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Disclaimer: This information booklet is intended as a guide only. It should not replace individual medical advice and if you have any concerns about your health or further questions, you should raise them with your doctor.
This booklet is for women with type 1 diabetes who are planning a pregnancy now or in the future. It provides information on preparing for pregnancy, as well as tips on how to manage diabetes during pregnancy and once the baby is born.

When you have diabetes, it is important to plan and prepare for pregnancy before you start trying for a baby. It is recommended that you have a review of your diabetes, and your general health, at least three to six months beforehand.

In this booklet we focus on the needs of women who have type 1 diabetes and are planning a pregnancy or who are already pregnant. Separate booklets are available from the National Diabetes Services Scheme (NDSS) for women with type 2 diabetes or gestational diabetes.

There are a number of risks during pregnancy for both mother and baby, but with careful planning, as well as support from a team specialising in diabetes in pregnancy, women with diabetes will usually have healthy pregnancies and healthy babies.

Encourage your partner, family and friends to read this booklet as well, to help them understand more about diabetes and pregnancy. If you have any questions or need more information contact your endocrinologist, GP, obstetrician, diabetes educator or dietitian.
Preparing for a healthy baby

Women with diabetes can have a healthy baby, but there are a number of extra risks associated with having diabetes during pregnancy. To reduce diabetes related risks, it is best that you become pregnant at a time when your diabetes is well managed and there are no other health issues. It is important that you plan your pregnancy and seek out specialist pre-pregnancy care during this planning period.

The best preparation for a healthy pregnancy starts with getting the right advice and assistance before you become pregnant. The first eight weeks of pregnancy is the time when a baby’s major organs develop, so it is important for your blood glucose levels to be as close to target as possible when you conceive and in the first part of your pregnancy. This reduces the risk of health problems in the developing baby and the chances of an early miscarriage.

There are other aspects of planning for a healthy pregnancy too, such as screening for diabetes complications, taking vitamin supplements, a review of your current medications and having routine blood tests. These topics will be discussed later in this booklet.

Make an appointment with your diabetes health professionals as soon as you start thinking about having a baby. If you find you are pregnant sooner than you intended, organise an immediate appointment at your closest maternity hospital or see an endocrinologist, a diabetes educator or a diabetes nurse practitioner with expertise in managing diabetes and pregnancy. They will work with you to achieve the best outcome for you and your baby.

If you are not sure who to contact or if you live in a rural area where there are limited services, ask your GP about the best options for managing your diabetes during pregnancy. This may include shared care between local services and a diabetes and pregnancy team in a major hospital. Services such as Telehealth may be an option to link your local health professionals with specialist diabetes in pregnancy services.
Preparing for a healthy baby

Your diabetes in pregnancy team

There are specialised services to support women with diabetes both when planning a pregnancy and during pregnancy.

All major hospitals with maternity services in Australia can provide information about pregnancy and diabetes, and some also have specialised diabetes in pregnancy services. You may also have the option of seeing a private endocrinologist with expertise in diabetes in pregnancy. If you live in a rural area or small town, consider travelling to a major centre that has a diabetes in pregnancy service - especially if you have had any complications from diabetes. It is a good idea to attend pre-pregnancy care at least three to six months before attempting to conceive.

Your diabetes in pregnancy team will be made up of a range of health professionals who can help you plan your pregnancy.

This may include:

- endocrinologist (diabetes specialist doctor)
- specialist obstetrician (pregnancy doctor)
- diabetes educator or diabetes nurse practitioner
- dietitian
- general practitioner (GP)
- midwife
- psychologist
- social worker.

If needed, you may also be referred to other specialists such as a renal (kidney) physician or an ophthalmologist (eye specialist). Talk to your GP if you are not sure how to access these health professionals in your area or phone the NDSS Infoline on 1300 136 588 for information about services available in your state or territory.
Preparing for a healthy baby

Planning and preparing for pregnancy

Contraception

Timing your pregnancy is important. Contraception enables you to plan your pregnancy around your personal circumstances, general health and diabetes management.

No single method of contraception is perfect for everyone. Different methods suit different couples and there are many forms of contraception suitable for women with diabetes. It is best to discuss the most appropriate contraception for your individual needs with your GP, endocrinologist or obstetrician.

Blood glucose targets

Research has shown that if you manage your blood glucose levels well at the time you conceive your baby and during the first two months of pregnancy, it will help to lower the risk of miscarriage as well as birth defects in your baby. Your diabetes in pregnancy team will discuss appropriate blood glucose targets with you and a recommended haemoglobin A1c (HbA1c). This is a measure of your average blood glucose levels over the past three months.

Current guidelines recommend a HbA1c of less than 7% (53mmol/mol) before falling pregnant. A lower HbA1c may sometimes be advised, however it is important to be aware that this may increase the risk of hypoglycaemia (or low blood glucose levels). The right balance can be difficult to achieve, so seek as much support as you can from your diabetes health professionals to help you during this time.

“Find yourself a really good team of health professionals who know about pregnancy and diabetes”
Preparing for a healthy baby

Folate

Folate (also known as folic acid) is a vitamin that is very important to reduce the risk of certain birth defects of the brain and spine. Folate can be found in a varied diet that includes green leafy vegetables, fruit, breads and cereals, nuts and legumes. However, it is difficult to get enough folate for pregnancy from your diet alone. Taking folic acid supplements has been shown to reduce the risk of birth defects for all women, not just those with diabetes. Ideally, you would start taking your folic acid supplement at least one month before your pregnancy, and continue taking it throughout the first trimester (the first three months of pregnancy).

It is recommended that women who have diabetes take a higher dose of folic acid than other women because of the increased risk of birth defects. In Australia current guidelines recommend 5mg of folic acid per day, but talk to your doctor, they may suggest you take one 5mg tablet each day, or just a half depending on other pregnancy supplements you may be taking.

Talk to your diabetes health professionals about taking a folic acid supplement. You do not need a prescription to buy folic acid, but make sure you tell the pharmacist you need to buy the 5mg tablet, not the usual 0.5mg tablet.
Preparing for a healthy baby

Insulin

When planning your pregnancy, it is important to discuss your diabetes management with your diabetes health professionals. This includes the types of insulin you are currently using and the advantages and disadvantages of different types during pregnancy. Also discuss the method of insulin delivery, whether you use an insulin pump or have multiple daily injections.

Insulin pumps

Insulin pump therapy is becoming increasingly popular with women with type 1 diabetes. You may want to think about this for yourself and discuss an insulin pump with your diabetes team when you start planning for your pregnancy.

An insulin pump is a small pager-sized device that you wear constantly. It has a small plastic cannula that delivers insulin under your skin and is changed every three days. The pump continuously delivers a small amount of rapid-acting insulin (basal dose), and also allows you to ‘dial up’ the dose you need when you eat or to correct a high blood glucose. Insulin pumps have been shown to be beneficial for many women wanting to lower their HbA1c before pregnancy, but it is still possible to meet blood glucose targets using multiple daily insulin injections. For more information about insulin pumps including cost and availability talk to your diabetes health professionals.

