



GUIDE



What women with type 1 or type 2 diabetes should know before becoming pregnant



The Ottawa Hospital | L'Hôpital
d'Ottawa



Disclaimer

This is general information developed by The Ottawa Hospital. It is not intended to replace the advice of a qualified health-care provider. Please consult your health-care provider who will be able to determine the appropriateness of the information for your specific situation.

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Why is planning pregnancy important?

Planning your pregnancy with your diabetes health care team will increase your chances of having a healthy pregnancy. Research has shown that having blood sugars in the target range can reduce the risk of birth defects in women with diabetes to the same level as is found in women who don't have diabetes.

It is best to plan with your diabetes team 6 months to 1 year in advance. Planning in advance gives you and your team the time to make any adjustments to your treatment to ensure that your blood sugars are in the ideal target range to get pregnant. **It is recommended that you use birth control until your blood sugars are well controlled, and your A1C is 7% or less.** Having blood sugars in the target range reduces the risk of complications for you and your baby.

Take folic acid 3 months before getting pregnant:

Take 1 to 5 mg of folic acid every day. This may be taken as part of a multivitamin. You can talk to your pharmacist to find what is best for you. Taking folic acid before pregnancy helps your baby have the best chance at the development of a healthy nervous system.

Have an eye exam: Check with you eye doctor if there are any issues with your eyes that could be affected by a pregnancy. Some women may need treatment before becoming pregnant to prevent problems with their vision.

If you have type 1 diabetes: Have blood tests to check your thyroid function (TSH). Normal thyroid levels are important to a baby's development.

Maintain a healthy body weight: Being at a healthy body weight for your pregnancy is important for the health of your baby and can reduce the future risk of type 2 diabetes as your child gets older.

Are my medications safe for pregnancy?

Insulin: Insulin is safe in pregnancy and does not cross the placenta. It will not affect or harm the baby. It is important that you are comfortable adjusting your insulin as there will be many changes needed in pregnancy. Before you get pregnant is a good time for a refresher.

Some diabetes medications are not recommended:

Diabetes pills: Many diabetes pills have not been tested for use in pregnancy and we do not know how they may affect the baby. Pills usually do not work well enough to keep blood sugars in the target range during pregnancy. For most women, it is recommended that diabetes pills be changed to insulin before trying to get pregnant. Most women treated with pills or only with diet need insulin to control diabetes during pregnancy. It is best to make the switch to insulin before getting pregnant to find the right dose to keep sugars at target before getting pregnant. The amount of insulin needed is different for every person and it may take some time to get to target.

Other medications: Many other medications including blood pressure and cholesterol medications may affect the baby. If you have other medical conditions or health problems that are treated with drugs, it is important to talk to your family doctor or specialist about your plans to get pregnant. They may need to make changes to some of your medications or stop some of your drugs in preparation for pregnancy.

If you think you are pregnant, do not stop your diabetes medication. Call your diabetes nurse educator or your diabetes doctor as soon as you can to ask what to do with your medication. Stopping your diabetes medication can cause high blood sugars, which are not good for the baby.

What else can I do?

Keep your blood sugar in the target range:

These are the target ranges that will help you get your HbA1c to 7% or less:

| Target blood sugar levels | |
|----------------------------------|----------------|
| Before meals | 4 to 7 mmol/L |
| 2 hours after every meal | 5 to 10 mmol/L |

Who can help?

Your diabetes team can help you reach your blood sugar targets. Tell them as soon as you can about your plans for pregnancy. Getting your sugars to target may require more visits and extra support to get you there. Your diabetes team may see you more often once you tell them you are planning a pregnancy. They may refer you to a health care team specialized in pregnancy and diabetes if they are not able to see you often enough to get your blood sugar to the target range. Once you are pregnant, you will be referred to see a diabetes in pregnancy team. The specialized diabetes team includes: diabetes doctors, diabetes nurse specialists and dietitians with experience in diabetes and pregnancy. They can follow you closely before and during your pregnancy. They will be able to

provide you with the extra support you need through regular visits and telephone contact. They will also coordinate your care with your obstetrical team and any other specialists you might need once you are pregnant.

What should I expect when I am pregnant?

Pregnancy hormones affect blood sugars:

During pregnancy, hormone changes affect blood sugars. In the first 3 months of pregnancy, women are more sensitive to insulin and may be less able to feel low blood sugars. Many women who take insulin need to reduce insulin doses at the beginning of their pregnancy to avoid low blood sugars. During the second half of pregnancy, hormones make the body less responsive to insulin so women often need more insulin to control blood sugar later in their pregnancy. Pills usually do not work well enough to control blood sugar during pregnancy. For this reason, we change women from pills to insulin as soon as we know you are planning to get pregnant or know that you are pregnant.

Pregnant women with diabetes often need to make changes to their insulin doses. Frequent contact with your diabetes team is needed to make sure blood sugars are in the target range.

High blood sugars can affect the baby:

In the 1st trimester (first 3 months of pregnancy) high blood sugars can affect the development of your baby's organs. Many of the organs form very early in the pregnancy, even before you know you are pregnant. Keeping your blood sugar as close to normal as possible gives your baby the same chances of being healthy as babies whose mothers do not have diabetes.

If blood sugars are higher than these targets in the 2nd and 3rd trimesters (4th to 9th months of pregnancy), there is a higher chance of having a large baby. Large babies make delivery more difficult and can cause problems for you and your baby.

You will need to check your blood sugar more often:

You will be asked to test – **before meals and 1 or 2 hours after meals** when you are pregnant .Your doctor or diabetes nurse specialist or educator will tell you how long after your meal you should test.

| Target blood sugar levels | |
|---------------------------|----------------------|
| Before breakfast | Less than 5.3 mmol/L |
| Before lunch and supper | 4.0 to 6.0 mmol/L |
| 1 hour after every meal | Less than 7.8 mmol/L |
| 2 hours after every meal | Less than 6.7 mmol/L |

At The Ottawa Hospital, there are two clinics with diabetes in pregnancy teams:

Special Pregnancy Unit (SPU) at the General Campus or High-risk Diabetes Clinic (HRdiab) at the Civic Campus

- 1) If you know that you are or think that you might be pregnant, ask your diabetes doctor if you should be referred to one of these special clinics.

- 2) A referral from your family doctor or diabetes specialist can be faxed to: SPU at the General (fax 613-739-6292) or HRdiab at the Civic (fax 613-761-5741).
- 3) You will meet with a doctor who specializes in pregnant women with diabetes, a diabetes nurse specialist and a registered dietitian.

Note: Once you are pregnant you will also need to be referred to an obstetrician. The obstetrician will work with the specialized diabetes team as needed during your pregnancy.

References:

- <http://www.diabetes.ca/diabetes-and-you/pregnancy-diabetes>
- <https://www.youtube.com/playlist?list=PLx-Ol2zy2vvz1P8yIB6cM5KxEBGWN0z8J>
- <https://www.youtube.com/watch?v=UeaYVd188Jo&index=2&list=PLx-Ol2zy2vvz1P8yIB6cM5KxEBGWN0z8J&t=329s>
- <http://www.womenshealthmatters.ca/health-centres/diabetes/pregnancy-and-diabetes/pregnancy-with-type-1-or-type-2-diabetes/>