Infobrochure

Diabetescentrum
Waregem

Gestational diabetes: “General information”

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Dear mom-to-be,

You have been diagnosed with gestational diabetes. You will be monitored by the diabetes team (endocrinologist, diabetes nurse, dietician) in collaboration with your gynaecologist.

In this brochure, we would like to give some theoretical and practical information concerning gestational diabetes.

After your consultation with the dietician, you will receive the second section of this brochure “nutritional advice”.

What is gestational diabetes?

Gestational diabetes is any form of abnormal increase in the sugar level (glycaemia) in your blood during pregnancy (after ruling out pre-existing type 1 or type 2 diabetes), caused by the hormonal changes during pregnancy. It occurs in about 10% of all pregnant women and usually disappears after childbirth. However, it is a signal that you are predisposed to type 2 diabetes that may develop later in life.

Some women are more susceptible to developing gestational diabetes:

- Existing overweight (BMI > 25 or abdominal circumference > 88 cm)
- Age (> 30 years, increase by more than 4% a year)
- Family history of diabetes (first or second degree relative)
- Pre-existing deranged sugar levels
- Gestational diabetes during a previous pregnancy
- Certain ethnic groups (Africa, Southeast Asia, Middle East, Latin America)
- If you have already delivered a baby weighing more than 4 kg
- In case of multiple pregnancies
- In case of a large weight gain during pregnancy of between pregnancies
- When taking certain medications such as cortisone

Causes

There are two mechanisms that can lead to diabetes during pregancy.

- **Gestational diabetes**: during pregnancy the placenta produces several specific hormones that are important for the proper development of your baby. These hormones causes insulin resistance and complicate the effective insulin action. Insulin is the hormone responsible for controlling the level of sugar in the blood (glycaemia). It helps with the transport of sugars from your blood to your cells, providing your cells with energy and lowering your blood sugar levels. Increased insulin resistance complicates the transport of sugars from the blood into the cells. In every pregnancy, the pancreas has to produce more insulin than normal. For some women, the pancreas cannot keep up with the increased demand for insulin. As a result, the bloodsugarlevels rise abnormally and gestational diabetes develops.

- **Pre-existing diabetes (type 2 or more rarely type 1) that has not yet been diagnosed before.** The symptoms of pre-existing diabetes may be confused with pregnancy symptoms: fatigue, thirst, frequent need to urinate.

Diagnose

Gestational diabetes usually occurs in the third trimester of pregnancy. Detection usually takes place between the 24th and 28th week of pregnancy. The screening is done by a glucose challenge test (GCT, 50 grams of sugar). If this GCT shows an abnormal result, an oral glucose tolerance test (OGTT, 75 grams of sugar) will be performed. Your bloodsugarlevel is checked by means of 4 venous blood samplings: sober, 30 minutes, 60 minutes and 2 hours after drinking the sugar solution. The diagnosis of gestation diabetes is made with at least 1 disturbed value.

Risks for the baby

With increased sugarlevels in the mother's blood, the baby also receives a large amount of sugars through the placenta. However, the insulin produced by the mom's pancreas does not pass through the placenta. The baby produces its own insulin to process the sugars it receives. When sugarlevels are elevated, the baby will produce more insulin. That excess of sugars and insulin causes your baby to store extra calories resulting in a higher birth weight and possibly other complications

Usually there are no serious complications for the baby because, with gestational diabetes, your bloodsugarlevel will generally not be elevated before the 20th week of pregnancy. At this moment, your baby's organs have already fully been formed.

However, there are some risks to consider for your baby's health:

- Excessive growth of the baby in the uterus with greater fat accumulation (macrosomia). This leads to higher birth weight, larger placenta and more amniotic fluid
- An increased risk of preterm birth or injury to the shoulder during birth due to macrosomia
- Immaturity of the baby's liver, which can cause jaundince, with a need for phototherapy after birth
- Low sugar levels (hypoglycaemia) during the first hours after birth
- An increased risk of developing obesity and type 2 diabetes later in life

Risks for the mother

In most cases, your pregnancy will perfectly go well and you and your child will be healthy. However, your gestational diabetes needs to be monitored, and treated if necessary. After all, it is important to maintain an normal sugarlevel to avoid the risks for you and your baby.