Review of medications

Many medications will need to be stopped or changed before pregnancy and then only re-started after pregnancy, or sometimes not until after you have finished breastfeeding. This is because they have not been shown to be safe during pregnancy or breastfeeding. Every medication that you are taking, including those for lowering cholesterol and blood pressure, must be reviewed before you become pregnant or as soon as possible after you find out you are pregnant.
Preparing for a healthy baby

Diabetes complications screening

Before conceiving it is important to be checked for any diabetes related complications in your kidneys, eyes and nerves. You will need to have your kidneys and eyes checked during your pregnancy as well.

Kidneys

Your doctor will ask you to have a urine test to check the amount of protein/albumin passing through your kidneys. You will also have a blood test to check the function of your kidneys. If there are any problems, you may need to see a kidney specialist before falling pregnant and you will need to be monitored carefully during your pregnancy (especially in relation to your blood pressure). Even minor kidney problems (such as slightly increased levels of protein in the urine) can increase the risk of developing high blood pressure during pregnancy. If you have any problems with your kidneys during pregnancy your baby’s growth will need to be monitored carefully.

Eyes

Make an appointment to see an optometrist or an ophthalmologist (eye specialist) to have the back of your eyes checked. Make sure they know you have diabetes. If you have damage to the small blood vessels at the back of the eye (diabetic retinopathy), this needs to be stable before you conceive. Ask your eye specialist if you need any treatment before you fall pregnant.

Eye problems may appear or worsen during pregnancy, so you will need to have your eyes checked regularly throughout your pregnancy and then again a couple of months after you have had the baby. Usually, eye problems that occur during pregnancy improve after your baby is born.
Nerves

Your podiatrist, diabetes educator or doctor can test for nerve damage in your feet (peripheral neuropathy), using simple physical examinations such as a tuning fork or a ‘monofilament’ that measures pressure sensation.

Some women with long standing diabetes may develop another type of nerve damage called autonomic neuropathy. This can lead to problems with stomach emptying (feeling full or bloated), bowel movement (diarrhoea, constipation) and unstable blood pressure. In pregnancy, these problems can worsen and be very difficult to manage. Problems with stomach emptying can also increase the risk of hypoglycaemia (low blood glucose levels). If you have any of these complications, you should discuss them with your doctor before conceiving.

Blood pressure

If you have high blood pressure, you should see your doctor before falling pregnant, especially if you are taking any medication.

High blood pressure needs special attention as it increases the chance of problems in pregnancy for you and your baby. You may need to stop certain blood pressure medications or change your medications before you conceive.
Preparing for a healthy baby

A healthy weight

Aim for a healthy weight before becoming pregnant. A healthy eating plan and regular physical activity can help with weight management.

The weight gain recommended for pregnancy depends on your weight before you conceive. It is a good idea to have a review with a dietitian for guidance on pregnancy-specific nutrition needs and your personal weight gain target. There is some weight gain associated with a healthy pregnancy and it is generally not advisable to aim to lose weight while you are pregnant. However, you also need to take care not to ‘eat for two’. The table below shows the recommended weight gain targets for pregnancy depending on your pre-pregnancy weight range (calculated using Body Mass Index or BMI = weight (kg) / height (m) x height (m)).

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<tr>
<th>Pre-Pregnancy BMI</th>
<th>Weight range</th>
<th>Recommended Pregnancy Weight Gain</th>
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<tbody>
<tr>
<td>&lt; 18.5</td>
<td>Underweight</td>
<td>12.5 – 18kg</td>
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<tr>
<td>18.5 – 24.9</td>
<td>Healthy weight</td>
<td>11.5 – 16kg</td>
</tr>
<tr>
<td>25 – 29.9</td>
<td>Overweight</td>
<td>7 – 11.5kg</td>
</tr>
<tr>
<td>&gt; 30</td>
<td>Obese</td>
<td>5 – 9kg</td>
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Institute of Medicine, 2009
Preparing for a healthy baby

Nutrient supplements

In addition to a folic acid supplement, it is recommended that all pregnant women take an iodine supplement of 150 micrograms during pregnancy and breastfeeding (unless you have an overactive thyroid or Graves disease).

Your doctor will also check the amount of iron in your blood and advise whether you need to take an iron supplement (most women will in the later part of their pregnancy). If you are concerned about other nutrients, speak to your dietitian about your usual dietary intake and ask whether you need multivitamins or other micronutrient supplementation.

Immunisation

Your GP will arrange blood tests to check your immunity to Rubella (German measles) and Varicella (chickenpox). Contracting Rubella when you are pregnant can lead to blindness, deafness and abnormalities in your baby. If you are not immune, you should be vaccinated at least one month before becoming pregnant. Also discuss flu and whooping cough vaccinations with your doctor.

Blood tests

Your doctor will check your thyroid function and may do some additional tests such as coeliac screening and checking your vitamin D level.

Smoking, drugs and alcohol

Smoking increases the risk of damage to blood vessels in the heart, brain, feet and kidneys, especially in people with diabetes. Smoking also harms the growth and development of your unborn baby. You can ask your diabetes in pregnancy team about strategies to quit, or you can call the QUITLINE on 13 78 48 or visit www.quit.org.au. Alcohol and recreational drugs increase the risk of miscarriage and damage to your baby and should be avoided.

Hard work but worth it!

For some women, it can be demanding and stressful to achieve blood glucose levels within the target range before conceiving, and then to maintain good diabetes management throughout the early stages of pregnancy.

This is likely to be a challenging period of your life, so be sure to seek the support and understanding you need from people close to you, as well as from health professionals.
Preparing for a healthy baby

**ACTION:**
If you are thinking about having a baby, the following checklist summarises the advice in this section for you.

- **Contraception and general pregnancy advice:** Ask your GP, endocrinologist or obstetrician for help to choose the best contraception for you and your partner when planning your pregnancy.
- **Referrals:** Ask your GP for referrals to diabetes in pregnancy specialists.
- **Your team:** Put together and meet your diabetes in pregnancy team.
- **Blood glucose targets:** Aim for an HbA1c of less than 7% (53mmol/mol) before falling pregnant. Discuss individual targets with your health professionals.
- **Folic acid supplements:** Start taking high-dose folic acid for at least one month before becoming pregnant and continue during the first three months of pregnancy.
- **Review insulin therapy:** Consider whether the type of insulin treatment you are having needs any changes, and consider whether an insulin pump might be a good option for you.
- **Medications:** Ask your doctor to review all the medications you are taking to check if they are safe to take during pregnancy.
- **Vaccinations:** Make sure your Rubella and chickenpox vaccinations are up to date.
- **Blood pressure:** Check and stabilise your blood pressure before becoming pregnant.
- **Diabetes complications:** Have a full complications screening done before you fall pregnant. Have any complications treated and stabilised if necessary, before falling pregnant.
- **Weight management:** Aim for a healthy weight before pregnancy as well as the most appropriate weight gain for you during pregnancy.
- **Smoking:** If you are a smoker, stop smoking - ask your health professionals for help.
- **Alcohol and other drugs:** Avoid alcohol and other drugs completely during pregnancy.
- **Diet and supplements:** Take a supplement that contains iodine and check with your doctor and/or dietitian whether you need to take a multivitamin or other supplements.
Eating well and physical activity

A healthy eating plan is essential for you and your baby, and it is also important to stay physically active throughout your pregnancy.

