

DIABETES AND PREGNANCY



PLANNING A PREGNANCY

If you are a woman with Type 1 or Type 2 diabetes, you can have a successful pregnancy. Thanks to advances in diabetes research, knowledge, and management, the outlook for pregnant women with diabetes is better today than it was a generation ago. However, you will still face challenges that other women don't. In deciding to have a child, you and your partner should understand that a diabetes-related pregnancy involves:

- Extra effort and commitment.
- Excellent blood sugar control.
- Education in all areas of diabetes management.

BEFORE YOUR PREGNANCY

If your blood sugar is in good control and you have no other medical problems, you should have no more difficulty becoming pregnant than a healthy woman without diabetes. To prepare for a healthy pregnancy, you should:

- Know how to monitor your blood sugar. If you are not currently testing your blood sugar, ask your health care provider about self-monitoring of blood glucose.
- Have your blood sugar in excellent control before becoming pregnant. Studies have shown that good blood sugar control before conception – as documented by a hemoglobin A1c (HBA1c) test in the normal range – as well as throughout the entire pregnancy, significantly reduces the incidence of birth abnormalities. Before becoming pregnant, ask your doctor for an HBA1c test and make sure the test is explained to you.
- Be at your ideal body weight before becoming pregnant. Women who are overweight have more complications with both diabetes and pregnancy.
- Choose a health care team that includes an obstetrician with experience in managing pregnancies complicated by Type 1 and Type 2 diabetes, not just gestational diabetes. Other team members should include your diabetes doctor, a dietitian, a nurse educator, and, in the last month of pregnancy, a pediatrician. Make sure to discuss any medical issues that may arise during your pregnancy with a member of your health care team.
- Plan to have your baby at a well-equipped hospital with up-to-date testing and monitoring facilities.

MEDICAL CARE DURING PREGNANCY

Additional Blood Tests

Controlling your blood sugar levels is crucial during this time, so your doctor will likely advise you to test your blood more frequently during your pregnancy, especially directing you to measure your blood sugar one hour after eating.

Insulin

Early stages: Your insulin needs may go down during the early stages of pregnancy. This is because the rapidly developing fetus is removing glucose from your body at a very great rate. Also, morning sickness may cut your appetite and, therefore, reduce the need for insulin.

Later stages: As pregnancy progresses the need for insulin will increase. Some women may have to double their insulin dosage.

Tests: Some doctors put their patients in the hospital for tests and readjustments of insulin dosage early in pregnancy. This may not be necessary if such tests are available in the doctor's office, as an outpatient, or at home, using self-monitoring of blood glucose.

Keep daily records and report changes: Any significant changes in blood sugar levels and insulin needs, and episodes of low or high blood sugar, should be brought to your doctor's attention immediately.

Diet

A *carefully controlled diet* is important to your health and that of your developing baby. You will need a personalized diet plan, which you should evaluate and adjust during the months of your pregnancy.

Snacks in addition to your three regular meals, will help avoid extreme blood sugar levels and provide the developing baby with a constant supply of nutrients.

Morning Sickness

Your doctor may prescribe a drug to reduce nausea (morning sickness). Sometimes, simply eating a dry cracker will help, but crackers are a simple starch and thus, your insulin doses need adjustments in order to eat crackers. You may want to experiment with various foods.

Hypoglycemia, Infections, and Ketones

Pregnancy may increase the frequency of hypoglycemia (low blood sugar) and the presence of ketones in the urine. Keep your doctor closely informed. Also, some pregnant women with diabetes have slightly higher rates of skin, vaginal, and urinary tract infections. With care, these should not be major problems.

Gestational Diabetes

Some women who do not have Type 1 or Type 2 diabetes develop gestational diabetes during their pregnancies. Gestational diabetes develops in 2 to 12 percent of all pregnancies, depending on your ethnic background. Diet control, careful monitoring of blood sugar, and sometimes insulin are required to treat it. Although this type of diabetes usually disappears when the pregnancy is over, women who have it are at increased risk for developing Type 2 diabetes later in life. In addition, if you do get gestational diabetes, there is a strong likelihood that it will recur if you become pregnant again.

SOME RISKS AND EFFECTS OF DIABETES ON PREGNANCY

Miscarriages

Women with poor blood sugar control or many severe complications are at greater risk for miscarriage. In otherwise healthy women with diabetes, the risk of miscarriage is no greater than that of the general population – approximately one out of every nine or ten early-stage pregnancies.

