

## Type 2 Diabetes and Pregnancy

Yes, you can have a healthy baby and a safe pregnancy with type 2 diabetes. What you need to do is **plan your pregnancy**. This means **normal good blood glucose control before and during pregnancy**.

Key points to planning a healthy pregnancy:

1. **Have normal blood glucose levels before and during pregnancy**

Blood glucose levels should be in the normal range **before** you get pregnant. The baby's organs are formed early, during the first 9 weeks of pregnancy, often before a woman even knows she is pregnant, so you must have good BG (blood glucose) control before you become pregnant.

Planning your pregnancy and keeping your BG in the normal range reduces the risk of birth defects in the baby. Some problems for the baby may include heart, brain, spinal cord or kidney.

While you are improving your BG control use a reliable method of birth control. For example: condom and foam or the birth control pill. Talk to your healthcare team to help you decide.

**See your doctor before you start trying to get pregnant.** Your doctor will do a blood test called an A1C. An A1C test tells you the average blood glucose over the last 3 months. Once your A1C is less than 7%, your doctor will tell you it is safe to get pregnant.

2. **Test your blood glucose with a meter.**

Test your blood glucose before breakfast and 2 hours after breakfast, lunch and dinner.

Planning pregnancy Blood glucose targets	A1C < 7.0	Before Breakfast 4-6	2 hours after meals 5.0 – 8.0
--	--------------	----------------------------	----------------------------------

3. **Take Folic Acid to prevent neural tube defects (spinal cord or brain malformations)**

- Extra folic acid is needed for all women.
- Prenatal vitamins contain 1 mg of folic acid.
- For women with diabetes, 1.0 – 4.0 mg folic acid is recommended after stopping birth control. When pregnant, continue to take folic acid until 12-14 weeks after your last menstrual period. After 14 weeks, continue to take a prenatal vitamin which contains 1 mg folic acid.

4. **Have diabetes complications checked before getting pregnant.**

It is important for you and your doctor to be aware of any diabetes complications you may have before you become pregnant. Some complications can get worse during pregnancy which may leave you with a permanent medical problem.

- **Eye exams:** See your eye specialist (ophthalmologist) before you become pregnant to look for any eye disease. Laser treatment for eye disease can protect the eye from getting worse during pregnancy. Laser treatment can be done safely in pregnancy if necessary, but if eye disease is not treated, pregnancy may make it worse and cause permanent damage.
- **Urine Test for Protein:** Checking for protein in urine can show early kidney changes. Have a blood and urine test to make sure your kidneys are healthy.
- **Check for High Blood Pressure:** High blood pressure can get worse in pregnancy. Your doctor will monitor your blood pressure during your pregnancy

5. **Check Medications:**

Some medicine that you may be taking may not be safe in pregnancy such as blood pressure medication. Check with your doctor before trying to get pregnant. Your doctor may be able to change the type of pills to ones that are safe to take in pregnancy. Some natural and homeopathic supplements may not be safe during pregnancy. Call Mother Risk at 416 813-6780 to find out more.

6. **Diabetes Medicine:**

If you are on diabetes pills it is best to switch to insulin before and during your pregnancy. Insulin is safe in pregnancy because it does not cross the placenta to the baby. If you have polycystic ovarian disease it may be recommended to continue to take Metformin (glucophage) in early pregnancy. Check with your doctor first.

It is safe to inject insulin in your stomach while you are pregnant. The insulin and/or needle **will not** harm the baby. Your baby makes his or her own insulin at 9 weeks.

**Congratulations, now you are pregnant!**

**Normal blood glucose in pregnant women is 20 % lower than in women who are not pregnant**

<b>Blood glucose goals during pregnancy</b>	A1C $\leq$ 6.0	Before breakfast 3.8-5.2	2 hours after meals 5.0 – 6.6
---	----------------	-----------------------------	-------------------------------

### **Adjust insulin doses to match changing blood glucose.**

The amount of insulin needed to keep BG in the normal range will change during the entire pregnancy.

- Testing BG before breakfast and 2 hours after breakfast, lunch and dinner (sometimes before dinner) will allow you to see if the insulin doses need to be changed. Meet with your nurse to learn how to change your insulin doses throughout your pregnancy.
- Increasing insulin doses are expected, especially during the second half of the pregnancy as you become more insulin resistant. This starts anytime from 20 weeks until 36 weeks.
- More low blood sugars near the end of the pregnancy may mean the placenta is changing. More fetal monitoring (fetal stress tests) may be needed to make sure the baby is well.

### **Keep food and activity consistent to prevent high and low blood glucose.**

- Prevent lows by matching insulin to food and activity.
- You will work with your dietitian to help you learn more about how your food affects your BG.
- Your nurse will help you understand what your BG results mean and how to look for patterns in BG
- Testing BG before breakfast and 2 hours after breakfast, lunch and dinner will allow you to catch any lows before they become severe.
- Treat lows with 15 g of carbohydrate.  $\frac{3}{4}$  c of juice or pop
- Retest BG in 15 minutes. If BG still less than 4 have another 15g of carbohydrate. Once your BG is over 4, have a snack if your next meal is more than an hour away.

### **Get a referral to a special pregnancy clinic**

The special pregnancy clinic will ensure you have the following tests:

- Ultra sound of the baby at 11-13 weeks gestation. NTS (nuchal translucency screening) to look for increased risk of Down syndrome. Diabetes does not increase the risk of Down syndrome.
- Routine screening includes maternal blood test at 16 weeks and a structural ultrasound done at 19-20 weeks.
- You will have an ultra sound every 4 weeks after 24 weeks to monitor the baby's health and how the baby is growing.

### **Possible complications in pregnancy**

- Worsening high blood pressure or Preeclampsia/eclampsia. Your blood pressure will be monitored through out pregnancy.
- Hydramnios (excess amniotic fluid) is more common in people with diabetes.

### **Possible complications for the baby if mother has high BG**

- High BG in early pregnancy can increase the risk of birth defects. Heart and spinal cord problems are the most common.
- High BG also can lead to:
  - Large baby over 9 pounds
  - Increased risk of baby having breathing problems, low blood glucose, jaundice, too many red blood cells, low calcium level, and heart problems. These problems are usually treatable and go away in a few hours or days.
  - Increased risk of still birth

### **Will your baby get type 2 diabetes later in life?**

- If the mother has type 2 diabetes the risk is 14%
- If the father has type 2 diabetes the risk is 12%
- The risk with both parents having type 2 diabetes is 28%