**Healthy eating**

Pregnancy is a good time to update your knowledge of food and nutrition. Your eating plan is an integral part of your diabetes management and general health. Make an appointment with a dietitian to discuss food choices during pregnancy.

Your food choices are important for providing nourishment for both you and your baby, and can help with managing your blood glucose levels. It is a good idea to review your carbohydrate counting skills, the best carbohydrate food choices for managing blood glucose levels and how to adjust your insulin to match your carbohydrate intake.

Aside from carbohydrates, there are other nutrients that need special attention in the lead-up to and during your pregnancy, including protein, iron, iodine, calcium and folate. Your dietitian can guide you on the best food choices to meet these extra nutritional needs for pregnancy.

Protecting yourself from exposure to high-risk foods that can cause infections and harm your developing baby is very important. These infections can be caused by listeria, salmonella and toxoplasmosis which can be present in high risk foods.
Eating well and physical activity

Certain types of fish also need to be limited during pregnancy due to their high mercury content. Seek advice from your dietitian and/or state health department on guidelines for food safety during pregnancy. Alcohol can cause damage to an unborn baby, and should be avoided throughout your pregnancy.

A dietitian can discuss the most appropriate foods for you during your pregnancy, provide information on foods to avoid or limit, give you advice on pregnancy weight gain, and work with you to help manage your diabetes during pregnancy.
Becoming pregnant does not mean you have to give up exercise or other physical activity. In fact, women with diabetes benefit from regular physical activity in pregnancy. It is a great way to relax and spend time with family and friends, as well as an essential tool for diabetes management.

Regular physical activity helps to maintain a healthy weight during pregnancy and has many additional health benefits, including managing pregnancy symptoms, such as lower back pain, nausea, heartburn, constipation and sleep disruptions. Physical activity is also a great mood regulator and can help you return to a healthy weight after you have had your baby. Your goal, while pregnant, should be to maintain your general health and fitness. Pregnancy is not the time to begin a new or strenuous exercise routine. If you are already active, continue your activities as long as it is comfortable to do so. However, it is best to avoid contact sports during pregnancy. Discuss your current activities with your GP or other health professionals.

“...once you know you have a life growing inside you, your focus changes. Be prepared to actually WANT to do lots of blood tests, eat properly and exercise.”
HELPFUL HINTS: Physical activity
You can enjoy physical activity by incorporating activity into your daily routine. Start with 10 minutes, two or three times a day. For example, you could:

• walk your dog (or a friend’s dog)
• join a pregnancy aqua fitness class
• swim or walk in water
• try pregnancy yoga or pilates
• walk along the beach or in the park
• walk your children to and from school
• take the family to the park for a ball game
• find out about low-impact aerobics or light resistance gym programs available in your area.

Remember that you will need to consider the effect of physical activity on your blood glucose levels. Exercise generally lowers blood glucose levels, so you may need adjustments to your insulin dose or insulin pump rate. It is important to discuss physical activity with your health professionals.
There are a number of ways that pregnancy will affect your body and your diabetes. There are also some additional risks associated with pregnancy for women with diabetes. Looking after yourself and your diabetes can help to reduce these risks.

**Blood glucose targets**

Your diabetes in pregnancy team will discuss individual blood glucose targets with you.

Current Australian guidelines for pregnant women with type 1 or type 2 diabetes recommend blood glucose levels between 4.0 and 5.5mmol/L fasting/before meals and less than 7.0mmol/L two hours after meals.

However, for women with type 1 diabetes, the targets below may be suggested by your diabetes in pregnancy team to take into account the need for optimal blood glucose levels during pregnancy, while minimising the risk of hypoglycaemia.

Your team may also advise you to monitor your blood glucose levels at other times.

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<td><strong>Fasting/before meals:</strong></td>
<td>4.0 – 6.0 mmol/L</td>
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<tr>
<td><strong>2 hours after each meal:</strong></td>
<td>5.5 - 7.5 mmol/L</td>
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**Having a healthy baby**

Diabetes and your pregnancy
Hypoglycaemia (low blood glucose)

During the first trimester (the first three months of pregnancy) your blood glucose levels will already be changing. Around the time when most women find out they are pregnant (at four to six weeks), your blood glucose levels may be more unstable, so insulin doses may need to be changed at this time.

From around six to eight weeks, it is common to become more sensitive to insulin, which means the insulin you take works more effectively. This may continue until about 14 weeks (or around three months) into the pregnancy. During this time insulin doses may need to be reduced (usually both daytime and overnight) to avoid frequent and more severe hypoglycaemia (hypos).

Some women also notice that their early warning signs for hypos (such as feeling shaky or sweating) change in pregnancy. This means that hypos can happen without much or any warning, increasing your risk of severe hypos. Frequent blood glucose monitoring can help you with adjusting your insulin doses and reducing this risk. This is important for your own safety and wellbeing. Your partner, family, friends and colleagues may be able to help you identify hypo symptoms if you are finding it difficult to detect your hypos. Discuss hypo management with your diabetes in pregnancy team.

You also need to remember to check that your blood glucose levels are above 5mmol/L before driving. For more information refer to the NDSS booklet *Diabetes and Driving*.

**Treating severe hypos**

Severe hypos (when you can’t treat your hypo yourself and you need help from someone else) can be more common during pregnancy, particularly in the first three months. Your partner and family may like to meet with your doctor or diabetes educator for an information session on when and how to use a glucagon injection (GlucaGen®) in an emergency. A glucagon injection is an intramuscular or subcutaneous injection that can be used to reverse hypoglycaemia in someone who has lost consciousness. It helps your body to release glucose stored in your liver and raise your blood glucose levels quickly.
Ketoacidosis and high blood glucose levels

If there is not enough insulin for your body cells to use glucose for energy, your blood glucose levels will rise and your body will break down fats instead as another energy source. However, fat breakdown leads to your body forming ketones which you can detect in your blood or urine. High blood glucose levels (hyperglycaemia) and ketones can lead to a serious condition called diabetic ketoacidosis (DKA), requiring hospitalisation.

Ketoacidosis may occur when you are unwell, forget to take your insulin or don’t take enough insulin. To check for ketones you can:

• test your blood (using a monitor which can test for both glucose and ketones in your blood) OR
• test your urine (urine testing strips are available where you buy your blood testing strips).

The risk of ketoacidosis increases during pregnancy and is very dangerous, especially for the baby. It is important to go to hospital immediately if your blood glucose levels are high and there is any sign of ketoacidosis (blood ketones more than 0.6mmol/L or urine ketones more than 1+).
Sick days

Everyday illnesses such as the flu and infections can cause your blood glucose levels to rise. If you get sick while you are pregnant you will need to be particularly careful and check your blood glucose levels more frequently. You may also need to increase your insulin doses or have small frequent doses to prevent ketoacidosis.

Talk to your diabetes health professionals about developing a sick day management plan, as this takes the guess work out of managing blood glucose levels when you are unwell. Make sure you have in-date ketone monitoring strips and that you know what to do if you find ketones present.

