



# Diabetes and Pregnancy

*The best for you and your baby*

**Whether you have had diabetes for many years or whether it started with your pregnancy, it is hard work to take care of diabetes while you are pregnant. This booklet will help you manage your diabetes in the best way for your and your baby's health.**

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UW Medicine

UNIVERSITY OF WASHINGTON  
MEDICAL CENTER

## **What type of diabetes do you have?**

The most common kinds of diabetes are:

- Type 1 diabetes
- Type 2 diabetes
- Gestational diabetes

### ***Type 1 Diabetes***

- Used to be called Juvenile Onset Diabetes Mellitus or Insulin Dependent Diabetes Mellitus (IDDM).
- Usually occurs before the age of 30.
- The pancreas no longer makes any insulin.
- 5% to 10% of people with diabetes have type 1 diabetes.

### ***Type 2 Diabetes***

- Used to be called Adult Onset Diabetes Mellitus or Non-Insulin Dependent Diabetes (NIDDM).
- Can occur throughout life, beginning in adolescence.
- The pancreas still makes some insulin.
- Person is often overweight.
- Often, other family members have diabetes.
- 80% to 90% of people with diabetes have type 2 diabetes.

### ***Gestational Diabetes***

- Found for the first time during pregnancy.
- May go away after the baby is born.
- Increases risk for developing type 2 diabetes later in life, especially if overweight.

**All women who have gestational diabetes must be screened for diabetes 6 weeks after their baby is born.** Talk with your obstetric (OB) provider to schedule this test.

## Nutrition During Pregnancy When You Have Diabetes

If you have diabetes during pregnancy, food choices are even more important for the health of both you and your baby. Early in pregnancy (around 9 to 11 weeks), your insulin needs will decrease. You will tend to have more morning sickness and may eat less. Later in pregnancy, the hormones your body produces will increase your insulin needs.

Talk with your health care provider to review your medicine needs, and ask your dietitian to help you plan meals to keep your blood sugars at the best level for you and your baby. A dietitian familiar with diabetes in pregnancy will help you maintain safe blood sugar levels and can help you choose the right foods to nourish your growing baby.

## Carbohydrates

A balanced diet for pregnancy should have about half of the calories coming from healthy carbohydrate foods. These include fruits, vegetables, whole grains, milk, and yogurt.

Carbohydrates cause a rapid rise in your blood sugar. Always eat proteins, fats, and fiber foods with your carbohydrate foods. This slows digestion, so the carbohydrates enter your bloodstream more slowly. The result is less of a rise in blood sugar after eating carbohydrates.

Avoid eating foods that are high in simple carbohydrates. These will make your blood sugars too high. They include:

- Alcohol (**NO** alcohol should be consumed in pregnancy)
- Fruit juices
- Honey, sugar, sweets
- Hot chocolate, Ovaltine
- Soda pop
- Sugary cereals

## Helpful Tips

**Keep your blood sugar levels as close to normal as possible.** This helps your body function well and helps your baby grow normally. High blood sugars can make your baby grow too big, and this can cause problems at birth.

Follow these guidelines to help keep your blood sugar stable:

- Eat 3 smaller meals and 3 snacks each day.
- Do **not** skip any meals or snacks.

- Keep your diet consistent. This means eating about the **same amount** of the **same types of foods** at the **same time** every day. A consistent diet will help your doctor prescribe the most effective insulin doses for you. And, it will help you avoid blood sugars that are too high or too low.
- Discuss food safety and foods to avoid with your dietitian or nurse. Avoid fish that is high in mercury and other toxins. You may eat fish that is on the safe list up to 3 times a week. But first, talk with your dietitian about portion sizes and what types of fish are safe to eat while you are pregnant and later, while you are breastfeeding.
- Raw fruits and vegetables contain natural fiber. Include a variety of vegetables in your diet. Count the carbohydrate in fruits, and eat them in small amounts later in the day.
- Read the nutrition labels on foods and drinks. Look at the total carbohydrate grams, and read the ingredient list to see if the food contains simple sugar or high-fructose corn syrup. Note serving sizes – a package of food may contain more than 1 serving. Your dietitian can help you understand how to read food labels.
- Include calcium-rich foods (low-fat dairy foods, fortified soy products) several times a day for your bone health. Take calcium supplements if you cannot get enough calcium from your diet.
- Take a prenatal vitamin every day.
- Limit salt and high-fat “junk” foods.

