing out of hospital environments, which in part hopes to reverse the trend of intervention. Many programs designed to assist women to birth in low intervention environments, including in their home, are now available. For the most part, the people involved in these models of care are experienced and motivated practitioners. If you plan to birth outside of hospital, do your research and make sure that your practitioner is working within the safe realm of their expertise. I would also encourage all women birthing outside of the hospital to engage with the hospital system in some way and have a fall-back plan in place. Trapeze artists can make their body do amazing things, but most would still like the safety net underneath them, just in case.

The key is finding the right balance between making use of medical care and being able to have the opportunity to keep things as natural as you would like them to be.

FIRST TRIMESTER TESTS

BLOOD GROUP, COUNT AND ANTIBODY SCREENING

Getting an idea about your blood is important for pregnancy. A blood count tells if your body has enough of the cells floating around that carry oxygen. These are called red cells, and the thing inside them which is most important for carrying oxygen is called haemoglobin. During pregnancy, your body needs to make about a litre of extra blood to have enough going around to supply oxygen to the placenta and baby. As part of this, your body also starts retaining more fluid to give the red cells something to float in. Sometimes you can make antibodies against foreign blood cells. Your baby may have a different blood type to you (like the father) and we screen to make sure your body's immune system is not reacting to this. All this stuff is checked again multiple times during the pregnancy.

SCREENING FOR RELEVANT INFECTIONS AND IMMUNITY

Hepatitis, syphilis, HIV, Rubella (German measles) get checked for every pregnancy, so don't be offended when your doctor wants to order these tests. Based on your particular health history, the doctor may also order additional tests, such as serology for genital herpes, or checks for other bugs if you spend a lot of time with animals or small children. The reason for these checks is to look for viruses which can have an effect on baby, either in relation to birth defects, or cross-infection during birth. Being forewarned in these circumstances can help to improve the outcome for baby.

Pap Smear

This can be done in the first trimester but may be omitted due to the possibility of blood spotting after a pap smear, which can be alarming. If you are overdue, it is probably worth doing early in the pregnancy, but can often be safely left until six weeks after the baby is out if you are reasonably up to date. If you have recently had an abnormal pap smear, then it is important to have a discussion with an obstetrician about how this needs to be monitored during and after your pregnancy.

As of writing this book, Australian cervical cancer screening is undergoing a major shift, and a different test looking for HPV DNA (evidence of the virus involved in abnormal pap smears) is becoming the new standard first line test. With new guidelines, this will now only require testing every five years, which should make it a bit easier for women to manage proper screening.

ULTRASOUND

There are some women who choose to go through their entire pregnancy without having an ultrasound. While I respect the opinions of couples when it comes to ultrasound, I personally have no reservations about restrained use of ultrasound technology during pregnancy. It is recommended that all pregnant women have at least one ultrasound in the middle of the pregnancy, to know how many to expect to push out, and to make sure the placenta is not blocking the way out.

When it comes to the first trimester, there are a few reasons that an ultrasound may be suggested – to date the pregnancy, to screen for

early major birth defects and for chromosomal disorders such as Trisomy 21 (Down syndrome).

There are some additional reasons that an early ultrasound may be recommended by your doctor. This includes any risk factors for ectopic pregnancy, where an early pregnancy implants outside of the uterus. If undetected, this can be life-threatening, and in many women causes damage to, or rupture of, a Fallopian tube. If detected early, it can often be managed without the need for surgery.

Dating

Dating of the pregnancy may not be necessary, if you had a clockwork menstrual cycle and you were sure of your period dates. The dating scan can lead to confusion when it does not quite match up with your natural period dates. As a general principle, if your dates are within five days of an early ultrasound date, you can stick with them. Because the most consistent part of a woman's menstrual cycle is from ovulation to getting a period (14 days), women with longer cycles will actually be a bit earlier in the pregnancy using their first period date compared with women with short cycles. To naturally date a pregnancy, it is sometimes suggested that you subtract a number of days from your due date if your cycle is more than 28 days, or add a number of days to your due date if you cycle is shorter than 28 days. The most accurate time to date a pregnancy by ultrasound is between 8 to 10 weeks of the pregnancy. At this stage, a heartbeat is clearly visible and there is not too much variation in size. At the end of a pregnancy, a healthy baby can vary from 6 to 11 pounds (or 2.5 to 5 kg), all of which can be perfectly normal for that particular couple. This variation in size begins after the first trimester, so dating a pregnancy after this time is notoriously inaccurate.

