

Gestational Diabetes- Commencing Insulin Therapy



What does insulin do?

Insulin is a hormone produced by the pancreas, which lowers blood glucose levels. Insulin acts like a key, opening the cells allowing glucose from our food to enter and be used for energy. During pregnancy, women make two to three times more insulin to keep blood glucose levels normal.

Insulin requirements during pregnancy

Placental hormones are produced in increasing amounts during pregnancy. While these hormones are necessary for the ongoing well-being of your baby, they oppose the effect of insulin in your body (insulin resistance). For some women, eating a healthy and balanced diet is not enough to keep blood glucose levels stable. These women have gestational diabetes, which will need to be managed during their pregnancy.



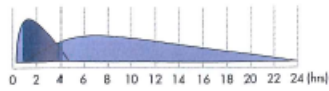

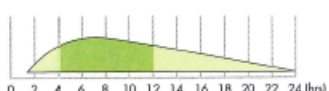
Up to 40 per cent of women with gestational diabetes will need insulin injections during pregnancy to maintain normal blood glucose levels. The insulin you inject is very similar to insulin your body makes and works in the same way. The injected insulin does not cross the placenta and will not harm your baby.

Insulin treatment for women with gestational diabetes is used to lower blood glucose levels. By keeping your blood glucose levels within a normal range, the risk of complications in your pregnancy from the diabetes can be reduced. When in labour most women with gestational diabetes needing insulin therapy will stop their insulin injections as advised by their diabetes team.

Types of insulin

- There are different types of insulin available which last for different periods of time (*see below*).
- Your doctor will prescribe the most appropriate for your needs
- Insulin can be administered using an insulin pen and needle
- It is usual to start off with a small dose of insulin and gradually increase the dose until the blood glucose levels are lowered to the normal range. The dose varies from person to person
- A telephone number will be provided to call the doctor if insulin dose adjustments are necessary

Insulin profile

This is the insulin you have been prescribed	Name of insulin	Insulin profile
<input type="checkbox"/>	Mixed Rapid and Long acting	 <p>Onset: 10 - 20 minutes Peak: 1 - 4 hours Duration: 24 hours</p>
<input type="checkbox"/>	Rapid	 <p>Onset: 10 - 20 minutes Peak: 1 - 3 hours Duration: 3 - 5 hours</p>
<input type="checkbox"/>	Long acting	 <p>Onset: 1.5 hours Peak: 4 - 12 hours Duration: Up to 24 hours</p>

Insulin Delivery

You will be given a sheet with instructions for your selected insulin delivery device.

Insulin injections

- Are given into the subcutaneous tissue (fat) beneath the skin, avoiding the nerves, veins and arteries
- During pregnancy the abdomen and thighs are recommended sites for injection
- It is important to rotate injection sites within the area being used e.g. within the abdominal area. (*see below*)
- If you are having two or more injections a day, choose a morning and afternoon site (e.g. morning site: left abdomen and afternoon site: right abdomen)
- Report any discomfort or redness at injection site to your diabetes team



What affects the way insulin is absorbed?

Different injection sites have different absorption rates and can cause changes in blood glucose levels.

It is extremely important that you:

- Have your insulin at room temperature
- Gently pre-mix your insulin
- Do not inject insulin into the thigh if exercised recently
- Do not inject in an area when expected changes in temperature may occur such as shower, bath, hot water bottle, spa, sauna
- Do not massage the area around the injection site

Insulin pen needles

A pinch up of a skin fold at the injection site is only necessary when using certain sized needles.



No pinch up = 4mm needle

Pinch up = 6 mm needle or greater

Your health professional will advise on best choice for you.



Priming your insulin delivery device and insulin injection technique

Your diabetes educator or doctor will provide step by step instructions and demonstrate how to administer your insulin

1. Always wash your hands before handling the device

Priming

2. Screw a new needle onto your injection device
3. Set dose selector at zero
4. Dial up two units of insulin to prime device
5. Hold device with needle pointing upwards and gently tap to remove air bubbles
6. Depress (push) the button on the device (back to zero)
7. A drop of insulin should be seen at the tip of the needle when primed
8. If a droplet is not seen, repeat the steps above until a drop of insulin is seen at the tip of the needle

To administer dose

9. Dial the insulin dose as prescribed
10. Select injection site
11. Inject the insulin – push the plunger down all the way gently
12. Wait and slowly count to 6
13. Remove the needle and dispose into sharps container – *(see next page for sharps disposal)*

Handling insulin

Storage

- Insulin not in use should be stored in the refrigerator between 2°- 8°. Do not store in the freezer
- Insulin in use can be stored at room temperature for up to one month
- Insulin is destroyed by heat therefore do not leave it in a car or anywhere the temperature exceeds 30°
- Insulin should not be exposed to direct sunlight
- Check expiry dates
- Dispose of insulin if it has expired or not been stored correctly



Travelling



- Store insulin in an insulated container
- Do not use an ice block
- If flying – It is necessary to take a letter from your healthcare team so you can carry your insulin and needles on board

Disposal of needles

Approved sharps containers can be purchased from retail pharmacies or Diabetes Australia