Talk with your health care provider to learn more. We are here to help you have a safe and healthy pregnancy for you and your baby.

## **Fluids**

- Drink **at least** 8 glasses (8 ounces each) of fluids each day. That is 2 quarts, or 64 ounces. Most of this fluid should be water. Sipping water throughout the day will help you achieve this. Water helps keep blood sugars lower and is good for you and your baby.
- Limit caffeine to 1 cup or less a day.
- Limit diet drinks to 1 or less a day.

## **Meals and Snacks**

Talk with your dietitian about your meal plan needs.

### ***Breakfast***

Pregnancy hormones have their greatest effect in the morning. This can make blood sugars harder to control in the morning. This means you should limit the amount of carbohydrates at breakfast to 30 grams (**2 servings**).

- Any carbohydrates you eat at breakfast should be whole grains such as brown rice, whole-grain breads, and whole-grain hot cereals such as steel-cut oats.
- Avoid refined sugary cereals, potatoes, fruits, and juices. Save the fruit for later in the day, to eat in small amounts.
- Avoid milk at breakfast, or have just 4 ounces (½ cup) or less.

### ***Snacks***

Snacks should contain 15 grams of carbohydrates (**1 serving**) plus protein, fat, and fiber.

Some good **protein** choices are:

- Eggs
- Cheese
- Natural peanut butter
- Chicken
- Seafood, fish
- Lean beef
- Nuts
- Tofu
- Soy products

Some good **fat** choices are:

- Olive oil
- Avocado
- Nuts
- Flax seeds
- Fish oil (from wild local salmon)

### ***Lunch and Dinner***

You may eat 45 to 60 grams of carbohydrates (**3 to 4 servings**) with your proteins and fats at lunch and dinner. Eat the higher amount if you are tall, or at the time of day when you are usually the most active.

## **Sample Meals and Snacks**

### ***Breakfast***

*2 servings of carbohydrates (30 grams)*

1 to 2 scrambled eggs

2 slices (1 ounce each) whole-grain toast with butter (avoid breads and peanut butter with high-fructose corn syrup – check the food label)

1 cup decaf coffee, non-herbal tea, or water

### ***Morning Snack***

*1 serving of carbohydrates (15 grams)*

1 to 2 ounces cheese (1 ounce of cheese is about the size of your thumb)

5 to 7 whole-wheat crackers

***Lunch***

*4 servings of carbohydrates (60 grams)*

Tuna salad sandwich: 2 to 3 ounces light canned tuna with  
mayonnaise, lettuce or spinach leaves, tomato, and 2 slices  
(1 ounce each) whole-grain bread

1 serving fruit

½ cup raw carrot sticks

1 cup 2% milk

***Afternoon Snack***

*1 serving of carbohydrates (15 grams)*

½ piece of fruit or ¾ cup fresh berries

1 to 2 ounces nuts (about 1 handful)

***Dinner***

*3 to 4 servings of carbohydrates (45 to 60 grams)*

3 ounces lean meat (7% to 9% fat), grilled or baked (3 ounces of meat  
is about the size of the palm of your hand)

⅔ cup brown rice

1 cup steamed broccoli (optional: butter)

1 cup 2% milk

*For a 60-gram carbohydrate meal: Add 1 fruit serving*

***Evening Snack***

*1 serving of carbohydrates (15 grams)*

1 to 2 tablespoons of natural peanut butter on 1 slice (1 ounce)  
whole-grain bread

## Hypoglycemia (Low Blood Sugar)

*Hypoglycemia*, or low blood sugar, is also called an “insulin reaction.” It can occur for many reasons.