Be aware that it may not be possible to see a heartbeat until after 6 weeks of pregnancy. Even then, an internal ultrasound may be necessary to detect this. Most viable pregnancies should be visible with an ultrasound on your abdomen by 8 weeks gestation – especially if you have a very full bladder. They are not just playing a joke on you by making you drink that litre of water before pushing on your bladder. The water in your bladder pushes the uterus up out of the pelvis and also provides a clear 'window' for the ultrasound waves to be reflected back to the probe. Keeping that bladder full for your dating scan will

reduce the likelihood of that awkward moment when you are asked to use the internal probe (often referred to as 'the wand'.)

If the baby is not at the size you were expecting, don't be too worried until you see your doctor. While it is a common cause for worry, there can often be a harmless reason and it may mean you ovulated late that cycle. Sometimes, it will be that the pregnancy has stopped developing at some point, an unfortunate occurrence referred to as a missed miscarriage. Sonographers always get nervous doing dating ultrasounds for women, because it is such an emotionally charged event. While it is an amazing experience to be able to show a couple the first heartbeat of their new baby, it can be devastating to not find it.

Screening

Some people feel that knowing whether or not they are carrying a child with a major chromosomal abnormality is important. This is a choice that you have to make for yourself, helped by good advice from your doctor.

Ultrasound has been used for a number of years to measure the thickness at the back of the baby's neck – called the nuchal translucency – between 11 to 13 weeks. In conjunction with a blood test, this can give a risk of carrying a baby with three major syndromes where the baby is carrying an extra chromosome, or 'trisomies': Down syndrome (Trisomy 21), Edwards syndrome (Trisomy 18) and Patau syndrome (Trisomy 13). More recently, these conditions can be detected by a blood test alone, called NIPT – non-invasive prenatal testing. However, as ultrasound technology improves, the 12-week scan has been useful for picking up other major defects with development of the baby's spine, brain, limbs or abdominal cavity.

Is Ultrasound Safe For Baby?

The technology uses high-frequency sound waves, which are a form of energy. In experimental studies, using very high-powered ultrasound for extended periods of time (many hours, or even days), there have been temporary and reversible demonstrated changes in very particular tissue types shown in some animals. The implications of this are unknown in humans, using ultrasound at much lower power levels for only very brief duration, and not continually

focusing on one tissue area. The risk, if any, of ultrasound is thought to be very, very small. Radiologists refer to this safe respectful use of imaging technology as the ALARA principle – As Low As Reasonably Achievable. There are certain precautions we routinely take to minimise theoretical risks, such as avoiding high power Doppler imaging on very early implantations or for prolonged periods of time near bone/fluid interfaces.

Some people worry that ultrasound may be uncomfortable for the baby due to the pressure, or perception of the sound by the baby. There is no evidence that ultrasound causes any recognisable distress for baby. There is certainly no doubt that over many decades the ultrasound has revolutionised pregnancy management for the better.

What I'm really thinking:

The 12-week ultrasound

I was very nervous and excited as it neared the 12-week ultrasound, particularly in my first pregnancy. It is such a wonderful experience getting to see your baby for the first time; The ultrasound technician points out different parts of the body, but really, it all just looks like a blob. Then, wait for it . . . the magical heartbeat. She turns up the sound on the machine and there it is. A sense of relief and the realisation that there is actually a tiny being growing inside of me. Hearing that heartbeat for the first time is like a weight has been lifted off your shoulders; that is all I have been waiting to hear for the past 2 months.

What you may be feeling

You may be counting down the days until that 12-week ultrasound. You might be feeling excited and impatient, particularly if your journey to becoming pregnant has been long or difficult. Likewise, your partner may be elated at getting to see baby and hear the heartbeat for the first time. The 12-week ultrasound puts your mind at ease.

FOETAL DEVELOPMENT

In my practice, I look with the ultrasound at every visit. When it comes to development of the baby, I think in terms of what I can show the couple on a screen.