There are also a number of risks for the mother with gestational diabetes:

- More chance of a section or problems during delivery
- Increased risk of preterm birth due to a larger quantity of amniotic fluid

- Increased risk of raised bloodpressure and the development of pre-eclampsia
- Increased risk of urinary tract infection during pregnancy
- High chance of developing gestational diabetes again in a future pregnancy

50% chance of developing type 2 diabetes 5 to 10 years after childbirth. This evolution into type 2 (pre)diabetes can occur more quickly among women who are overweight or if diabetes runs in the family.

Treatment

Balanced nutrition

The treatment of gestational diabetes primarily consists of a healthy diet. The goal is to achieve normal blood sugar levels while still providing enough nutrients for you and your baby. You will be guided by a dietitian for this purpose.

General dietary advice for gestational diabetes:

- Eat at regular times and do not skip a meal
- Eat 3 main meals daily and 2 to 3 healthy snacks in between
- Make sure that your three main meals contain carbohydrates
- Avoid consuming products with extra added sugars (soda, fruit juice, cookies, pastries, sugary yogurt, ...)
- Drink enough water (at least 1,5L per day)
- Preferably eat whole grain products

Maintain regularity in carbohydrates and in spreading them throughout the day. Above all, do not reduce your recommended amount of carbohydrates to obtain better bloodsugar levels. This is not a weight loss diet. A lack of essential nutrients can cause major health problems for your baby's growth. The dietitian will survey your current eating pattern, guide you by giving tips and advise to control your bloodsugars in order to maintain a normal weight gain during pregnancy. The dietitian will prepare a personal nutrition plan for you.

Physical activity

Regular exercise, in addition to a balanced nutrition, is an important part of the treatment. Physical activity improves the effect of insulin, resulting in better control of your blood glucose levels. When there is no medical contraindication, light to moderate physical activity of at least half an hour per day is recommended for gestational diabetes

Insulin

If your blood glucose levels are severely disturbed and/or if it appears that the personal nutrition plan and physical activity (exercise) are insufficient to keep your blood glucose levels within target levels, insulin therapy will be prescribed by the endocrinologist. This is the only medication that can be safely given to treat gestational diabetes. This medication is administered in the form of an injection.

If starting insulin is necessary, you will be given all the information around insulin therapy by the diabetes nurse so that you can safely start therapy. You will then receive the third part of this brochure: gestational diabetes "insulin therapy".

Don't try to avoid insulin by eating less or not eating carbohydrates, as they are absolutely necessary for your baby's healthy development

Follow-up

Glycemic values, growth curve baby, amount of amniotic fluid

Your gestational diabetes will be followed in a multidisciplinary way. Your gynaecologist works together with the endocrinologist, the diabetes nurses and the dieticians. The following parameters are monitored: your measured glycemia levels, your baby's growth and the amount of amniotic fluid.

Self-monitoring

Self-monitoring means that you measure the level of sugar in your blood yourself (by finger prick) and keep a systematic record of it. Regular measurements are important to ensure that your blood glucose is well controlled and remains within the range of normal values.
The diabetes nurse will teach you the measuring technique and will ask you to measure your fasting blood glucose 3 times a week as well as 1 hour after breakfast.

