

## How would you know if you had DKA?

- Some symptoms of DKA can be similar to labour, e.g. tummy pain, so you need to be on your guard and check blood for ketones if you are at all unwell or glucose levels are unexpectedly high
- Typical symptoms are breathlessness, passing urine more frequently, weakness, sickness and vomiting and tummy pains

## URGENT- GO TO HOSPITAL IF:-

- 1) You feel any of the above symptoms and think you have DKA
- 2) Your baby stops moving or its movement has altered
- 3) You have persistent vomiting and/or diarrhoea
- 4) You are unable to eat / keep fluids down
- 5) You have moderate to large ketones in the blood or urine

### Where to get help:

#### Your Diabetes team contact-

Name:.....



.....

#### Your Midwifery Team contact-

Name:.....



.....

#### Local Hospital Contact No.-

Name:.....



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**Care Planning:** *This leaflet should only be used with the ongoing advice from your Diabetes Team, as part of your plan of care.*

### Diabetes in Pregnancy Advisory Group



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## Type 1 Diabetes and Pregnancy

### 'Sick Days'

### What to do if unwell



Do you have:-

- A cold / flu, urine infection, toothache, under severe stress emotionally or physically or any other illness?

### Blood glucose (BG) targets in pregnancy:-

- Fasting 3.5 – 5.9mmol
- 1 hour after food less than 7.8mmol/L
- No ketones in the blood or urine

Your blood glucose (BG) levels will rise, because you are unwell.

Do you know what type of diabetes you have? Yes / No

If **no**, ask your diabetes team. If you have type 1 diabetes this leaflet is designed to help you

Type 1

- Check BG levels and blood ketones (or urine ketones) every 2 hours and follow the action plan suggested in this leaflet
- This leaflet advises how to increase your quick acting insulin doses when your BG levels are above target
- **Ensure you are aware that your baby is moving normally.**
- You will need to contact your diabetes team and/or midwife for further advice and help.

### Importance of Ketones and Avoiding 'DKA'

**In type 1 diabetes** there is **no insulin** to help the body use glucose from the blood. The body is starved of energy and begins to break down fat to use as fuel. Using fat stores produces breakdown products known as ketones which are acid and can be toxic. Build up of these acids in the body can lead to a serious condition known as **ketoacidosis or 'DKA'**.

Ketones can be measured on finger stick blood tests - increasing amounts of ketones would be a worrying sign when you are unwell, especially when pregnant. Ketones can also be found on urine testing.

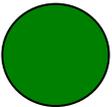
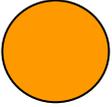
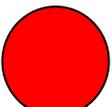
In pregnancy ketones can develop very quickly even when blood glucose is only slightly high, or even when it is normal.

Acting quickly when you are unwell to stay well hydrated (drinking more fluid than usual) and ensuring you have plenty of insulin on-board (see below) can help you to avoid DKA and will get you on the road to recovery faster.

### ACTION PLAN:

- 1) Remember, NEVER STOP your long-acting insulin (i.e. Levemir, Insulatard etc.)
- 2) If not eating, use Quick Acting insulin (QA, e.g. Novorapid, Humalog etc.) for correcting high BG readings
- 3) If unable to eat solids, replace with liquid foods (soup, milk, fruit yoghurt)
- 4) Drink sugar free fluids at least 100ml (teacup) hourly
- 5) Know your insulin sensitivity: i.e. 1 unit of QA insulin usually drops BG levels by 2 to 3mmol. **Yours is: 1 unit of QA: drops BG ----- mmol/L**
- 6) Know your insulin to carbohydrate ratio i.e. 1 unit of QA to ----- g of carbohydrate
- 7) Act quickly by using the following advice if you discover ketones in your blood or urine

### Making sense of your blood glucose and ketone testing

Results	Blood Glucose	Blood Ketones	Urine Ketones
	BG less than 8 mmol/L	Less than 0.6 mmol/L	<b>Negative</b> 
	BG 8 to 10 mmol/L	Between 0.6 and 1.5 mmol/L	<b>Trace</b> 
	BG 10 to 13 mmol/L or BG more than 13 mmol/L	Above 1.5 mmol/L	<b>Moderate ++</b>  <b>Large +++</b>



### How to Adjust Quick Acting Insulin

- Continue the same dose of long-acting insulin
- Use the same ratio of Quick Acting insulin (QA) with your meals

Give 10% of Total Daily Dose (TDD) of insulin every 2 hours (i.e. add up all your meal time insulin & basal insulin you have in 24hrs (TDD) & divide it by 10) until you recover

TDD	20	25	30	35
10%	2 units	3 units	3 units	4 units

Give 20% of TDD as QA insulin every 2 hours (i.e. add up all your meal time insulin & basal insulin you have in 24hrs (TDD) & divide it by 5) until you recover

TDD	20	25	30	35
20%	4 units	5 units	6 units	7 units