For the first two weeks there is nothing, because you are not pregnant yet. In weeks 3 and 4, when some women may have an inkling they are pregnant, if we look with an ultrasound, there will be a small cyst on the ovary (the one you ovulated from) and the uterus may look a little larger.

5 weeks

It is possible to confirm that a pregnancy is in the right place because a very small bubble will be visible inside the womb. This is the gestational sac, which is the developing amniotic fluid and early placental tissue. Until later in the pregnancy, the size of this sac is all we can measure to estimate how far along the pregnancy has progressed.

6 weeks

The gestational sac will be a lot bigger. It will generally be possible to see a little jellybean of a dot within this bubble, which is called a foetal pole. At this stage, the little jellybean is only a few millimetres long.

8 weeks

It should now be possible to see a flicker of a heartbeat. The rate of this heartbeat initially can be a little slow but should come up to a quite fast pace of 160 to 170 beats per minute (bpm) sometime during the next couple of weeks. The little jellybean may now even have visible 'limb buds', which look like stumpy little teddy bear arms and legs. Sometimes, you can even see that baby still has a 'tail', as the rest of the baby catches up with the developing spine. It may be a little early to see any movement, but the bubble of fluid in the womb should be quite prominent.

10 weeks

The heartbeat should be easy to see. It will be possible to clearly see which end is the head of the baby and, which is the bottom. The little limbs will be starting to look like proper arms and legs. If you are lucky, you should be able to catch some movements of the baby, which often look like little jumps from the hips. Don't be too

concerned if you don't see baby move, as they can often sleep for long periods.

12 weeks

This is the most common time that women have an ultrasound during the first trimester. By 12 weeks, it is very obviously a baby. The bones are beginning to fill with calcium and on ultrasound, it begins to look like a little skeleton of a human being. The shape of the forehead and nose will be apparent. The spine and limb bones become very obvious and the heartbeat is not just a flicker, but a proper beating heart. It will often be possible to actually 'hear' the heartbeat by 12 weeks, using a doppler ultrasound. Movements are very common, and you may see the baby wave its hand across the screen, or arch its back and neck. All of the major organ systems are formed, but very tiny, so not able to be properly examined in detail. This is why we wait until closer to 20 weeks to have another look at all the organs.

16 weeks

By now, most women will be able to feel their 'baby bump' above the pelvis and below the belly button but may not yet be feeling movements. Baby will be starting to get too big to fit on the ultrasound screen all at once. The baby weighs around a quarter of a kilo at this stage. It is possible to make out fine detail, such as fingers and toes. It may even be possible to have a reasonable guess about the baby's gender.

20 weeks

By now, all the organs are clearly visible on ultrasound, and there is a check for anything untoward with development in the 'morphology ultrasound'. From 20 weeks, it becomes possible to get a clear glimpse of the baby's face with detail like the cheeks and lips becoming more apparent. It also starts to become obvious what the gender is, so care is needed not to give away any surprises.

CHROMOSOMAL SCREENING – NUCHAL, NIPT AND INVASIVE TESTING

This is an area of testing has evolved rapidly in the past two decades. Chromosomal screening is now something that the majority of pregnant couples consider a routine test.

A chromosome is basically a big bundle of DNA, the stuff which carries our genes and makes us each as unique as we are. Inside every

cell of our body is all of the genetic information, tightly organised into these chromosomes, of which, most of us have 46. The only cells in our body which do not have 46 chromosomes are the ones which we are making specifically to use for making a baby. These are the sex cells, or gametes, and they are only supposed to have half of our chromosomes, or 23. These are the sperm in men, and the ovum in women. When sperm are made, or ovum are getting ready to ovulate, they undergo a final molecular dance called meiosis, in which a cell with all of our DNA is split into two, with half given to each gamete. Sometimes, this doesn't quite happen properly, and gametes with the wrong number of chromosomes are made.

For men, who make tens of thousands of sperm every day, producing a proportion of irregular sperm is considered normal. The age of the male partner does not seem to have as significant an impact as the woman on chromosome number for the baby. It is possible that the sperm with the bad chromosome combinations don't swim as well and can't fertilise the egg.

For women, each ovulation (once a month for most women) only releases one egg (but sometimes more, which is one way that twins occur). If that egg has an incorrect number of chromosomes, it is more of a problem for making a baby. This becomes more common with age in women, because all the eggs are present from the time a woman is born. 'Old eggs' don't seem to split their chromosomes as easily, and having the wrong number is more common.