For more information about ketones, ketoacidosis and sick day management ask your diabetes health professionals for a copy of the booklet *Sick Day Management for Adults with Type 1 with Diabetes* or visit www.adea.com.au to download a free copy.

**HELPFUL HINTS: Illness and infections**

- Check your blood glucose levels more frequently when you are unwell.
- Take your insulin even if you are vomiting or not eating. Talk to your diabetes health professionals about adjusting your insulin dose in this situation.
- Follow your sick day management plan.
- Check your urine or blood for ketones.
- Call your doctor or diabetes educator if:
  - your urine ketone reading is more than 1+
  - your blood ketone reading is more than 0.6 mmol/L
  - you are vomiting or unable to eat or drink
  - you are worried about high blood glucose levels
- See your doctor to find out the cause of the illness.
- Discuss hypo management with your diabetes health professionals.

If you are vomiting so much that you cannot keep food or fluids down, call your doctor or diabetes educator immediately or go to the Emergency Department of your nearest maternity hospital.
HELPFUL HINTS: Morning sickness

- Keep your fluids up: sip on drinks such as water, flat diet (sugar-free) lemonade, diluted diet cordial, or diet icy poles.
- If you have been vomiting or unable to eat, you may need to include ordinary soft drinks and cordial instead of diet drinks (refer to your sick day management plan).
- Eat small, frequent meals - talk to your doctor or diabetes educator about changing insulin doses to allow for this.
- Avoid strong food odours and rich, fatty foods.
- If mornings are a problem, snack on food like dry toast or dry biscuits before getting out of bed.
- Eat and drink slowly.
- You may find that you can tolerate cold foods better than hot food.
- Some women find ginger (tea, biscuits or tablets) to be useful.
- Ask your dietitian for some suggestions.
- Test for ketones.
- Always take your insulin, but you may need to change the dose.
Diabetes and your pregnancy

**Diabetes complications**

Your doctor will advise you to have a baseline screening for all diabetes complications before pregnancy. If there are any complications, they should be assessed and stabilised before you fall pregnant. They will also need to be closely monitored throughout your pregnancy. If complications are advanced, it is important to discuss the risks of pregnancy with your doctor before planning to fall pregnant, as pregnancy does put additional stress on your body. Some of the complications of long-term diabetes can be made worse by pregnancy, such as renal damage (kidneys) and retinopathy (eyes).

**Kidneys**

Diabetes complications affecting the kidneys increase the chance that your blood pressure will become a problem in the second half of pregnancy, usually after 26 weeks. If you have no signs of kidney problems or only very mild problems before pregnancy, it is unlikely that a pregnancy will have any long-term effects on your kidney function. If you already have diabetes related kidney disease, pregnancy may cause your kidney function to worsen.

**Eyes**

Rapid improvements in blood glucose levels can increase the risk of developing eye problems or make any existing eye complications worse. Gradually reducing your HbA1c before you fall pregnant can reduce the risk of these problems occurring. If you have eye problems that become worse during pregnancy, laser treatment is safe if you need it. Any eye problems that may have developed during pregnancy tend to improve after the birth, usually by the time the baby is three to four months old.

**Nerves**

If you have autonomic nerve damage, you may experience more problems with low blood pressure during pregnancy. Delayed stomach emptying can also cause vomiting that can persist throughout the pregnancy, which can be stressful and make it difficult to maintain good nutrition. This can lead to significant problems so you should discuss with your doctor how autonomic nerve damage may affect your pregnancy.

If you have diabetes complications it is particularly important to have specialised management of your diabetes during pregnancy. It is best for your pregnancy to be managed in a major hospital which has a lot of obstetric and diabetes medical support as well as the best facilities for babies if they are born early or have any problems when they are born.
Pre-eclampsia and high blood pressure

Pre-eclampsia is a potentially dangerous complication of pregnancy. It includes the development of high blood pressure, protein in the urine, and swelling or puffiness in the legs, fingers and face. It is more common in women with diabetes.

Pre-eclampsia is dangerous for you and your baby. It can cause problems for your baby’s growth and is a major cause of premature birth. Well managed blood glucose levels before and throughout pregnancy can reduce the risk of pre-eclampsia but not fully prevent it.

Your doctor or diabetes in pregnancy team will check your blood pressure and urine, and look for signs of swelling at each visit in the later stages of your pregnancy.

Women who have a high risk of pre-eclampsia may be advised to take medication such as low-dose aspirin from early pregnancy to reduce the risk.

**ACTION:**

- Visit or phone your diabetes in pregnancy team regularly and understand the signs and symptoms of pre-eclampsia.
Medical tests and monitoring during pregnancy

Throughout your pregnancy you will need to have a number of tests to check your general health and the wellbeing of your baby, including:

- HbA1c to assess your overall blood glucose management during pregnancy
- Full blood count and iron studies, to make sure you are not anaemic
- Kidney function tests

Other tests will be arranged by your doctor as needed.

Ultrasound scans

Ultrasound scans are used to monitor your baby’s growth and wellbeing and to check for abnormalities in your developing baby and the risk of genetic disorders. It is likely that you will be offered ultrasounds at the following stages:

- 7 – 8 weeks: to estimate your due date
- 11 – 13 weeks: for the first trimester combined screening (a nuchal translucency (NT) ultrasound and blood test to check for genetic abnormalities, including Down Syndrome as well as for risk for early onset of pre-eclampsia (high blood pressure) before 34 weeks)
- 18 – 20 weeks: for the anatomy scan (to check for physical abnormalities)
- 28 weeks: to check your baby’s growth.

You may also be asked to have additional ultrasound scans, usually every two to four weeks from 28 weeks, to monitor your baby’s growth and general health.
Medical tests and monitoring during pregnancy

Urine tests

You will be asked to give a urine sample at each visit during your pregnancy. This is tested for ketones, albumin and protein, and it can also identify the presence of any infection that would need to be promptly treated. A small amount of protein in the urine is not uncommon in pregnancy. However, a larger amount may indicate that the pregnancy has affected your kidneys or, in later pregnancy, that you are developing pre-eclampsia.

Fetal heart rate monitoring

Sometimes your obstetrician may recommend that you have a cardiotocography test (CTG), to monitor your baby’s heart rate. This test may be recommended in the later stages of pregnancy. A CTG takes about 30 minutes and involves two sensors being placed on your stomach. These sensors record an electronic trace as a graph of your baby’s heart rate, and detect any contractions in your uterus.

Blood glucose monitoring

It is essential to monitor your blood glucose levels frequently during your pregnancy. You will be asked to monitor before meals and one to two hours after meals. You may, at times, be advised to do some extra monitoring, such as before bed and overnight (to look for hypos). You should also check your blood glucose levels before driving.

Monitoring will help you and your doctor to get a better understanding of your blood glucose levels so you can adjust your insulin to achieve the best possible management of your diabetes. Extra blood glucose monitoring can also help you reduce the tendency to have hypos and big swings in your blood glucose levels.

