

BC Women's Hospital - Diabetes in Pregnancy Clinic

LOCATION: BC Women's Hospital Entrance #93
Please check in at Desk #7 upon arrival.

TIME: Follow up appointments are in person or by phone on Tuesday or Wednesday mornings. **Please be on time.**

CLERK: Monday to Friday 8:00 am to 4:00 pm **604-875-3135**
Please call the clerk or leave a message at this number to make or change appointments.

NURSES: Monday to Friday 7:30 am to 2:30 pm **604-875-2339**
Please leave 1 voicemail, with your full name and phone number. All calls will be returned within 24 hours on weekdays. Voicemails are not retrieved after hours or on weekends/holidays.

Nurse Team email: bcwdiabetesnurse@cw.bc.ca

ENDOCRINOLOGISTS: Dr. J. Kong & Dr. D. Thompson

For urgent diabetes related concerns, please call 604-875-2161 and ask to have the Endocrinologist on call for BC Women's Hospital paged.

DIETITIANS: Monday to Friday 8:00 am to 3:00 pm **604-875-2211**

Dietitian Team email: bcwdiabetesdietitian@cw.bc.ca

**PERINATAL
SOCIAL WORKER:** 604-875-2283 (office) or Email: swmap@cw.bc.ca
604-875-2161 and ask for Pager 1480

PHYSIOTHERAPY: 604-875-2126 (booking clerk)

If you have any questions or concerns, please feel free to ask us.

Welcome to BC Women's Diabetes in Pregnancy Service

The Purpose of the Service

Our team helps individuals who have diabetes in pregnancy by providing education, promoting self management, and offering ongoing guidance throughout their journey.

What to Expect

Regular visits with the diabetes clinic are important to help keep your blood sugars in target.

Your first visit to the clinic will provide diabetes in pregnancy education by a nurse and a dietitian. Allow 3.5 hours.

Your first follow up appointment will also be in person at the clinic on a Tuesday or Wednesday morning where you will be seen by the diabetes doctor and other members of the diabetes in pregnancy team – nurse, dietitian and physiotherapist. Allow a minimum of 90 minutes – this appointment can be longer depending on your needs.

In most cases, future appointments with the diabetes team will occur by phone.

Gestational Diabetes

Gestational diabetes affects about 3% - 20% of all pregnancies. The word "gestational" means "during pregnancy". Diabetes means your body does not make enough insulin and/or cannot use insulin very well. Insulin is made by your body and keeps your blood sugar (glucose) normal.

During pregnancy the placenta makes hormones. You and the baby need these hormones for a healthy pregnancy. However, these hormones do not let the insulin in your body work well, so your body needs to make extra insulin to keep your blood sugars normal. Gestational diabetes happens when the body cannot make this extra insulin. Once the baby is born, the hormones return to normal and so should the blood sugars.

It is important to treat gestational diabetes so that it does not cause problems for you or your baby. You can manage your blood sugars by following a special meal plan and exercising after meals. For some individuals, the meal plan and exercise work well to keep blood sugars normal, for others, treatment may be needed. Insulin is the preferred treatment for diabetes in pregnancy. Your diabetes doctor will discuss this and develop a personalized plan with you if insulin is needed.

To see how well your treatment plan is working, you will need to check your blood sugar levels and urine ketones throughout your pregnancy.

Pregnancy is a time of learning. Please speak with the diabetes team if you have any questions or concerns. By partnering with the diabetes team, you will be supported to keep you and your baby healthy.

Questions & Answers

Q: How will gestational diabetes affect my baby?

A: Short term effects

If your blood sugars are high, the extra sugar goes to the baby. The baby stores the extra sugar as fat and may grow very big, causing problems with delivery.

When the baby gets extra sugar, it makes extra insulin to manage that sugar. When the baby is making extra insulin, the baby's lungs do not mature as they should, and the baby may have trouble breathing at birth.

If, during your pregnancy, your blood sugars are high, your baby will be exposed to extra sugar and will get used to making extra insulin. After delivery, the baby is no longer receiving sugar from you and can quickly use up its own sugar supply causing the baby's blood sugar to go low. A low blood sugar in baby at delivery may have to be treated and monitored to help the baby adjust to the lower sugar amounts outside of the womb.