When an egg is fertilised by a sperm, the chromosomes mix together. 23 from each parent usually makes an even 46 for the new baby. Out of the 23 pairs of chromosomes, there are some which are more vital than others to making a baby. Think of the chromosomes like the pages of an instruction manual for making a piece of flat-packed furniture – if you were reading the instructions and the last page with the warranty was missing, you could get by pretty well. If the two pages in the middle, which told you where to put those seven long screws and 22 short screws and that other thing with no name go . . . you are probably going to struggle a bit more.

Most of the time, if the balance of chromosomes is wrong, the developing embryo realises it doesn't have all the instructions and the whole thing stops. This usually happens in the first 6 to 8 weeks and is the reason for a lot of miscarriages.

There are some combinations of chromosomes which aren't as readily recognised as challenging for the embryo, and it can develop into a more mature foetus without any obvious concerns. The most common combinations which allow an embryo to develop into the second trimester are the ones we screen for with the above tests, at the end of the first trimester. The chromosomes involved are numbered 13, 18 and 21. In addition, the sex chromosomes (X and Y) can also have uneven combinations. Some of the early pregnancy chromosomal tests will also screen for this.

Nuchal Translucency

This test involves an ultrasound at around 12 weeks to check the thickness at the back of the baby's neck. A blood test is also taken from the mother to check for two substances, PAPP-A and free beta-HCG. The numbers from this ultrasound and the blood test are combined with statistics related to the mother's age and the major trisomies, and the odds of abnormality are calculated.

If you are in your 40s, and you have a risk of 1:50 of having a baby with a chromosomal disability, a result giving new odds of 1:700 is going to be pretty great news. This same result might sound terrifying to a woman in her early 20s, as her risk before the test was around 1:1400. It is still very unlikely that her baby has a syndrome, but to her mind, the risk just doubled.

NIPT

This stands for Non-Invasive Prenatal Testing. It is a blood test for the mother that can detect tiny fragments of DNA from the baby floating around in the mother's bloodstream, called free foetal DNA.

This test can be performed from around 10 weeks onwards, and results are usually back within a week. Unlike nuchal translucency, the reported results are not affected as much by the age of the patient and their prior risk. The results are not given with such variation in the odds, instead reported as low risk or high risk by the pathologist. A 'low risk' result can be reported by some labs as low as 1:10 000, which most couples find reassuring.

Keep in mind that these results are currently limited to chromosomes 13, 18, 21, X, Y and some small partial chromosomal duplications or deletions.

It is also possible to be told the gender from this test, if you would like to know.

Who can have the test?

Anyone can have the NIPT test. If you are over 35, or you or your doctor would like to investigate further after the results of the 12-week ultrasound and scan, this may be an option for you.

What does it involve?

It involves a blood test anytime from week 10 onwards. The results are usually back within a week. Unlike the Nuchal Translucency Test, the results are not affected by the age of the mother and their prior risk. The results are given as either 99.9+% sure that the baby has the syndrome or 99.9+% sure that the baby does not have the syndrome. In odds like those above 1 in 10 000 or less, which makes it reassuring for parents. If this result is negative, few people would consider amniocentesis. If the result is positive, it would be likely that it is recommended to have amniocentesis to confirm the result before acting on it. Amniocentesis is a more invasive form of testing but it provides more accurate results. However, it is not a routine test and might be undertaken when your doctor feels there is a need for further testing.

A modern-day dilemma of the NIPT test is that it can tell you the gender of the baby from as early as 10 weeks. Before this, most couples would have to wait for their second trimester ultrasound to know the gender, which happens around 20 weeks. Don't worry, if you want to keep the gender a surprise (which is very common) you can choose for this result to be hidden from the lab report. If you do change your mind down the track, most laboratories will reveal the gender on request later.

Invasive Prenatal Testing

If any of the above screening tests return a positive result, proving the condition requires a diagnostic test.

This is a test where a needle is inserted into the uterus through the skin of the abdomen, and some fluid is taken out of the sac around the baby (amniocentesis) or a small biopsy of placenta is collected (chorionic villus sampling – or CVS). Screening for chromosomal problems is only one of the reasons these tests can be done, but it is the most common reason for them.