Continuous Blood Glucose Monitoring

Continuous Glucose Monitoring (CGM) may be suggested during your pregnancy. CGM uses a sensor placed under the skin to continually detect changes in glucose levels and to provide additional information about glucose patterns. This can be useful, but does not replace self blood glucose monitoring during pregnancy. Ask your diabetes in pregnancy team for more information.
Most women will have a healthy baby, but all pregnancies can have problems regardless of whether the mother has diabetes. Having diabetes brings some additional risks for the baby, but looking after yourself and your diabetes can help to reduce these risks.

**Risks to your baby in early pregnancy**

Diabetes can increase the risk of birth defects (congenital abnormalities) in babies. These abnormalities are more common when diabetes management before and during early pregnancy has not been optimal. Damage to the baby’s heart, spine and kidneys can occur during the early stages of pregnancy, often before women realise they are pregnant. Miscarriage can also occur, as it can for all women. The risk of miscarriage increases when HbA1c is elevated before falling pregnant and in the early stages of pregnancy.

To reduce your chance of miscarriage and of your baby developing abnormalities, it is important to maintain the best diabetes management you can.

Your diabetes in pregnancy team will stress the importance of frequently checking your blood glucose levels and keeping these as close to the target range as possible. It is also important to minimise the frequency of mild hypos and the risk of serious hypos, and to try to limit the swings in your glucose levels. Talk to your diabetes in pregnancy team about your individual blood glucose targets.
Diabetes and your baby

The aim is to have your HbA1c less than 7% (53mmol/mol), if possible for three months before falling pregnant. Your diabetes in pregnancy team can advise you on your personal HbA1c goal before you conceive. Have your blood glucose meter checked and upgraded, if necessary, to make sure your blood glucose readings are accurate.

Along with your own efforts to achieve target blood glucose levels, pregnancy-related changes will also cause a drop in your HbA1c. The recommended HbA1c during pregnancy is 6% or lower, but this should be discussed with your diabetes team.

High blood glucose levels during pregnancy

Glucose can freely cross the placenta to your baby, so your baby’s blood glucose levels will reflect your own. If your blood glucose levels are high, the normal response of your baby will be to produce extra insulin for themselves (this occurs from about 12 weeks gestation). The combination of extra glucose and extra insulin can make your baby grow too big. Having a large baby can cause problems during labour and delivery.

Risks to your newborn baby

Babies may have low blood glucose levels (hypoglycaemia) after birth as they can continue to make extra insulin for a day or two after delivery. Hypoglycaemia is more likely to occur if babies are born early or if they are very small or large. Your baby could also have trouble with feeding, breathing or other medical problems. Keeping your blood glucose levels as close to target as possible during pregnancy and birth will dramatically reduce the risk of these problems.

Does the insulin I inject harm my baby?

No. It is important to know that the insulin you inject does not cross the placenta and cannot harm your baby.

Will my baby be born with diabetes?

No. Your baby will not be born with diabetes. For mothers with type 1 diabetes, the chance of your child developing type 1 diabetes before the age of 20 is only 2-3% and 5-6% if the child’s father has type 1 diabetes. However, if both parents have type 1 diabetes, the risk for the child is much higher with about a one in three chance of the child having diabetes by age 20.
Insulin requirements tend to change constantly throughout pregnancy as different hormones take effect and your baby grows. You need to be prepared to adjust your insulin doses on a regular basis. It is not uncommon to need to make adjustments to your dose at least once a week.

If you are not sure how to adjust your insulin doses, ask your diabetes in pregnancy team for advice. Adjusting insulin doses in pregnancy is more challenging than usual, so make sure you know how to get in touch with your diabetes team and be prepared to contact them more often.

**Early pregnancy changes**

Many women find it extremely challenging to maintain optimal blood glucose levels in the early stage of pregnancy with so many hormonal and physical changes occurring. For around the first six to eight weeks of pregnancy your blood glucose levels may be more unstable. Following these early pregnancy changes to your blood glucose levels, you may find that your insulin requirements are lower until the end of the first trimester. You are likely to need to reduce your insulin doses at this time to reduce the risk of hypos occurring, especially severe ones. It is also important to be aware that during pregnancy, sometimes hypos can occur without much (or any) warning. Preventing a hypo is better than treating one. Try not to miss any meals or snacks and check your blood glucose levels regularly.

**Mid to late pregnancy changes**

From the second trimester of pregnancy, especially after 18 weeks your insulin requirements will usually start to rise. By around 30 weeks you may need as much as two or three times your daily pre-pregnancy insulin dose. This is because the hormones made by the placenta interfere with the way your insulin normally works - as the pregnancy hormones rise, so does your need for insulin. In the second half of your pregnancy you are likely to need more mealtime, rapid-acting insulin, compared with the long-acting/basal insulin. Insulin requirements tend to continue to rise until about 36 weeks, when they may plateau or start to fall a little. If you notice your insulin requirements fall significantly and rapidly in late pregnancy, this can be a sign of problems with the pregnancy - contact your specialist for advice immediately.

**Having a healthy baby**

**Insulin changes during pregnancy**
Insulin changes after the birth

Changes after the birth

Once your baby is born and your placenta is delivered, your insulin requirements will fall dramatically. The mother’s insulin requirements tend to be very low for the first few days after the baby is born and then gradually increase. Your target blood glucose levels should be reviewed after delivery. You will still need to do frequent blood glucose monitoring after your baby is born. Target blood glucose levels after delivery will be higher than your pregnancy targets, to reduce the risk of hypos while you are establishing breastfeeding and a new routine with your baby. It is usually recommended to keep blood glucose levels in the 5–10mmol/L range at this stage.

In the first few weeks, you will usually still need less insulin than you did before the pregnancy. If you are breastfeeding, once your milk comes in your insulin requirements may decrease again. Your endocrinologist or diabetes educator will help you re-adjust your insulin doses after delivery. Before you go home from hospital, discuss with your diabetes health professionals the best way of contacting them over the next few weeks/months as it can be challenging managing your diabetes in the early weeks with a new baby.

**ACTION:**

- Have an insulin management plan for immediately after delivery.
- Carry hypo treatment with you at all times.
- Keep hypo treatment by your bedside and nearby if you are breastfeeding.
- Check you have a glucagon script and current supply, and that your partner/family knows how to use it.
- Make a plan with your diabetes in pregnancy team about when and how often to check your blood glucose levels.
- Review your sick day management plan.
- Have a list of contact details for your diabetes in pregnancy team and have these readily available.
Your diabetes in pregnancy team will work with you towards the ultimate goal of having a healthy baby.

As a woman with diabetes it may be possible for you to have a full term delivery and natural birth. However, your doctor will probably recommend delivering your baby at around 38-39 weeks or even earlier if there are problems during your pregnancy. Reasons for earlier delivery may include high blood pressure or pre-eclampsia, your baby becoming too big or perhaps not growing enough. Occasionally it may also be because your diabetes is getting difficult to manage or if there is a concern about a fall in your insulin requirements or your baby’s activity level.

Your diabetes in pregnancy team will discuss what to expect during labour and delivery. This will include a plan for insulin adjustment, blood glucose management and who to contact if you go into labour earlier than expected.