If your blood sugar is too low, you may feel:

- Sleepy
- Dizzy
- Hungry
- Restless
- Lightheaded
- Confused
- Depressed
- Anxious
- Cranky
- Shaky
- Sweaty
- Not like yourself (personality changes)

You may also have:

- Palpitations (fast or skipped heartbeats)
- Tingling feeling in your hands, feet, lips, or tongue
- Headache
- Sleep problems
- Unsteady movement
- Blurred vision
- Slurred speech

### *What should you do?*

If you can, test your blood sugar. **Less than 60 mg/dl is too low.** If you cannot test, but think your blood sugar is low, treat yourself right away with one of the foods listed below.

### **Treat low blood sugar right away:**

- Eat food with fast-acting sugar. Good choices are:
  - 3 glucose tablets or 1 pack glucose gel
  - ½ glass (4 to 6 oz.) apple or orange juice
  - 1 glass (8 oz.) milk
  - 2 tablespoons raisins
  - 4 to 5 pieces candy (Starbursts, Lifesavers)
- After eating one of these foods, wait 10 to 15 minutes. Then test your blood sugar again. If it is still too low (less than 60 mg/dl), have another food or drink from the list above.
- After your blood sugar is above 60 mg/dl, eat a snack if you do not plan to eat a meal within 30 minutes. For example, eat half of a sandwich or crackers and peanut butter.

**Hypoglycemia (low blood sugar) occurs when there is too little sugar in your blood. You need to treat it right away.**

**You may have more low blood sugars between 9 and 11 weeks of pregnancy. At this time of pregnancy, normal changes in your hormone levels may cause you to need less insulin. This may last for several days or a couple of weeks.**

***If you pass out or cannot eat, someone needs to:***

- Inject glucagon (see pages 16 and 17).
- Measure your blood sugar level, if possible.
- **Call 9-1-1 for emergency help.**

Tell family, friends, and co-workers NOT to force food or drink if you are unconscious. You might not be able to swallow and you could choke.

***What can cause low blood sugar?***

- Too much insulin or changing the time you take your insulin
- Not eating enough food, skipping a meal, or eating later than usual
- Extra exercise or activity

You may have more low blood sugars between 9 and 11 weeks of pregnancy. See more information about this below and on the next page.

***It is important to:***

- **Keep food or juice with you at all times:** at work, in your car, when you exercise, etc.
- Wear a medical alert bracelet or necklace that says you have diabetes.
- Eat meals and snacks on time.
- Know how to adjust your insulin or food for unplanned exercise.
- Tell your nurse or doctor if you are having low blood sugar readings without any symptoms.
- Teach your friends, family, and co-workers about low blood sugars and how they can help.
- **Choose someone who can check on you twice a day** to make sure you are OK.

***Call your doctor or nurse if you have:***

- 3 or 4 low blood sugar tests in a row
- Low blood sugar at the same time every day for several days
- Severe low blood sugar (you needed glucagon, 9-1-1 was called, or you were unable to treat it by yourself)

***Hypoglycemia at 9 to 11 Weeks of Pregnancy***

- Be aware that your insulin needs may decrease near the end of your first trimester (9 to 11 weeks) for a short time.



- Notice if you are having more insulin reactions or if you need to eat more to keep your blood sugars from getting too low.
- Treat all insulin reactions right away (see page 7).
- Keep testing your blood sugars carefully.
- Call your doctor or nurse for help adjusting your insulin dose if you are having more insulin reactions. Your insulin dose may need to be lowered (usually by about 20%).

**If it is not treated, low blood sugar may progress to severe hypoglycemia, which can cause:**

- Seizures
- Confusion
- Unconsciousness
- Death

***Important Reminders***

- Treat early symptoms of low blood sugar **right away** with some form of carbohydrate, such as ½ cup of juice or milk, soda pop with sugar, candy, raisins, or glucose tablets. **ALWAYS** carry one of these quick-acting forms of sugar with you.
- If you have symptoms of low blood sugar, check your blood sugar if possible. If you have symptoms and cannot check, just treat yourself for low blood sugar.
- Treating mild low blood sugar as soon as possible can prevent severe hypoglycemia.
- Family, friends, and co-workers must remember that if you cannot swallow or if they cannot wake you up, they **MUST NOT force food or drink by mouth**. They should use the shot of glucagon. See pages 15 through 18.