By taking a sample of fluid or tissue from around the baby and directly checking for chromosomal problems, you can be almost certain of the result. The biggest drawback of this test has always been that it is invasive and hence carries a small risk of causing complications, including a small chance of causing a miscarriage of between 1:100 to 1:200 depending on the type of test done.

What I'm really thinking:

The NIPT

I feel like when I have found out I am pregnant; there is excitement but also anxiety surrounding the health and wellbeing of my baby. I didn't have the NIPT test with my first pregnancy, but decided that I wanted to do it for my second. I found that doing the NIPT the second time around helped me be a lot less worried knowing that he was a low risk for many of the chromosomal abnormalities that they test for. I felt that by having it, if the results were indicative of an abnormality, that my husband and I could plan and prepare. The test is a simple blood test, no special needles or fasting necessary. Being as impatient as I am, I ticked the box to find out the sex (a perk of having the NIPT).

Ruby

SYMPTOMS AND SIDE-EFFECTS

Everyone has different experiences in the first trimester: some women breeze through without a twinge while other suffer from nausea and vomiting, tender breasts and/or low energy levels. These early symptoms may even be the first sign of pregnancy for you. Below are a list of the most common symptoms and side-effects you may experience in the first few months of pregnancy.

MORNING SICKNESS

Morning sickness may be your first sign of pregnancy. From around week 6, you may start to feel nauseous or even vomit, which are very common for early pregnancy. In fact, around half of pregnant women experience nausea and or vomiting to some degree during the first trimester. It is important to remember that morning sickness doesn't harm you or your unborn baby. However, morning sickness that is severe and results in weight loss and dehydration may cause issues, and you should seek advice from your doctor.

Medication is usually the last resort when it comes to treating nausea and vomiting during pregnancy. The two most widely used medications for women who suffer from moderate to severe nausea and vomiting are ondansetron (Zofran) and metoclopramide. Metoclopramide has recently become a Category A medication, meaning it is safe to use while pregnant and has no known side effects in an unborn baby.

Ondansetron (Zofran) is a Category B medication, indicating that there are not enough adequate studies and research done in pregnant women. If you have vomiting and nausea that commences after week 9, it is a good idea to speak with your midwife or doctor to exclude other causes, such as illness or infection.

Tips for dealing with morning sickness

- Eat small meals frequently, preferably high carbohydrate and low in fat.

- Snacking on plain foods such as dry crackers or biscuits between meals may help.
- Keeping plain crackers within arms' reach for when you first wake and feel nauseous or if you wake in the middle of the night.
- Avoiding spicy or rich foods.
- Drink plenty of water to stay hydrated.
- Ginger may assist in easing nausea. You can safely have ginger powder or ginger tablets, which can be taken orally, or ginger tea.
- Get plenty of rest.
- Changing multivitamins to one that doesn't have iron may be beneficial for some women in managing nausea and vomiting, particularly during the first few weeks until the symptoms subside.

What I'm really thinking:

Morning sickness

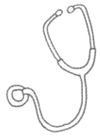
Nausea in the first 12 weeks was debilitating. Suffering from morning sickness during the early stages of pregnancy had an impact on my excitement about being pregnant. All I wanted to do was hide away at home, with a bucket next to my bed, sipping on ginger tea or sucking on ice blocks. Cooking meals was horrific, with every smell making me feel more nauseous. I kept reminding myself that it's good, that the nausea means the HCG is high and therefore, my pregnancy was going to continue.

Nausea in my second pregnancy was even more dreadful; running after a toddler while wanting to throw up is never a good time. This is where help from family and friends was essential, for getting rest and having downtime.

What you may be feeling

You may already be feeling those early nausea symptoms, where certain smells make you want to run for the loo. You might be vomiting at all times of the day or maybe it is a feeling similar to sea sickness that lingers all day.

David



HYPEREMESIS GRAVIDARUM (SEVERE NAUSEA)

Hyperemesis Gravidarum is severe nausea in pregnancy. Severe nausea and vomiting can begin as early as the first 4–6 weeks in pregnancy. Hyperemesis can cause weight loss and dehydration and usually requires hospitalisation or medical attention. If you cannot keep food and water down, and are vomiting frequently, contact your doctor.