**Induction of labour**

Depending on how your pregnancy is progressing, you may need to have an induction, which means helping your body to start labour. An induction can be performed in several ways and sometimes a combination of two or more methods will be used.
Labour and birth

These Include:

- **Gel insertion** – this involves inserting a prostaglandin pessary or gel into your vagina, to help the cervix to soften and open. This, in turn, tells your uterus to start contracting. Some women need two or three doses of gel before labour begins.

- **Oxytocin drip** – this method involves an intravenous (IV) line (or drip) being inserted into a vein in your arm, and the oxytocin hormone being slowly delivered into your blood to help your uterus start contracting. The drip may be used alone or with a gel insertion.

- **Balloon induction** – this involves a catheter being inserted into your vagina. Water is then pumped into the device, which gently puts pressure on your cervix, assisting dilation and encouraging your uterus to start contracting.

- **Rupture of membranes (breaking waters)** – this method involves rupturing the membrane, or bag of fluid, around your baby. Your membrane is gently broken using an ‘amnihook’, which looks like a long crochet hook, and the gush of fluid may encourage your uterus to start contracting and bring on labour.

**Caesarean section**

If your doctor is concerned about you not being able to have a vaginal birth (for example, if they suspect your baby is large or there are other obstetric problems), they will discuss this with you when you are making a plan for your baby’s birth. This is usually towards the end of your pregnancy at around 35 - 36 weeks.

If a caesarean section is advised, it will be according to your obstetric needs, not just because you have diabetes. Birth by caesarean section is not a decision taken lightly, as there are risks involved with such major surgery. The medical decision to perform a caesarean section should be discussed with you in detail, so your doctor can explain the risks and benefits involved.

If you are having a caesarean section, you will usually have to fast for about six hours beforehand, so you should discuss with your diabetes in pregnancy team the options for managing your blood glucose levels and insulin doses during this time. It is a good idea to make a management plan with your diabetes in pregnancy team well before the birth.

In some circumstances a caesarean section is undertaken as an ‘emergency’. This might happen if there are problems with you or your baby, or because the labour is not progressing the way it should.
Managing diabetes during labour

Your own blood glucose levels in the time leading up to the birth have an important effect on your baby’s blood glucose levels. The higher your blood glucose, the higher the glucose supply will be to your baby before birth. The extra glucose stimulates the baby’s pancreas to make more insulin. After birth, your glucose supply to your baby suddenly stops, but your baby may continue to produce excess insulin for several hours and even up to one or two days after birth. This can cause hypoglycaemia in the baby. If you have blood glucose levels close to the recommended range during labour, this lowers the risk of your baby having low blood glucose levels at birth.

When an induction or caesarean section is planned, your diabetes in pregnancy team will discuss with you a plan for managing your diabetes. This will include adjustment of your insulin doses/pump rates or changing the way insulin will be delivered.

When you are in labour, your blood glucose levels will be monitored frequently (usually hourly) and the amount of insulin you are being given will be adjusted to keep your blood glucose in the normal range. An intravenous (IV) insulin infusion and IV glucose (sugar) are often used throughout labour, which allow small amounts of insulin and glucose to run into your blood continuously. Alternatively, rapid-acting insulin injections every two to four hours may be used during labour to manage your blood glucose levels.

If you use an insulin pump, you may be able to continue using it, but with modified basal rates and smaller bolus doses. This will only be the case if this can be managed safely at the hospital where you will deliver your baby and blood glucose levels can be kept within the target range.
Labour and birth

Managing diabetes after delivery

After your baby is born your diabetes management plan will need to be reviewed. You are likely to need less insulin for the first few days after delivery and your target blood glucose levels will be higher (usually 5-10mmol/L). At this stage when you have a new baby to care for, it is very important to try to avoid hypos. Your diabetes in pregnancy team will discuss changes to your diabetes management plan with you.

ACTION:

• Talk to your diabetes in pregnancy team before labour about pain relief options, diabetes management and any other questions or concerns you may have.

• Have a written plan for your diabetes management during birth, regardless of the birthing method.
After your baby is born

After the birth, your baby will be examined by a paediatrician, your obstetrician or a midwife. If your blood glucose levels have been stable during your pregnancy and the birth, and your baby has no problems, your baby will probably go with you to your hospital room.

If your baby is born very large, very small, prematurely or is having breathing problems or low blood glucose levels, they may need to be observed in a Special Care Nursery for a day or two. Not all maternity hospitals are equipped with a high-level Special Care Nursery, so in some circumstances your baby may need to be transferred to another hospital.

Skin-to-skin contact between you and your baby will be encouraged at birth because it will help you to develop a close bond with your baby. It also allows your baby to suckle and will help to keep your baby’s temperature more stable. Ask your midwife about skin-to-skin contact if you and your baby need to be separated due to premature delivery.

Your baby’s blood glucose level

Your baby will be tested for low blood glucose levels for at least the first 24 hours after birth. Blood glucose tests are done by heel prick at regular intervals until the baby’s blood glucose levels are in the normal range. This test is to check for low blood glucose levels, it is not a check to see if the baby has diabetes and does not mean that your baby will develop diabetes in the future. If your baby’s blood glucose level is low (less than 2.0 - 2.5 mmol/L), your baby may need to have supplementary feeds or some glucose. Talk to your midwife about using your breast milk for supplementary feeding.

ACTION:

- Ask your midwife or diabetes in pregnancy team for a tour of your hospital’s Special Care Nursery before your due date.
- Ask about early skin-to-skin contact with your baby.
Breastfeeding has many benefits, both for you and your baby. These include benefits for your baby’s immune system, growth and development, and it can also help with bonding between you and your baby.

**Breastfeeding and diabetes**

Most women with diabetes are able to breastfeed their babies. It is important to keep in mind though, that breastfeeding may require some practice, support and persistence.

It is a good idea to see a lactation consultant four or five weeks before your baby is due to find out as much as you can about breastfeeding. You can also discuss diabetes and breastfeeding and any challenges you may come across.

Women with diabetes sometimes find that there is a delay with their breast milk ‘coming in’. The milk usually comes in on the third day after the birth, but it may be delayed by 24 to 48 hours. If your baby is born early or if you have problems with low blood glucose levels after delivery it can also be more challenging to establish breastfeeding initially.

The lactation consultant may discuss with you the option of antenatal expressing and storing colostrum (early breast milk) before the birth of your baby. It’s important to note however, that the advantages and disadvantages of antenatal expressing for mother and baby are still being researched.
Breastfeeding

Early breastfeeding

Try to feed your baby as soon as possible after delivery and then at least every three to four hours during the first few days to help your baby maintain their blood glucose levels. If your baby is at high risk of hypoglycaemia, you will be advised to breastfeed more often (at least every three hours).

If you don’t have your baby with you, ask your midwife about expressing milk (colostrum) within the first four hours of your baby’s birth. Your breasts make milk on a supply-and-demand basis. If you express, your breasts will keep producing milk which you can then give to your baby by bottle, spoon or tube.

Blood glucose levels

Your insulin requirements may be quite small in the first few days or so after delivery, but you will still need to do frequent blood glucose monitoring so you can adjust your insulin doses. It is usually safest to keep blood glucose levels in the 5-10mmol/L range at this stage, not lower, to reduce the risk of hypos. Keep in mind, it can be really hard to get blood glucose levels within the recommended range while breastfeeding.