Practical guidelines for measuring your glucose levels:

- Always wash your hands with soap and water and dry them well before measuring
- Prepare the pen (use a new needle every day)
- Always insert the strip into the device before pricking your finger
- Alternate between all your fingertips
- Do not press too hard on your fingertip. This may affect the result.
- Write down the results in your diary

Target values

Fasting, before breakfast: < 95mg/dl
1 hour after breakfast: < 140mg/dl
1 hour after lunch: < 140mg/dl
1 hour after dinner: < 140mg/dl

As long as the blood sugar values are within the target values, the management of your gestational diabetes can be maintained unchanged. The glycaemic values are communicated weekly to the diabetes nurses. You may contact them by telephone or e-mail (see contact details at the end of this brochure).

Fee for self-monitoring, guidance and treatment by the diabetes convention

A diabetes convention is an agreement between the National Instiute for Sickness and Disability Insurance (also known as RIZIV in dutch) and the diabetes team of the hospital with the purpose to provide free education and guidance and self-monitoring material for diabetes patients. During your appointment with the diabetes nurse you will sign the application for this compensation.

The diabetes nurse will provide you with an individual glucose meter with accompanying test material. If you need additional material, you can obtain it free of charge from our diabetes centre. You do not have to buy material for self-monitoring. However, the mutual health insurance organisation specifies in advance the maximum amount of testing material that the diabetes centre is allowed to provide. There is enough test material for the number of measurements that the diabetes nurses will ask you to perform.

After childbirth

Usually, the blood glucose level normalises within 24 hours after childbirth due to the disappearance of the pregnancy hormones. To check how your sugar metabolism is doing, without the influence of the placental hormones, we recommend a glucose day curve on the 2nd day after delivery. For this purpose you will receive a form from the midwife or the diabetes nurse with guidelines when to take your blood glucose. During the postpartum period, we would like to ask you to check your blood glucose values once a month and to record them in your diary.

After gestational diabetes, you have a 50% chance of developing type 2 diabetes within 10 years. You can reduce the development of Type 2 diabetes by half by living a healthy lifestyle.

In addition to following the nutrition and exercise advice, we strongly recommend you to have an oral glucose tolerance test (OGTT) carried out again after childbirth (3 to 6 months). This test is performed again to check that diabetes does not persists. If you do not have a lab form, please contact the diabetes nurse. (This OGTT test can be postponed until 6 months after your birth if you are breastfeeding)

The result of this oral glucose tolerance test and the noted blood glucose values (which you performed after the birth and noted in your diary) will be discussed with you during a last consultation with the endocrinologist. If this appointment has not yet been scheduled, you can still book this consultation via the secretariat (056 62 35 16).

The Zoet Zwanger (= Sweet Pregancy) project

Gestational diabetes is a warning for the future. The risk of developing permanent diabetes within the first 10 years is as much as 30-50% higher than for women without gestational diabetes.
You can minimise the risk of diabetes by:

- Maintaining a healthy weight
- Getting enough exercise
- Having a healthy diet

It is strongly recommended that you see your general practitioner every year and have your blood glucose checked. So inform your GP that you have had gestational diabetes.

Het Zoet Zwanger (“Sweet Pregancy”) project is an initiative of the Diabetes Liga (Diabetes League), supported by the Flemish Government. The aim of this project, apart from informing and sensitizing, is also to annually follow up women who have had gestational diabetes. The diabetes nurse will ask you at the start of your pregnancy diabetes if she may register you for this project.

About three months after delivery, you will receive a first e-mail with an overview of the necessary action steps to prevent diabetes. One year after delivery and then annually, you will automatically receive an e-mail asking you to see your general practitioner for a check-up (fasting blood glucose measurement).

You can find the information on www.zoetzwanger.be, but the diabetes nurse will also explain it to you during the education. Please note that the website is in dutch. We suggest that you show all correspondence from the Zoet Zwanger project to a relative or someone close to you who understands Dutch, so that all the infomation is clear.

Conclusion

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

Diabetes nurses:
Phone: 056/62 35 22
Mail: diabetescentrum@ziekenhuiswaregem.be

Diabetes dieticians:
Kimberly Verriest – Darya Van Ussel
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