Infobrochure

Diabetescentrum
Waregem

Gestational diabetes: insulin therapy

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Dear mom-to-be,

Despite your effort to adjust your diet and exercise according to the dietician's nutritional schedule, your blood sugar levels remain above the target zone (fasting <95mg/dl and/or 1h after meals <140mg/dl). Your treatment of gestational diabetes was supplemented by insulin therapy by the endocrinologist.

In this brochure we would like to provide you with some more information about this insulin therapy.

Types of insulin

There are 2 types of insulin that can be started. The choice of the type of insulin depends on the time of the elevated values (sober or after a meal).

Long-acting insulin: is injected once a day and has a supportive effect on the pancreas. This insulin is started when fasting values elevate.

Fast-acting insulin: is injected with the main meal and helps the pancreas to process the sugars or carbohydrates from the food. This insulin is started in the event of increased values after a meal.

Administering insulin

If the endocrinologist decides to start with insulin, the diabetes nurse will give you the required information and demonstration so that you can do these injections yourself.

Insulin is injected into the abdomen, flank or upper legs using a pre-filled pen.

Injection guidelines

1. **Remove the pen cap** from the pen and **tighten an insulin needle** securely to the pen. Use a new 4mm needle every day.

2. **Perform an 'air shot':** set 2 units, hold the pen vertically and push the injection button until the units are back to 0. If no drop of insulin appears from the needle, you have to repeat the process.

3. **Setting the dose:** the insulin dose is expressed in units

4. **Inject the insulin:** insert the needle perpendicularly into the skin and push the injection button until the units are back to 0, wait 10 seconds before removing the needle from the skin.

5. **Remove the insulin needle from the pen**, using the large needle cap. If the needle is left attached to the insulin pen, air bubbles may enter the pen and/or insulin may leak from the pen. Always **close the insulin pen with the pen cap**.

Follow-up

Self-monitoring

When starting insulin therapy, self-monitoring of your blood sugar level is increased to 4 measurements per day. In this way, the dose of the insulin therapy can be evaluated and, if necessary, adjusted in time.

The target values remain the same:
Fasting, before breakfast: < 95mg/dl
1 hour after breakfast: < 140mg/dl
1 hour after lunch: < 140mg/dl
1 hour after dinner: < 140mg/dl

We would ask you to send your blood glucose values regularly (weekly or twice a week) to the diabetes nurse (by e-mail or telephone), for evaluation.

Practical information

You can get insulin free of charge from your pharmacy with a doctor's prescription from the endocrinologist/doctor.

The insulin is delivered in a box with 5 pre-filled pens. The pen remains effective for 1 month if stored at room temperature. If the pen is not empty after 1 month, throw it away and replace it with a new one. The remaining insulin pens must be kept in the refrigerator (please note: insulin must not freeze and cannot withstand extreme heat).

You can buy insulin needles at the pharmacy (without doctor's prescription), but they are not reimbursed by the health insurance fund. The recommended

needle length is 4 mm (or 5mm). You can collect used needles in a needle container. A needle container can be bought at the pharmacy. A full needle container, properly closed, is handed in at the container park.

Diabetes convention allowance

When insulin is started, the diabetes nurse will have you sign a new diabetes convention application. Your health insurance fund will then increase your allowance for the extra self-monitoring equipment and insulin therapy needed. The mutual health insurance organisation provides a reimbursement for four measuring strips per day and all insulin pens you need in the treatment of your gestational diabetes.

Hypoglycemia

The insulin dose, expressed in units, is determined by the endocrinologist based on your length, weight and measured blood glucose levels. The main goal is to get the values between the targets. The dose is adjusted to prevent hypoglycemia (too low blood glucose level) and hyperglycemia (too high blood glucose level). There is, however, a chance that the blood glucose levels will drop too much as a result of the injections, even to below 60mg/dl. This is called a hypoglycemia or 'hypo'. This is not harmful, but it does not feel good.

Causes of hypoglycemia

Hypoglycemia can have different causes:

- Injecting too much insulin
- Eating too little or too late after the injection of rapid-acting insulin
- Skipping a meal
- After a major physical effort

Symptoms

The body alerts you if your blood sugar level is too low. The most common symptoms are:

- Paleness
- Faintness
- Fatigue
- Sweating
- Trembling

- Difficulty concentrating
- Dizziness
- Palpitations
- Headache
- Irritability

What to do in case of hypoglycemia

If you suspect that your blood sugar level is too low, you should **first check your blood sugar level** with a finger prick to confirm the symptoms of a hypoglycemia (< 60mg/dl).

If you have a hypoglycemia, you should immediately **take fast-acting carbohydrates** such as a small glass or can of sugared soda (150ml) or 3 tablets of dextrose. **Recheck your blood glucose level 20 minutes after treatment** to see if it has normalised. If your blood glucose is still below 60mg/dl, repeat the previous step. If your blood sugar level has recovered and your next main meal is still more than an hour away, it is best to have a snack or meal, (for example a piece of fruit, a yoghurt, a slice of bread or a biscuit.)

In case of **repeated hypoglycemia**, contact the diabetes nurse or doctor. If necessary, the insulin dose can be readjusted.

Hyperglycemia

Excessive blood glucose can occur if you forget to take insulin, eat too much, when you are ill or have an infection ...

If you notice that your blood glucose level is too high several days in a row, this is usually due to increasing insulin resistance during the course of your pregnancy. We ask you to always contact the diabetes nurse or doctor to adjust your therapy.

Childbirth

Continue to measure your blood glucose until the day of delivery. If you have an induction, you may continue to inject long-acting insulin the evening before your hospitalisation. If you are allowed to have breakfast before your hospital admission, you must still inject your fast-acting insulin at breakfast. If you have to stay sober, you do not take any more rapid-acting insulin.

When you arrive at the hospital, please inform the midwife that you have gestational diabetes, whether or not treated with insulin. The midwife will have to follow a hospital procedure drawn up for this purpose. Your blood glucose will be closely monitored during labour and high blood glucose levels will be corrected by intravenous insulin therapy using an insulin pump.

Immediately after delivery, all insulin is stopped and the blood glucose level is monitored for a while. The midwife or diabetes nurse will give you the necessary instructions. During your maternity leave, another check-up with the endocrinologist is scheduled after you have had an oral glucose tolerance sugar test (OGTT, 75 grams). Your GP will be informed of the result afterwards.

It is recommended that you visit your doctor once a year for a blood sample to determine your fasting blood glucose level. This is important considering that after gestational diabetes you have a 50% chance of developing type 2 diabetes within 5-10 years. The annual blood test at the GP can help detect the development of type 2 diabetes at an early stage. You can also read about this in our 'general information' brochure on gestational diabetes.

Conclusion

If you need more information, if you have any questions or if your sugar levels are too high or too low, please contact the diabetes nurse or the dietician at our diabetes centre.

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