People who get hyperemesis are some of the most distressed patients I come across. In severe cases, this can be truly debilitating.

The normal nausea and vomiting of pregnancy is considered a problem when any of the following start happening:

- You are becoming dehydrated.
- You are losing weight.
- You are showing signs of nutritional deficiency or anaemia.
- It is causing significant impact on mental health and wellbeing.

Many women with hyperemesis require multiple admissions to hospital during the first trimester for intravenous fluid rehydration, and anti-nausea medication. There are a number of medications that doctors can prescribe for hyperemesis. Some of these have a well-established safety record, while some are not known to cause problems, but do not have an established safety record so must be used with caution. Last line medications have a small potential for harm or side effects.

In addition to lifestyle and dietary measures, doctors will usually gradually build on the medications until the nausea is controlled. It is uncommon, but possible, to get so malnourished and unwell from this condition that it can cause organ dysfunction in the mother and lead to extreme measures, such as intensive care unit admission and use of intravenous nutrition.

Ruby 

BLEEDING

You may have some light bleeding or 'spotting' and think that it is a period. Early pregnancy bleeding is common, though distressing. It is not necessarily a sign of an impending miscarriage. Implantation bleeding may occur around eight days after ovulation. If you have light spotting around this time, it may be what is known as endometrial implantation.

If you have noticed some 'spotting', you may find that using a panty liner is beneficial as it will allow you to keep an eye on the consistency and quantity.

If you notice bleeding that is heavy or accompanied by cramping, seek medical advice from either your doctor or midwife.

BREAST CHANGES

Swollen and tender breasts? This is normal and may be a similar feeling to what you experience when you're due to get your period. Be prepared for many breasts changes throughout your pregnancy, especially as you near birth and prepare to produce milk. You may notice the veins on your breasts become more visible, your nipples may begin to darken in colour and feel sensitive to touch. These are all completely normal symptoms. A supportive bra with no underwire may help to alleviate breast tenderness.

BLOATING

You may feel bloated in the first trimester due to the hormone progesterone, which causes your digestive system to slow down and, in turn, make you feel bloated and uncomfortable. Bloating, cramping and flatulence are very common in early pregnancy and may feel similar to what you experience just before a period.

CRAMPING

Mild cramping in pregnancy is common. Cramping or stomach aches and pains are usually due to ligaments stretching around your growing uterus. Cramping may be felt throughout your pregnancy at

different stages as baby grows and your uterus expands. Back pain is also a common complaint in pregnancy, as your stomach begins to grow with increased pressure on your lower back.

If cramping or stomach pain is severe, or accompanied by bleeding, vomiting, fever, urinary tract symptoms, or if you are worried, it is always a good idea to speak with your midwife or doctor to ensure there aren't any other underlying issues.

CONSTIPATION

A common complaint that women have during pregnancy, and one that you tend not to discuss with your friends and family, is the changes in bowel movements, including constipation and diarrhoea. Fluctuating bowel movements in pregnancy are common and can be managed.

Constipation in pregnancy is also due to the increase in progesterone slowing down the digestive system, and the surge of blood volume and fluid being retained in the bowel. There are also other causes of constipation, including the pressure of your expanding uterus on the intestines, however, this is more the case in the second and third trimester. The introduction of a prenatal vitamins can also be the cause of constipation.

Tips for constipation

First try dietary fibres, such as fruit, vegetables and wholegrains. Physillum husk is a common supplement, which is found in Metamucil and can be used during pregnancy. Increasing fluid intake is also important. If there are no improvements, osmotic laxatives such as lactulose (also known as Actilax) and macrogol (also known as Movicol) are safe stool softeners. These draw fluid to the bowel to encourage a soft stool rather than causing cramping and contractions in the bowel, which are counterproductive. These laxatives are safe over-the-counter options and are commonly used in pregnancy and postpartum for mothers who suffer from constipation after birth. Another option, which you may prefer to leave as your last resort, is glycerol suppositories. These are very safe, gentle and fast-acting.

BREAKFASTS

Banana Protein Smoothie

¾ cup of milk of choice (dairy, nut or soy)
1 x banana
2 tbsp of Greek yoghurt
2 tsp chia seeds
1 tbsp shredded coconut
1 tbsp of LSA or almond meal

Place all the ingredients into a blender or use a hand mixer to blend.