**Testing your blood sugar at home is the best way we have to watch your blood sugars. The numbers tell us if your blood sugars are in the best range for you and your baby. They tell us how much insulin you need. Without these tests, it is impossible to adjust your insulin correctly. Testing your blood sugar is one of the best things you can do for yourself and your baby!**

## **Blood Glucose Monitoring**

### *Meters for Testing Blood Sugar*

We may give you a meter for testing your blood sugar during your pregnancy if you wish. The brand of meter you may receive depends on your insurance provider. You may get test strips and other supplies at your pharmacy.

### *Recording Your Blood Sugar Numbers*

Be sure to write your insulin doses and blood sugar numbers on the log sheet we give you in clinic. Writing numbers down on your log sheet will show you how insulin, activity, and different foods affect your blood sugars each day.

Use the comment section to write down changes in your food, activity, illness, insulin reactions, unusual stress, or other events that may have affected your blood sugar levels.

**Bring both your meter and log sheet with you to every clinic visit.**

### *How often do you need to test your blood sugar?*

We know it is difficult to test as often as we ask during your pregnancy. But, people who test often have the best blood sugar control. Testing will also help you and your health care team see how to adjust your insulin for different foods, exercise, and changes during your pregnancy.

Your doctor or nurse will tell you how often you need to test. It may be as often as 7 or 8 times each day! Once your blood sugar levels are stable, you may be able to test less often.

## Facts About Oral Diabetes Medicines

People with diabetes have blood sugar levels that are too high. Pregnant women with type 2 diabetes or gestational diabetes do not make quite enough insulin, or their bodies have a hard time using the insulin they do make. Some women have to take insulin shots to keep their blood sugar levels close to normal. Other women can take pills by mouth to lower their blood sugar levels.

Diabetes pills do not work for everyone. Some women may use pills for a while during their pregnancy, but may need insulin later in pregnancy to control their blood sugar. It is important to take the medicines as instructed by your provider and tell your provider if you are having low blood sugar, vomiting, diarrhea, or any other problems with your diabetes.

The 2 types of diabetes pills used by our clinic are *metformin* and *glyburide*.

### ***Metformin***

Metformin works by helping insulin work better in the body. It can be taken 2 or 3 times a day with meals. Low blood sugar does not usually occur with metformin (unless you are also taking glyburide or using insulin).

Your doctor or nurse midwife will tell you how often to take metformin and may tell you to stop taking it 1 to 2 days before you are expected to give birth. **Tell your doctor or nurse midwife right away if you start having flu-like symptoms such as diarrhea, vomiting, or if you feel really tired (more than usual).**

### ***Glyburide***

Glyburide stimulates the pancreas to make more insulin. It is usually taken either 1 to 3 times a day, about 30 minutes before a meal. It is sometimes given at bedtime. Your doctor or nurse midwife will tell you how and when to take this medicine. Because it stimulates the body to make more insulin, it is possible to have hypoglycemia (low blood sugar) while you are taking glyburide.

It is important to know the symptoms of hypoglycemia. They include feeling dizzy, jittery, shaky, confused, sweaty, weak, cranky, etc. If you have any of these problems, check your blood sugar and treat low blood sugar by drinking 8 ounces of nonfat milk or taking another fast-acting sugar such as fruit juice or some of the other foods or drinks listed on page 7.

## Facts About Insulin

There are several types of insulin. Each one works differently, which is why most people take 2 or more types of insulin.

This table shows how the different types of insulin work after they are injected.

Insulin Type	Starts Working	Working Hardest	How Long It Lasts
<b>Humalog</b> (Lispro) <b>Novolog</b> (Aspart)	5 to 15 minutes	1 hour	2 to 4 hours
<b>Regular</b> (R)	½ to 1 hour	2 to 3 hours	6 to 10 hours
<b>NPH</b>	2 to 4 hours	4 to 10 hours	10 to 16 hours
<b>U 500</b>	Ask your provider for information		
<b>Glargine</b> (Lantus) <b>Detemir</b> (Levemir)	2 to 4 hours	(Does not apply)	24 hours or more

### *When to Inject Insulin*

Inject your insulin at the times of day your health care team has told you to. If you are taking Regular (R) insulin, wait 30 to 60 minutes to eat after you give your shot. If you are taking Humalog or Novolog insulin, eat **within 5 to 15 minutes** of giving your shot, unless otherwise directed by your provider.