Hypoglycaemia

Your blood glucose levels may fall rapidly during and following breastfeeding, just like with any other physical activity, so be prepared to treat hypos while you are breastfeeding. Blood glucose levels can fall by 3-5mmol/L during a breastfeed, so it is important to have some hypo treatment within reach while you are breastfeeding.

You may need to:

• discuss strategies to prevent hypos with your health professional

• develop a routine for feeding your baby, so you can have your meals on time and reduce your risk of hypos
Breastfeeding

• snack before or during breastfeeding (e.g. fruit, crackers, sandwich) or speak with your health professional about adjusting your insulin dose/pump rates
• treat yourself as soon as you notice any hypo symptoms
• check your blood glucose after a feed, to see how much your levels are falling, especially during the night.

Breastfeeding information and support

Your midwife or lactation consultant can support you to establish breastfeeding and give you strategies for successful breastfeeding. Most Australian hospitals have baby-friendly health initiatives to help support early breastfeeding.

If you don’t plan to breastfeed for long, remember that just six to eight weeks of breastfeeding will still give your baby many benefits, including immunity from infections. Breastfeeding may also reduce the chance of your baby developing diabetes later in life.

For more information contact:
• the lactation consultant at your local hospital
• your Child and Family Health Nurse
• the Australian Breastfeeding Association helpline on 1800 686 268.

ACTION:

• Talk to your diabetes team about targets for blood glucose levels and insulin adjustments during breastfeeding.
• Eat regular meals and snacks to prevent hypos.
• Monitor your blood glucose levels more frequently and discuss any concerns with your diabetes health professionals.
• Talk to your midwife or lactation consultant about breastfeeding strategies.
• Ask about storing breast milk to supplement feeds if necessary.
Taking home a new baby is incredibly exciting, but this can also be a stressful time. Some women with diabetes find it very hard to make their own health a priority and give their diabetes the attention it demands during this busy period. Take advantage of any assistance your family and friends can offer. If you don’t have any support nearby, it may be a good idea to organise help with things like shopping, cooking and housework. It is best to start thinking about this and getting plans in place before the baby arrives.

When you first go home with a new baby, especially for the first few weeks, you will be kept busy looking after your baby. You may find that this new routine, along with disturbed sleep, means that you don’t manage your diabetes as well as you would like. It is very important both for you and your baby that you stay healthy and safe, so remember the following:

• Don’t forget to take your insulin.

• Avoid hypos so that you are safe to take care of yourself and your baby.

• Check your blood glucose levels at least four times a day, so that you know whether your blood glucose levels are dropping, and to guide your insulin doses.

• Aim to keep most of your blood glucose levels between 5-10mmol/L.

• Ask for help from your diabetes in pregnancy team, even after your baby is born.
Going home and the future

Contraception and future pregnancies

Make sure you are using suitable contraception to avoid having another pregnancy before you are ready. Remember that planning another pregnancy and having your diabetes well managed beforehand will help you to have a healthy baby.

If you decide to not have any more children, you may want to consider a tubal ligation or discuss a vasectomy with your partner. There are also a number of very effective long-term but reversible contraception options, including intra-uterine devices (IUDs) and hormone implants. Discuss the available options with your doctor.

Looking after your health

Once you are getting some more sleep and managing a new routine with your baby (usually three to six months after the delivery), it is a good time to become more aware of your health needs again. Review your diabetes management with your diabetes health professionals to keep yourself healthy so that you feel well, reduce the risk of long-term health problems and enjoy your new baby.

ACTION:

• Take the time to look after yourself, as well as your baby.

• Make sure you have the contact details for your diabetes health professionals for advice and support on managing your diabetes after your baby is born.

• Review your family planning and contraception; whether you intend to have another child or not.

• Make an appointment with your diabetes in pregnancy team or doctor before planning your next baby.

• Talk to your GP or diabetes specialist about annual screening for diabetes complications (kidneys, eyes, nerves etc.).

“Overall being pregnant is a wonderful, magical experience...It’s a gift that women with diabetes in the past feared, and were advised against. Thank goodness times have changed”. 
Your emotional wellbeing

Becoming a mother is one of the most memorable moments in a woman’s life. For women with diabetes, pregnancy also involves a lot of planning, preparation and hard work. It is not surprising that women with diabetes sometimes feel worried, stressed, anxious and uncertain during pregnancy and once the baby is born. These feelings are very normal and may come and go at different stages of your pregnancy.

It can also be a time in your life when you feel very motivated and empowered to take care of yourself. It is really about finding a balance between the responsibilities of taking care of your diabetes and your unborn baby and enjoying one of the most memorable times in your life.

Being pregnant and giving birth is a team effort involving you, and your partner and your family, friends and health professionals. There will be more medical appointments than usual, which may feel overwhelming at times. However these visits are also an opportunity to let your diabetes in pregnancy team know how you are feeling and to discuss any concerns or issues you have.
Your diabetes in pregnancy team is well equipped to assist you with the emotional ups and downs you might go through during pregnancy. They are there to listen to your concerns and to help you get the support you need. It is best not to ignore these feelings or to delay seeking help. Looking after your emotional wellbeing is as important as looking after your physical health.

Many women with diabetes describe a number of challenges before, during and after pregnancy which can impact on their emotional health.

Achieving and maintaining blood glucose targets

This is probably the most challenging aspect of managing your diabetes while pregnant. While you may have felt ‘in control’ of your diabetes before, you may find that this all changes once you are pregnant. Even if you follow your health professional’s advice, you may still have variations in your blood glucose levels. You may feel that your health professionals do not always acknowledge how much effort you have put in and the frustration it causes. It may feel like the emphasis on blood glucose levels takes away from the positive experience of expecting a baby and what it means for you to become a mum.

If you are finding it too hard to achieve the recommended blood glucose targets, talk to your doctor or diabetes educator/diabetes nurse practitioner to discuss realistic goals for you and how to achieve them.

Worrying about your baby’s health

It is very normal to worry about whether or not you will have a healthy baby. It is important to find a health professional you feel comfortable with so you can openly discuss these concerns with them. Find out as much as you can about how to minimise the risk of problems during pregnancy. The support of women with diabetes who have recently become mothers can also be helpful at this time. Remember that most women with diabetes will have a healthy baby.
Your emotional wellbeing

Preventing and managing hypos

Frequent and sometimes severe hypos can be common, particularly in the first trimester of pregnancy. This can be very stressful, particularly if your usual hypo signs and symptoms change. Frequent blood glucose checks to pick up hypos early and appropriate insulin adjustments can help reduce this risk. Your partner or family members can also help you recognise the signs of a hypo and be trained on how to administer glucagon if needed.

Managing the concerns of well-meaning partners, friends or family members

Your partner, friends or family members may worry more than usual about you at this time. You may feel that they are constantly watching you and that you are being judged about how you are managing your diabetes. While they may mean well, it is important to let your loved ones know how this makes you feel. Talk about how they could support you, what is helpful and what is not. Reassure them that you are taking care of your diabetes, but that it is not always easy. You could consider inviting them to be involved in your diabetes and pregnancy care so that they better understand your diabetes management, worry less and give you the support you need.