Large Babies

Women with diabetes may have large babies as a result of their high blood sugar levels. This effect can be reduced by keeping blood sugar levels as close to normal as possible. Obviously, a big baby makes delivery more difficult and for this reason, Cesarean sections are frequently performed.

Polyhydramnios

This condition – excessive amounts of amniotic fluid throughout pregnancy – is somewhat less common. Aside from the discomfort of an overly distended belly, polyhydramnios rarely has harmful consequences. However, it is a sign that the diabetes has not been under optimal control. The fluid builds up because the baby is urinating large quantities due to elevated glucose levels.

Toxemia

Toxemia is characterized by an increase in blood pressure, the presence of protein in the urine, and the swelling of hands and feet. Toxemia was once a common complication of diabetes-related pregnancy, but with good blood sugar control this problem is no more common than in a non-diabetes-related pregnancy.

Edema

Swelling or edema is a common occurrence. Limiting your salt intake may be all that is necessary to reduce this excessive accumulation of fluid. Advise your doctor if swelling occurs.

MONITORING THE BABY'S DEVELOPMENT

There are many tests that give information about the development of the baby and the degree of intrauterine risk.

Sonogram or Ultrasound

This high frequency sound wave is used to map out the size of the baby. Repetition of this test during pregnancy makes it easy to calculate the baby's rate of growth. A simple, painless, harmless test, a sonogram is carried out in the doctor's office or in a hospital on an outpatient basis.

Amniocentesis

This technique evaluates the maturity of the baby's respiratory tract and its ability to breathe on its own. In this test, a fine needle is inserted into the uterus, and a small quantity of the fluid around the baby is extracted. If the level of a material called surfactant is high enough, the doctor knows that the baby's lungs have matured, and the baby will be able to breathe on its own. Amniocentesis helps doctors decide on the best delivery time for the baby.

Non-Stress Test (NST)

This test checks on your baby's general well-being by recording your baby's heartbeat as he or she moves. A faster heartbeat would be a normal reaction. Non-stress tests are usually conducted one to three times each week in the last few weeks of pregnancy. Other tests may be ordered if the NST is abnormal.

Fetal Movement Records

Your doctor may ask you to keep track of your baby's movements and will instruct you on how and when to note these movements.

DELIVERY

Women with diabetes can have a normal vaginal delivery if the pregnancy is uncomplicated and all factors are normal. However, because of added risk, many doctors caring for pregnant women with diabetes deliver their babies before the due date, either by inducing labor or by performing a Cesarean section. Moreover, since babies born to women with diabetes can be large, a Cesarean section may be required. If a Cesarean section needs to be performed, remember that this is one of the most common major operations and has become a relatively simple and safe procedure.

AFTER THE BABY IS BORN

Genetic Consideration: Will Your Baby Have Diabetes?

Research has determined that there is a genetic component to diabetes, but this fact does not necessarily mean your baby will have diabetes or develop diabetes. Nonetheless, you will want to keep a close watch for symptoms.

The baby may have some trouble at birth, however, if the mother's glucose levels were elevated before delivery, particularly if they were high during the last two months of the pregnancy. Although the baby *does not* have diabetes, it may need special care. In this situation, the baby is given early supplements with sugar, either intravenously or by mouth, and will be watched closely until its blood sugar has returned to normal.

Insulin Requirements After Delivery

Soon after delivery – often within a few hours – your insulin needs will drop, and you may need less insulin than you did before becoming pregnant. This state usually lasts for a period of several weeks. The extra activity involved in caring for a newborn also tends to reduce your insulin needs for a while. You may want to keep emergency snacks in every room while taking care of a new baby, in case you feel the beginning of an insulin reaction.

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Breastfeeding

A woman with diabetes who is otherwise healthy may choose to breastfeed her baby.

- *Baby in intensive care unit:* Even if the baby is in intensive care, you can breastfeed after he or she is released. When your milk comes in, you can pump it manually, which will maintain milk production until you can actually nurse the baby.
- *Snacking before nursing:* Because breastfeeding can often cause a sudden drop in your glucose level, have a glass of milk before you nurse the baby in order to maintain your blood sugar.
- *Maintaining fluid and caloric intake:* When you nurse, you may have to increase your fluid and caloric intake to make up for the calories used by milk production.
- *Minor infections:* Any sign of pain or redness around the nipples or the breasts themselves must be promptly reported to your doctor. A minor infection can be quickly treated with antibiotics, and you usually don't have to stop nursing because of it.

The information in this brochure is not intended to take the place of medical advice. For guidance on topics discussed, consult your health care professional.

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