Long term effects

Big babies born to people with gestational diabetes have a higher risk of developing obesity and type 2 diabetes in childhood and adulthood.

Steps you can take to lower these risks are

- be at a healthy weight when you get pregnant
- have a healthy weight gain during pregnancy
- maintain blood sugar targets throughout your pregnancy
- breastfeed your baby for a minimum of four months

Q: Will my baby be born with diabetes?

A: No, your baby will not be born with diabetes. However, if there is diabetes in the family, there is an increased risk that family members may get diabetes later in life.

Q: Why did I get gestational diabetes?

A: Your body cannot make the extra insulin needed for pregnancy. There are many things which increase your risk of gestational diabetes. These include:

- family history of diabetes
- having had gestational diabetes or a large baby in a previous pregnancy
- belonging to a high-risk ethnic group (Indigenous, Hispanic, South Asian, Asian and African)
- being 35 years of age or older
- being over your recommended body weight
- certain medical conditions or medications

Q: Why do I have to test my blood sugar?

A: The blood test done at the lab only tells you that you have high blood sugar. The home blood sugar testing before and after meals will tell you if your meal plan and exercise program are working to control your blood sugar. These test results will help you in making food and exercise changes and help us individualize your plan of care.

Q: Why do I have to check my urine ketones?

A: To help you control your blood sugars, you will be provided with a meal plan that provides a specific amount of carbohydrates to eat. Ketone checking will show if you and your baby are getting enough carbohydrates.

Q: How long do I have to follow the diet and test my blood sugar?

A: It is very important to follow your meal plan and do your activity every day until the baby is born. If your blood sugars are in target with the meal plan and exercise program, your testing will be reduced and may even be stopped close to the time of your delivery. If you require insulin, you will check your blood sugars daily until delivery.

Q: If I need insulin, how do I give it? Does it hurt?

A: Your doctor will help you decide if you need insulin and will discuss this with you. It is given by injection. The nurse will teach you how to give yourself insulin. Most people say that giving insulin is not painful.

Q: Is insulin harmful to the baby?

A: No, the insulin is safe for the baby. The insulin lowers your blood sugar so that the baby does not receive extra sugar, so it is beneficial for the baby.

Q: How can I exercise when my back is so sore?

A: Call BC Women's Physiotherapy directly and book an appointment for assessment and treatment (604-875-2126).

Q: Will the diabetes go away when I have the baby?

A: Once the baby is born and your hormones return to normal, so should your blood sugars. Your blood sugar will be checked after the baby is born to make sure that it has returned to normal. In a very small number of women the blood sugars do not return to normal, and you will have further follow-up with your family doctor.

Individuals who have gestational diabetes in one pregnancy are at a higher risk for getting gestational diabetes in their next pregnancy, and for getting type 2 diabetes later in life. Achieving or maintaining a healthy body weight and healthy lifestyle can lower your risk for gestational diabetes in future pregnancies and type 2 diabetes.

Physical Activity

Physical activity or exercise is important when managing your blood sugars.

Everyone reacts differently to the effects of physical activity.

It is important to monitor your blood sugar levels to see what works best for you.

Use the FITT principle:

Frequency: after breakfast, lunch and dinner

Intensity: moderate or somewhat hard
work hard enough to breathe harder than at rest and
raise your heart rate
able to talk but not sing

Time: for 15-20 minutes, right after you finish eating

Type: anything that keeps your body moving and raises your
heart rate

Activity examples: brisk walk outside, step up/step down on the bottom stair, ride a stationary bike (with some resistance), try a YouTube prenatal exercise video or dance, use light weights or elastic exercise bands, do physical housework if you can increase your heart rate

The Diabetes in Pregnancy physiotherapist can:

- work with you to decide which activity will help you control your blood sugars
- help you find things to do if you have been told to limit or stop physical activity
- help you find ways to lessen your aches and pains that make it hard to do your day-to-day activities

Reasons to stop exercising:

- excessive shortness of breath
- chest pain
- painful uterine contractions
- premature rupture of membranes
- dizziness or faintness
- headache
- vaginal bleeding



Meal plans

During Pregnancy

Good nutrition is important for a healthy pregnancy. Discuss changes to your meal plan with the dietitian if you are:

- hungry or too full
- have small, medium or large ketones in your urine
- have high or low blood sugar
- are gaining too much or too little weight
- find it hard to follow the meal plan
- if you have any questions or concerns

During Illness

- You may notice your blood sugars are higher when you are sick.
- If you are on insulin:
Call the diabetes nurse or Endocrinology pager if you are unable to adhere to your meal plan as insulin may need to be adjusted.
- If you are unable to eat or have severe nausea or vomiting, call your care provider or report to emergency/UCC for assessment and treatment

When you feel too sick to eat your usual foods, switch to easy-to-digest foods and fluids as follows:

- 1) Stop your meal plan and have at least one choice every hour from this list:
 - 1 cup of milk or flavoured soya milk
 - ½ cup of Yop®
 - ½ cup of Gingerale® or 7-UP®
 - 1 cup of Gatorade®
 - 1 slice toast
 - 1 cup of soup
 - 2-3 plain cookies (such as Arrowroots or Digestives)
 - 6-7 small crackers
 - ½ popsicle
 - ½ cup of fruit juice
- 2) Drink extra fluids such as water or clear soup.
- 3) Return to your meal plan slowly as you feel better.
- 4) Contact nurses/dietitian for support.

Urine Test for Ketones

Ketones are not normally present in the urine. However, when you have not eaten enough carbohydrates, or do not have enough insulin in your body, you will burn fat for energy. This makes ketones which are removed from the body through the urine. If you regularly have small to large ketones in your urine, speak with your diabetes health care team.

Ketone Testing

How to check:

1. Check the expiry date on bottle. Do not use outdated strips.
2. Remove strip from bottle. **DO NOT** touch the reagent pad at the end of the strip as it may affect the test. Keep bottle tightly closed and away from moisture.
3. Urinate on the beige coloured pad of the strip. (“pee” on the end of the strip).
4. Wait 15 seconds.
5. Compare with colour chart on the side of the Ketostix bottle.
6. Record as N (Negative)
 - T (Trace)
 - S (Small)
 - M (Medium) L
 - (Large)

How often to check:

Before breakfast or when you first pass urine (“pee”) in the morning and before supper.

If your results are normal (negative to trace), your ketone testing will be reduced to 1-2 days a week.



BLOOD SUGAR CHECKING

Blood Sugar Checking Instructions

You will be provided with a blood glucose meter during your first visit to the diabetes clinic. The nurses will teach you how to use the meter and will provide start up samples along with a prescription for ongoing supplies. Training and samples of other devices (continuous monitoring sensors) will not be provided. Use of alternate testing methods can be discussed with your Endocrinologist at your follow up visit.

To see how your meal plan and activity schedule are working for you, we will ask you to check your blood sugars 7 times a day for 3 consecutive days prior to your first follow up visit with the diabetes doctor.

- 1) 0-5 minutes before breakfast.
- 2) 1 hour after you **start** eating breakfast.
- 3) 0-5 minutes before lunch.
- 4) 1 hour after you **start** eating lunch.
- 5) 0-5 minutes before supper.
- 6) 1 hour after you **start** eating supper.
- 7) 0-5 minutes before bedtime snack.

Example: If you eat breakfast at 8 a.m. you would check your blood sugar at 7:55 a.m. and at 9 a.m.

After your visit with the diabetes doctor, your testing schedule will be reduced and individualized to your treatment plan.

At BCW hospital we use the OneTouch Verio meter and OneTouch Reveal App. You will receive a meter and prescription for supplies at your first visit with us. You can use the OneTouch Reveal App on your phone to record your blood sugars or use the paper logbook on the next page.

For meter support: <https://www.onetouch.ca/products/glucose-meters/onetouch-verio-flex>

Date	Insulin Dose				Breakfast		Lunch		Dinner		Bedtime Snacks	During the Night	Urine		Comments
	Before Breakfast	Before Lunch	Before Dinner	Before Bedtime	Before	After	Before	After	Before	After	Before		Before Breakfast	Before Dinner	

Blood Glucose Goals:
 Before meals and before bedtime snack: 5.0 or less
 One hour after meals: 7.2 or less

Record Urine Ketone Results as below

N = Negative

T = Trace

S = Small

M = Medium

L = Large

Discharge from the diabetes service

Around 36 weeks of pregnancy, if your blood sugars are within target range on diet and activity, you may no longer be required to test your blood sugars and may be discharged from the diabetes service. However, if you have any questions, please feel free to call the diabetes service.

