

GESTATIONAL DIABETES



Diabete Gestazionale (Lingua Inglese)

Lilly

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DEFINITION

During pregnancy, approximately 2-5% of women develop intolerance to glucose known as **gestational diabetes**, usually between the 26th and the 28th week.

This is due to the production of hormones typical of pregnancy, which oppose the action of insulin in the body.

Insulin is a hormone produced by the pancreas which controls the levels of glucose (sugar) in the blood.

Gestational diabetes develops when the pancreas cannot produce a greater amount of insulin in response to hormonal changes, to continue to control blood sugar levels.

WHAT CAUSES AND HOW TO MANAGE GESTATIONAL DIABETES



Causes

Gestational diabetes develops during pregnancy in women who never had diabetes before; however, they are often found to have a family history of type II diabetes and/or to have been overweight before becoming pregnant. Also, women who start a pregnancy at a late age, or who in a previous pregnancy gave birth to a macrosomic infant (over 4 kg) have higher probabilities of developing gestational diabetes.

Risks for the baby

The main consequence of **gestational diabetes** is altered fetal growth, with a risk for the baby to be born macrosomic, i.e. too big. A macrosomic infant (over 4 kg in weight) has a higher risk of becoming obese in childhood. The risk of malformations increases if blood sugar levels are not controlled.

After diagnosis

Having **gestational diabetes** does not necessarily mean having diabetes for the rest of your life: properly controlled before and after childbirth, diabetes will go away after pregnancy.

Therefore, it is important to concentrate on this period and achieve good control of your blood glucose level through a correct lifestyle.

Things you should know

- ▶ Gestational diabetes does not last forever: in most cases it goes away after delivery.
- ▶ Gestational diabetes may develop again during subsequent pregnancies.
- ▶ Diabetes is not transmitted to the baby.
- ▶ With adequate blood glucose control, gestational diabetes will not cause fetal malformations.

HOW TO CONTROL DIABETES

During pregnancy, it is very important to **control blood glucose levels**. An excessively high blood glucose level, called hyperglycemia, would stimulate insulin secretion in the fetus. This would accelerate the baby's growth.

In the final period of pregnancy, high blood sugar in the mother and high insulin in the fetus may contribute to the development of hypoxia (shortage of oxygen), acidosis, and death of the fetus.

Lastly, high insulin of the fetus at birth may cause temporary hypoglycemia (low blood glucose) in the baby. The diabetology team can help you to control your blood glucose and avoid these risks. The team's objective is to explain how to control your own blood glucose, what diet to follow and what exercise to do. If blood glucose levels remain high, you will need to start insulin therapy.

BLOOD GLUCOSE TARGETS

Fasting blood glucose should be:	≤ 95 mg/dl
1 hour after meals blood glucose should be:	≤ 140 mg/dl
2 hours after meals blood glucose should be:	≤ 120 mg/dl

1) E.Orsi, D. Bruttomesso, Diabete in gravidanza, Vivere il Diabete, July 2011 4 (2), page 1



THE DIABETOLOGY TEAM

A diabetology team is generally composed of a diabetologist, a nurse and a nutritionist; during pregnancy, the team will help you to understand how to maintain a good blood glucose control, how to perform self-monitoring, and what diet to follow.

GLUCOSE CONTROL

During pregnancy, you should perform frequent self-monitoring (4 – 8 times per day) of your blood glucose level: before meals, one hour after meals, and during the night.

Studies have demonstrated that proper blood glucose monitoring one hour after meals is associated with reductions in:

- number of LGA infants (Large for Gestational Age: babies whose weight at birth is higher than the 90th percentile)
- number of caesarian sections due to cephalopelvic disproportion
- number of neonatal hypoglycemias.

OTHER TESTS

During pregnancy you need to have your urine analyzed (“urinalysis”) to check for the presence of proteins, and your blood pressure measured. An ultrasound scan is also recommended, to check the size of the fetus.

CORRECT LIFESTYLE



A HEALTHY DIET

Correct nutrition is essential at this time. Your diet should be recommended by a specialist, such as a dietician or nutritionist. Specifically, it is important to be careful with the amount of sugar you consume, and therefore with the glycemic index of the different foods. You should try to eat fruit, vegetables and low fat foods, and avoid high-fat or high-sugar foods like cakes or biscuits.

EXERCISE

In addition to benefiting your general health, exercise can help to control your blood glucose level. Aerobic exercise done at moderate intensity can be considered the most appropriate for this purpose, but you should ask your diabetology team for advice on what type of exercise is best for you.



TREATMENT

If, despite following the diabetology team's advice, your blood sugar levels remain too high, you will need to start insulin therapy.