Going home

Taking your baby home is an exciting time and a new chapter in your life. While you may have felt that there was a lot of support available while you were pregnant, many women feel ‘abandoned’ at this time. You may be uncertain about things such as how to care for your baby, breastfeeding or changes to blood glucose levels and insulin requirements.

Be reassured that help is close at hand. There is support available from child and family health nurses, lactation consultants and your diabetes health professionals. Make the time to find out what kind of support you need and who to ask.
Your emotional wellbeing

Postnatal depression

Many women experience changes in their emotions after having a baby. It is common to have the ‘baby blues’ in the first week after your baby is born. Postnatal depression occurs when these feelings last more than a week or two and interfere with your ability to function on a daily basis with normal routines including caring for your baby or caring for yourself.

Be aware of the signs of postnatal depression such as loss of enjoyment in your usual day to day activities, low self-esteem and confidence, loss of appetite, panic attacks, a sense of hopelessness or fear for your baby’s wellbeing. If you are experiencing any distressing symptoms that are causing you concern after your baby is born or your family or friends have noticed signs of postnatal depression, your doctor, midwife, or child health nurse can provide you with assistance or arrange for you to access psychological support. Don’t expect that these feelings will just go away – make sure you seek the help you need.

Emotional support

There are many ways in which other people can support you through your pregnancy, the birth and beyond. If you have a partner, initially you may be reluctant to involve them in your diabetes management, particularly if this is something that you have always managed by yourself. However remember that pregnancy is an exciting time for couples and your partner may want to be part of this journey. Sharing your feelings and expressing your needs at this time can give you the reassurance you need.

“It is important to share the experience of pregnancy with your partner. They will be feeling the same elation and anxieties as you. By sharing them, your lives and your pregnancy will be much happier and easier”. 
Family and friends can also be great support people during this time. Talking openly and honestly about your emotions can help you to express your feelings, allow your loved ones to better understand the support you need and help you at each stage of pregnancy and beyond.

Many women find it helpful to hear stories of how other women with diabetes have experienced their pregnancy. Ask your diabetes in pregnancy team if there is a support network or group you can attend to meet other women with diabetes. Some women have even formed support groups in the waiting rooms of diabetes and pregnancy clinics! Other women find online networks, forums and blogs a useful source of information and support.

As a woman with diabetes, pregnancy can be one of the most wonderful yet challenging times of your life. There are many emotions you may experience at this time, but you are not alone. Talk to your partner, family and friends about how you are feeling and ask your health professionals about accessing the support you need for your emotional wellbeing.

**ACTION:**

- Ask for support from your family, partner, friends and health professionals
- Seek out counselling services if you need support.
- Diabetes Counselling Online offers peer support and information with a focus on wellbeing, at www.diabetescounselling.com.au
- If you need to talk to someone immediately contact:
  - Beyond Blue Support Service on 1300 22 4636
  - Lifeline 13 11 14
The following checklist provides information for you and your diabetes in pregnancy team to guide you through the different stages of pregnancy - from pre-pregnancy planning through to delivery and going home. Use this checklist together with your health professionals to help you manage your diabetes and your pregnancy.

**Before pregnancy (at least 3 months)**

- Discuss contraception with your doctor
- Meet your diabetes in pregnancy team*
- Discuss individual blood glucose targets
- Aim for a HbA1c of less than 7% (discuss your individual target)
- Review your diabetes management plan
- Diabetes complications assessment (for kidneys, eyes and nerves)
- Review of medications including insulin type and delivery, diabetes tablets, blood pressure and lipid medication
- Review hypoglycaemia prevention and treatment plan
- Glucagon script and training for support people in the use of glucagon
- Review sick day management plan
- Dietitian review of weight and diet for diabetes and pregnancy
- Start high-dose folic acid supplement (at least one month before conception)
- Start taking an iodine supplement
- Thyroid function tests and a coeliac screen
- Blood test for Rubella and chicken pox immunity and if needed, immunisation at least one month before conception

*Frequent contact with your diabetes in pregnancy team is recommended before, during and after your pregnancy.*
Pregnancy and diabetes checklist

The first 12 weeks

☐ GP appointment to confirm pregnancy, discuss booking birth hospital and diabetes in pregnancy team appointments
☐ Early pregnancy blood tests including HbA1c
☐ Ultrasound at 7-8 weeks (to confirm due date)
☐ Review of your medications
☐ Review blood glucose levels, insulin requirements and blood pressure
☐ Review hypoglycaemia prevention and treatment plan
☐ Review sick day management plan
☐ Maintain an adequate diet for pregnancy
☐ Continue taking folate supplement (for the first 3 months)
☐ Keep in touch with how you feel and talk to a health professional if needed

Having a healthy baby
Pregnancy and diabetes checklist
Pregnancy and diabetes checklist

12 – 14 weeks
- Nuchal translucency (NT) scan and associated blood tests
- Book 18-20 week anatomy ultrasound to check for physical abnormalities
- Review blood glucose levels, HbA1c, insulin requirements and blood pressure
- Keep in touch with how you feel and talk to a health professional if needed

18 – 20 weeks
- Anatomy ultrasound (to check for the normal development of the baby)
- Discuss ultrasound results
- Review blood glucose levels, insulin requirements, blood pressure and any diabetes complications
- Check pregnancy weight gain
- Keep in touch with how you feel and talk to a health professional if needed
24 – 40 weeks

- Regular ultrasounds to assess your baby’s growth and wellbeing (every 2-4 weeks from 28 weeks)
- Blood and urine tests (according to doctor’s assessments)
- Regular review of your baby’s wellbeing by obstetric team
- Blood pressure checked at each obstetric / diabetes visit
- Discuss breastfeeding with lactation consultant or midwife
- Review blood glucose levels, HbA1c and insulin requirements
- Check pregnancy weight gain regularly
- By 36 weeks, discuss obstetric delivery plan (the delivery and timing of the birth)
- Discuss diabetes management during labour/delivery and develop a written plan
- Keep in touch with how you feel and talk to a health professional if needed
Breastfeeding & going home

- Seek advice/help with breastfeeding
- Review blood glucose levels and insulin requirements
- Review hypoglycaemia prevention and treatment plan
- Contact details for diabetes team for support and follow-up
- Arrange follow-up appointments
- Discuss family planning including contraception and pre-conception care for next pregnancy
- Keep in touch with how you feel and talk to a health professional if needed
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This booklet is for women with type 1 diabetes who are planning a pregnancy now or in the future. It provides information on preparing for pregnancy, how to manage diabetes during pregnancy and once the baby is born.

For more information go to the NDSS pregnancy and diabetes website:

www.pregnancyanddiabetes.com.au

The NDSS is an initiative of the Australian Government administered by Diabetes Australia. The NDSS delivers diabetes related products at subsidised prices and provides information and support services to people with diabetes. Registration is free and open to all Australians diagnosed with diabetes.

Visit ndss.com.au or call 1300 136 588.

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