If you are using insulin during the pregnancy, you will remain with the clinic until you deliver your baby.

Early Labour at Home

During early labour at home follow your meal plan. If you are using insulin continue to take it as long as you are eating as per your normal meal plan.

If you find you cannot follow the meal plan, try these easy to digest foods or fluids every hour:

- ½ cup of fruit juice
- 1 cup of milk
- ½ cup milkshake or Yop®
- 1 cup of Gatorade®
- 1 slice toast
- 2-3 plain cookies (such as Arrowroots or Digestives)
- 6-7 small crackers
- 1 cup soup
- ½ popsicle
- ½ cup of Gingerale® or 7-UP®

Also, have enough water so that you are not thirsty.

Call the nurse (or the Endocrinologist pager after hours) if you are unsure if you should take your insulin or not.

During Labour in Hospital

Tell your nurse that you have diabetes

Once you're in hospital, your nurse will help you to test and manage your blood sugars during your labour. Bring your blood glucose meter with you and, if you're taking insulin, let your nurse know when you took your last dose. Check with your nurse before using any juice or snacks brought in from home.

After Delivery

Once baby is born, you no longer need to test your blood sugars or follow your meal plan, and all insulin treatment stops. The morning after baby is born, the nurse will check your before breakfast blood sugar, the normal value for this blood sugar when you are not pregnant is below 6.0. If your blood sugar is above 6.0 you will be instructed to follow up with your family care provider.

The nurses will also be checking your baby's blood sugar every few hours until the baby's blood sugar is normal.

Healthy Eating for Breastfeeding

- AVOID weight loss diets. Continue to enjoy meals and snacks using a variety of foods. Eat enough to satisfy your hunger.
- Choose 2 to 3 servings of calcium rich foods daily. Examples of one serving are 1 cup of milk, $\frac{3}{4}$ cup of yogurt, or 1 $\frac{1}{2}$ ounces of cheese.
- Continue to take a multivitamin and mineral supplement.
- Drink a minimum of 6 cups of fluids daily including water, milk, juice and soup.
- Limit yourself to 2 cups of regular coffee or 4 cups of strong tea daily.

Healthy Eating for Bottle feeding

- Enjoy a variety of foods daily.
- Avoid weight loss diets for at least six weeks after delivery.

Breastfeeding Resources

- Antenatal Hand Expression <http://www.bcwomens.ca/our-services/pregnancy-prenatal-care/diabetes-in-pregnancy#Resources>
- Learning to breastfeed <http://www.bcwomens.ca/health-info/pregnancy-parenting/breastfeeding-your-baby>

Follow-Up After Delivery

If your blood sugar after delivery is **normal** – You should be screened for diabetes:

- Screen for diabetes between 6 weeks to 6 months after delivery by doing a 75 g glucose tolerance test. A lab requisition for this was provided to you at your first diabetes clinic appointment. Phone the lab of your choice to set up this appointment. Follow up with your family physician to review the results.
- when you are planning another pregnancy.
- every 3 years (or more often depending on risk factors)

Future Pregnancy

Gestational diabetes recurs in about 30-85% of individuals and can happen earlier in the next pregnancy.

You should be screened for gestational diabetes in future pregnancies. Your maternity care provider may send you for screening in first trimester and then repeat after 24 weeks if needed. Please contact your maternity care provider regarding referral to the diabetes in pregnancy clinic.

You can start to follow the diabetes in pregnancy meal plan early in your next pregnancy to include 3 meals and 3 snacks spaced out throughout the day. Limit sugar and sweet foods and drinks.

Regular, moderate exercise is also encouraged if approved by your maternity care provider (for example walking 30 minutes 5 times a week).

Thinking of the Future

- Women with gestational diabetes are at a higher risk of developing diabetes in future pregnancies and later in life.
- Log on to website - www.diabetes.ca for information regarding diabetes prevention and treatment
- Log on to website <https://www.healthlinkbc.ca> for dietitian support