The diabetology team will explain what it is, what effects insulin will have, and how it is administered.

LOW BLOOD GLUCOSE: WHAT IT IS, WHAT TO DO ABOUT IT

Low blood glucose, or hypoglycemia, occurs when the level of sugar in the blood is 70 mg/dl or less.

If your blood glucose level is low, you may feel shaky in the legs, confused, weak, hungry, nervous, have fast heart beat or tingling in the tongue and lips.

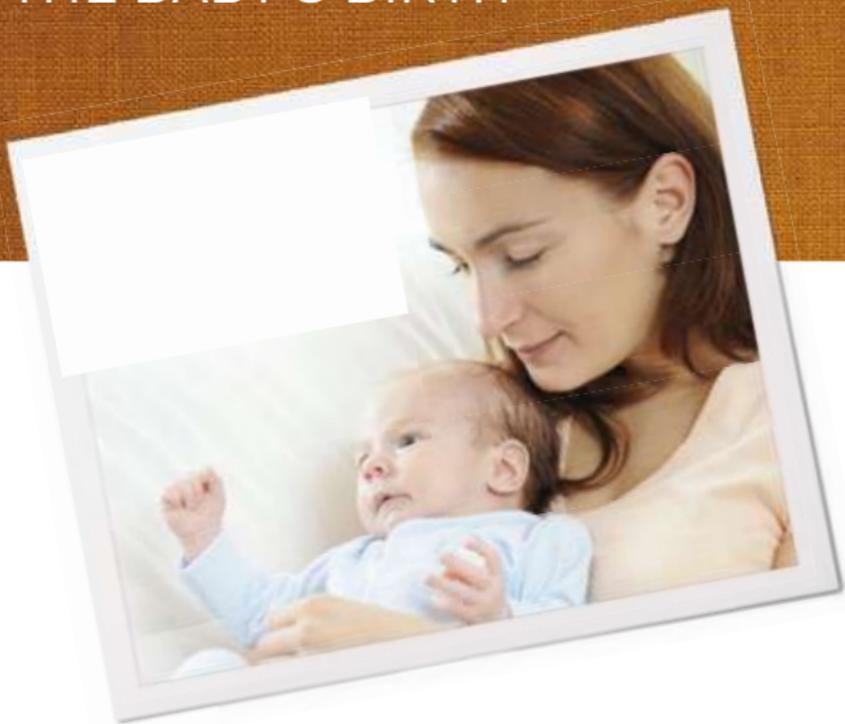
To manage low blood sugar and increase glucose levels quickly, be sure to have with you 15 g of fast acting carbohydrates, choosing between:

- half a glass of fruit juice or a sugary drink
- 1-3 sugar lumps
- 5 or 6 sugary candies
- 1 tablespoon of sugar or honey

If after 15 minutes your blood glucose is still below 70 mg/dl, take another 15 g dose of sugar, until your blood glucose raises above 100 mg/dl.

- Eat complex carbohydrates (bread, pasta, cereals) to help prevent your blood glucose from dropping again.
- Inform your diabetology team if you experience low blood sugar.

DURING AND AFTER THE BABY'S BIRTH



DURING LABOUR

During labour and delivery, your blood glucose levels will be constantly monitored and you will receive an insulin infusion. Sometimes, the babies of women with diabetes are larger than the average; in this case, labour may have to be induced before term, or delivery by caesarian section may be required. Your treating physicians will determine which solution is best for you.

AFTER DELIVERY

After your baby is born, his or her blood glucose levels will be monitored. In particular, this monitoring will be performed during the first 24 hours to determine whether the infant needs to receive additional nutrients in order to maintain adequate glucose levels.

Gestational diabetes generally ends after delivery. This means that your glucose levels will return to normal, and if you received insulin therapy during your pregnancy you can now discontinue it. In the first six weeks after delivery, you will still undergo blood glucose monitoring to make sure that your levels are back to normal, as some patients with gestational diabetes develop type 2 diabetes.

BREASTFEEDING

As with all other cases, maternal milk is the best food also for babies of mothers with **gestational diabetes**, so there are no reasons not to breastfeed your child.

IN THE FUTURE

In women who developed gestational diabetes during pregnancy there are higher probabilities that the condition will occur again in future pregnancies; they are also more likely to develop type II diabetes.

To reduce this risk, it is important to follow a healthy diet and to exercise regularly.

Try to exercise at least thirty minutes a day, five days a week, even if you feel a little fatigued. After delivery, the diabetology team will schedule a follow-up visit to check up on your condition.

Other guides on diabetes
are available at

www.lillydiabete.it

For more information
please contact your doctor or call

 **800-117678**

Every day from 8:30 a.m. to 9:30 p.m.