ACT Sharp Bin Locations

- **Directions** City Health Centre, Cnr Moore and Alinga Sts
- **Hepatitis ACT** 36 David St ,Turner (opposite O'Connor Shops)
- **AIDS Action Council** Westlund House, 16 Gordon St ACTON
- **Belconnen Health Centre** Cnr Swanson St and Benjamin Way
- **Calvary Hospital** Emergency Department Car Park
- **City Health Centre** Cnr Moore & Alinga Sts Canberra City
- **Gungahlin Health Centre** Cnr Cavanagh St and Fussell Lane
- **Phillip Health Centre** Cnr Corinna and Keltie Sts
- **Tuggeranong Health Centre** Cnr Anketell and Pitman Sts
- **Winnunga Nimmityjah Aboriginal Health Services** Boolimba Cres, Narrabundah

Recycling Centres

- **Belconnen** Jolly Street
- **Mitchell** Baillieu Court
- **Phillip** Botany Street
- **Tuggeranong** Scollay Street



Driving

- You need to take care when driving now you are on insulin
- **You do NOT need to** notify your local transport department that you have gestational diabetes and are commencing insulin
- Check your blood glucose levels before you start to drive – it is recommended that your levels are above 4mmol/L to drive
- Hypoglycaemia (low blood glucose levels) can impair your ability to drive safely
- It is advisable to have a carbohydrate snack available in the car
- Pull over immediately and stop the car if you feel as though your blood glucose level is low
- Treat the hypoglycaemia and do not drive until you have checked your blood glucose levels
- Always carry your meter when driving



Hypoglycaemia – A blood glucose level less than < 4mmol/L

After you commence insulin injections it will be necessary to maintain a balance between the amount of insulin given, your food intake and the amount of physical activity you undertake.

The most common reasons for hypoglycaemia are:

- A missed meal, delayed or inadequate meal
- An unusual amount of exercise
- A higher insulin dose than required
- Alcohol intake, especially on an empty stomach (alcohol is not recommended in pregnancy)

Symptoms of hypoglycaemia include:



You may or may not have all of the following symptoms:

1. Headache or dizziness
2. Trembling, shaking
3. Tingling sensation of the lips and fingers
4. Nausea
5. Sweaty, cold and clammy
6. Feeling hungry
7. Palpitations

Treatment of hypoglycemia

3 Important steps if hypoglycemia occurs – you must

1. **Test**
2. **Treat**
3. **Report** (See contact details supplied)

If your blood glucose level is less than 4.0mmol/L and you are experiencing the symptoms of hypoglycaemia then choose **one** of the following:



Seven glucose jelly beans



A glass of soft drink or sports drink
(not diet)



Three heaped teaspoons of sugar
or honey dissolved in water



100mls of Lucozade

If after 15 minutes your symptoms have not improved and your blood glucose level remains below 4.0 have another serve of fast release carbohydrate. When you feel better, and if it is not time for a meal, eat some longer acting carbohydrate (low GI) for example:



One piece of fresh fruit e.g.
apple or orange



Sandwich using multigrain
bread or fruit bread



Glass of low fat milk

Severe hypoglycaemia can lead to confusion and loss of consciousness. If this happens, you should not be given food. Whilst it is very rare, if severe hypoglycaemia occurs and you become unconscious, someone must call an ambulance immediately.

The following simple guidelines will help to prevent a 'hypo' or quickly treat one:

- Eat carbohydrate regularly
- Use your medication carefully as prescribed
- Take extra food if you are engaging in an unusual amount of exercise
- Carry some sugar containing foods such as jelly beans with you at all times
- Also carry longer acting carbohydrates, such as fruit for use if meals are delayed
- Carry your identification with you at all times
- Carry your blood glucose meter at all times

Summary

Insulin therapy use in gestational diabetes is a valuable treatment option when dietary changes and physical activity have not resulted in achieving blood glucose levels within the recommended range for pregnancy.

Your healthcare team will provide ongoing support and education during your pregnancy to assist you with management of your insulin therapy. You will be seen in the Diabetes Antenatal Clinic (ANC); however, you need to ensure you continue your routine ANC appointments with your **GP** and **Midwife**

Contact details:

- Endocrinology Registrar for insulin dose adjustments
 - Monday -Friday between 2pm – 4pm
6244 2222 and page via switch
Pager number _____
Dr _____
- Endocrinologist on call all other times
 - For urgent advice only
6244 2222 and page via switch

ACT Health Diabetes Service acknowledges:

2. Queensland Government Department of Health Commencing Insulin therapy Gestational Diabetes (*2013)
- ADIPS – Australian Diabetes In Pregnancy Society
- ACT Health Diabetes In Pregnancy Working Group

Accessibility

If you have difficulty reading a standard printed document and would like an alternative format, please phone 13 22 81.



If English is not your first language and you need the Translating and Interpreting Service (TIS), please call 13 14 50.

For further accessibility information, visit: www.health.act.gov.au/accessibility

www.health.act.gov.au | Phone: 132281 | Publication No XXXXX

© Australian Capital Territory, Canberra Sept 2016

