

Diabetes and Pregnancy

A PATIENT'S GUIDE

When Amber and her husband, Alex, began planning for their first child, they met with her health care team and learned what she needed to do to get her body ready for a healthy pregnancy. Over the next year, Amber worked hard to get her A1C down to 6.5% and to get her weight in a healthy range. Amber and Alex were excited when she reached her goals and even more elated a month later when Amber discovered she was pregnant. Throughout her pregnancy, they worked together to ensure a healthy pregnancy and a healthy baby. They knew they had succeeded when their beautiful daughter was born.

Most women with diabetes can have a safe pregnancy and delivery if they have tight blood sugar (glucose) control before becoming pregnant. If you have type 1 or type 2 diabetes, it is important to get good health care both before and throughout pregnancy. Women with gestational diabetes also need special care during pregnancy. This is a temporary type of diabetes that can occur during pregnancy.

How should you plan for pregnancy if you have diabetes?

If you have diabetes and want to have a baby, get a checkup before becoming pregnant. Ideally, your partner should join you, and you should see a team of health care providers that includes your diabetes specialist, a diabetes educator, a dietitian, and an obstetrician.

At this visit, the health care team will counsel you on what your target blood sugar range should be, as well as your hemoglobin A1C. Sometimes called A1C, this test shows your average blood sugar levels over the past few months. The care providers also will discuss whether you should change your diabetes treatment. If you receive insulin therapy, it is best to use an insulin pump or multiple daily injections of insulin. Pre-mixed insulin is less likely to help you maintain your target blood sugar range.

You also will learn what you should do before pregnancy to have the best chance for a healthy baby. Experts recommend the following:

- **Take a daily folic acid supplement.** This vitamin helps lower the risk for having a baby with birth defects of the brain and spinal cord. Take a dose of 5 milligrams (mg) a day (or whatever your doctor advises) starting

three months before you try to get pregnant.

- **Get an eye exam.** See an eye doctor to find out if you have diabetic eye disease (retinopathy). If you do, your doctor may want you to get treatment before you try to conceive because this eye disease can get worse during pregnancy.
- **Control your blood pressure.** Your blood pressure should be normal or close to it — below 130/80 mm Hg (said as “130 over 80”).
- **Lose weight if you are overweight.** Being overweight raises the chance of problems during pregnancy.
- **Ask your doctor if you should stop taking any of your medicine or change to a different medicine.** Certain medications may not be safe for an unborn baby. These include
 - **Blood pressure-lowering drugs called ACE inhibitors or ARBs**
 - **Statins to lower high cholesterol**



What other tests might your doctor order?

Other health problems can affect you and your baby. Your doctor may want you to have tests to look for these problems.

- **Thyroid function test.** Type 1 diabetes increases the risk for an underactive thyroid (hypothyroidism) or an overactive thyroid (hyperthyroidism). Thyroid disease may affect your baby's growth and brain development. Untreated hyperthyroidism raises the chance of having a miscarriage or a premature baby.
- **Screening test for blocked arteries.** Pregnancy stresses your heart, and diabetes raises the risk for heart disease. If you have risk factors for heart disease, your doctor may want you to have a screening test for blocked arteries of the heart. This type of heart disease may need treatment before you can consider pregnancy.

If you have had gestational diabetes in a previous pregnancy, you should be tested for diabetes before becoming pregnant again. Women with a history of gestational diabetes have a 35 to 60 percent chance of developing diabetes in the next 10 to 20 years.

What care do you need during pregnancy?

Blood glucose. While pregnant, you will probably need to check your blood sugar more often than before pregnancy. Check your blood sugar as often as your doctor recommends. You should probably test it before meals, one or two hours after a meal, at bedtime, and during the night.

Ask your doctor what your blood glucose numbers should be. Most pregnant women with diabetes should aim for these blood sugar levels as long as they do not cause low blood sugar:

- Before meals: 95 mg/dL or less
- One hour after the start of a meal: 140 mg/dL or less
- Two hours after the start of a meal: 120 mg/dL or less

Insulin. If you were already using an insulin pump before pregnancy, you should keep using it. You probably should not start using an insulin pump for the first time during pregnancy. But if other types of insulin treatment do not control your blood sugar, your doctor may want you to switch to an insulin pump.

Medical nutrition therapy. You should see a dietitian for nutrition therapy. This healthy eating plan, tailored to you, helps make sure you get the nutrients you need and gain the right amount of weight, while controlling your blood sugar. The dietitian may suggest you limit the amount of carbohydrates, or “carbs” (for instance, potatoes, bread, and fruit), that you eat. It is a good idea to eat three small meals and two to four snacks a day. Your dietitian also will advise how often to eat and how many calories to eat a day.

Vitamins. Your doctor likely will decrease the dose of folic acid you take once you finish your first trimester of pregnancy (week 12). Most often, the recommended dose of folic acid is 0.4 mg (400 micrograms) to 1 mg per day through the rest of pregnancy and until you stop breastfeeding. Ask your doctor what other prenatal vitamins you need.

Will you be able to breastfeed?

Women with diabetes are encouraged to breastfeed their baby. Breastfeeding lowers your baby’s risk for childhood obesity and for type 2 diabetes later in life. Women with gestational diabetes have an increased risk of developing

type 2 diabetes; breastfeeding seems to lower that risk. It also may help you lose the weight you gained during pregnancy.

Insulin is safe for breastfeeding women. If you take metformin or glyburide pills to treat type 2 diabetes, you can safely continue taking these medications while breastfeeding.

What problems can occur in pregnant women whose diabetes is not well controlled?

High blood sugar can affect you and your unborn baby. Pregnant women with high blood sugar are more likely to:

- Have a baby with birth defects, if blood sugar is not in control during the first two months of pregnancy (in women with type 1 or type 2 diabetes)
- Have a miscarriage or a stillborn baby (in women with type 1 or type 2 diabetes)
- Develop high blood pressure
- Give birth too early — have a premature baby
- Need a C-section or have a difficult delivery, because high blood sugar can cause the baby to grow too large in the womb

Tight blood sugar control can help you avoid these problems. A newborn of a woman with diabetes also may develop temporary low blood sugar (hypoglycemia) in the few days after birth.

What can you do to help have a healthy baby?

You can help ensure your baby’s health and your own health. Work with your obstetrician and your diabetes specialist to get proper medical care before, during, and after pregnancy. Take your diabetes medicine as prescribed and keep your blood sugar in control. Follow the healthy eating plan that you made with your health care team. Also, be physically active. Ask your doctor what type of activity is best for you.

The good news is that with careful planning, proper medical care, and good self-care, you can have a safe pregnancy and a healthy baby.

RESOURCE FOR PEER SUPPORT DURING PREGNANCY

DiabetesSisters, a non-profit organization: diabetessisters.org

This guide for patients comes from the Endocrine Society’s 2013 clinical practice guidelines for physicians about the care of pregnant women with diabetes: type 1, type 2, and gestational.

EDITORS

Ian Blumer, MD, Charles H. Best Diabetes Centre • Denice Feig, MD, Mount Sinai Hospital

The development of this patient guide was supported by an educational grant from Novo Nordisk Inc.

Note to health care professionals: This patient guide is based on, and is intended to be used in conjunction with, the Endocrine Society’s clinical practice guidelines (available at www.endocrine.org/guidelines/index.cfm).