Green smoothie

1 chopped apple
½ banana
½ cucumber
mint to taste
1 tsp chia seeds
125ml of coconut water
125ml of milk of choice

Place all the ingredients into a blender or use a hand mixer to blend.

On the run smoothie

½ cup of milk
½ cup of coconut water
½ cup of blueberries
½ cup of strawberries
¼ Avocado
A handful of baby spinach leaves

Place all the ingredients into a blender or use a hand mixer to blend.

Overnight Oats

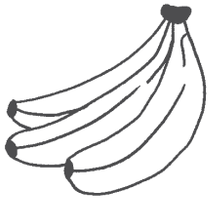
½ cup of milk - choose from dairy or nut milks
½ cup of rolled oats
¼ cup of yogurt
¼ cup of fruit, nuts or seeds

Place milk, oats and yoghurt into a glass jar, container or a large glass cup. Stir together until all the oats are covered. Add in your choice of fruit whether it be blueberries, strawberries, chia seeds or nuts.
Place in the fridge overnight ready to be consumed in the morning.

Hazelnut and blueberry chia overnight oats

½ cup of milk
½ cup of oats
¼ cup blueberries
¼ cup of hazelnuts chopped
1 tbs chia seeds
1 tsp cinnamon

Add oats, milk, hazelnuts and chia seeds together in a large glass or glass jar. Stir through well and add cinnamon. Place in the fridge for 6+ hours or overnight. Add the blueberries before serving.



Vanilla porridge with stewed fruit

1 cup of quick oats
1/2 cup of milk – I use almond or cow's milk
¼ cup of water
2 tbls almond meal
1 tbsp of greek yoghurt
1 tsp vanilla essence
Stewed chosen fruit – 2x Apple, 2x Pear or 4 x stalks of Rhubarb

Place oats into a pan with milk and water. Let the oats cook on a low heat for 4 mins, stir in vanilla essence and almond meal. Transfer porridge into a serving bowl and add in Greek yogurt. Top with stewed fruit.

Stewed fruit:

Cut chosen fruit up into small pieces Place into a saucepan with ¼ cup of water. Let the fruit simmer in pan on a medium heat. Once the fruit is soften let it cool and place into a glass container to be stored in the fridge for up to 3 days.

Quick breakfast frittata

½ cup of baby spinach
2 eggs
¼ cup of milk
2 tbls olive oil
100g of feta cheese
salt and pepper

Whisk eggs in a bowl with the milk. Stir through salt and pepper.

Heat pan on the stove top with olive oil. Add in the mushrooms and cook for 1-2 minutes. Add the baby spinach for a further 1 minute or until wilted.

Add the egg mixture to the pan and cook for 4 minutes only lightly stirring every minute or so. Once the eggs start to cook through add in the feta cheese. Continue to cook until light and fluffy and there is no longer any liquid (this is to ensure your eggs are cooked 'well done').

Slide the frittata off the pan and slice.

Sunday Avocado Sourdough

½ Avocado
5 cherry tomatoes cut into halves
1-2 slices of sourdough toast
Fresh squeezed lemon to taste
salt and pepper

Spread mashed avocado onto toasted sourdough.
Sautee tomatoes with dash of olive oil and salt and pepper in a pan or until soft.
Add lemon before consuming to taste.

Breakfast Bowl

1 Hard boiled egg
½ cup of cooked Quinoa
½ Avocado
4 cherry tomatoes
Handful of baby spinach
2 Tbsp of ricotta cheese
Dill
Sesame seeds
Lemon to taste

Add egg to saucepan with 3 cups of cold water and bring to boil. Let the egg boil for 6-8 minutes and then let sit for up to 10 minutes, making sure that the egg is cook through and the yolk is no longer runny.

Rinse quinoa in a colander and then place quinoa into saucepan with 1 cup of water and a pinch of salt. Let the quinoa cook on the stove top on a medium heat until water has disappeared.

Slice egg, avocado and cherry tomatoes. Place into a bowl with ricotta cheese, quinoa on the side and sprinkle with dill and sesame seeds. Squeeze lemon to taste.