Do **NOT** go to sleep after taking Regular or Humalog/Novolog insulin without eating first.

### *Where to Inject Your Insulin*

Insulin can be given in the stomach, arms, thighs, and the area above your hip bone. Where you give it changes how fast the insulin works. It works fastest when given in the stomach and slowest when given in the thigh.

Talk with your health care team about where to give your shot for each time of the day. For example, it is usually best to give your breakfast and dinner shots in the stomach, so the insulin will start working more quickly before the meal. It may be best to give your bedtime shot in the thigh, so the insulin will work more slowly during the night.

In each area where you inject insulin, do not use the same exact site each time. But, do take each shot in the same area at the same times every day. For example, if you take fast-acting insulin in your abdomen before breakfast every day, rotate where in your abdomen you inject each time. This will prevent scar tissue from building up.

### *Some Common Questions About Insulin*

#### **How is insulin made?**

Most insulins used today are “human” insulin. They are chemically the same as insulin made by the human pancreas, but they are made in a lab. They are not made from a human pancreas. This means there is no risk of catching HIV/AIDS or any other disease from your insulin.

#### **How should I store my insulin?**

Keep the bottle(s) of insulin you are using at room temperature. Keep extra bottles in the refrigerator. Do not let insulin get too hot or freeze. Do not leave it on a windowsill or in a hot car. Do not put it in the freezer.

#### **Can an insulin shot in the stomach hurt the baby?**

**NO.** The needle is much too short to reach your baby, even in very thin women and even late in pregnancy.

#### **Should I stop my insulin if I am sick and cannot eat?**

**NO.** You may need more insulin when you are sick. **DO NOT** skip your insulin unless your doctor tells you to. See *Sick-day Guidelines* on page 14.

#### **Can I become “addicted” to insulin? If I have to use insulin during my pregnancy, will I always have to use insulin?**

Your body will not become “addicted” to insulin. Whether or not you need insulin after pregnancy depends on the type of diabetes you have. If you needed insulin before you became pregnant, you will still need insulin afterward. If you were on diabetes pills before pregnancy *and* if you had well-controlled blood sugars, you may be able to go back on the pills after pregnancy.

### *Needle Safety and Disposal*

Ask your nurse how to safely dispose of needles (called “sharps”). Sharps containers are boxes used to store used needles and syringes safely. You can buy them at most pharmacies. You may also dispose of used syringes at any public health clinic or needle exchange. Call 206-205-7837 for more information.

Illness, such as the flu, can make your blood sugars hard to control. It is likely you will need more insulin, even if you are eating less.

If you are vomiting or unable to eat, *diabetic ketoacidosis (DKA)* can occur quickly from having a high level of ketones in your body. It can harm your baby. It is important to follow the sick day guidelines to help prevent DKA.

## Sick-day Guidelines

- **DO NOT** skip your dose of insulin.
- Tell your doctor you are sick.
- Test your blood sugar often, at least every 2 to 4 hours.
- Test your urine for *ketones*. Ketones are chemicals that the body makes when it does not have enough insulin. A high level of ketones can harm you and your baby.
- For blood sugars over 250 mg/dl, take extra short-acting insulin (Regular, Lispro, or Novolog) as directed by your health care provider.
- Drink plenty of fluids – at least ½ to 1 cup (4 to 8 ounces) every hour.
- Try foods from the starch/bread food group, such as dry toast, crackers, or rice, if you cannot follow your regular meal plan. Drink liquids such as juice or soda pop with sugar, or eat popsicles with sugar. Take small amounts of food and liquid every hour.
- Tell a friend or family member that you are sick so they can check on you during your illness.

### *Call your doctor or nurse if:*

- You vomit more than once.
- You cannot keep down calorie-containing food or fluids.
- You have a moderate or high level of ketones in your urine.
- Your blood sugar is over 250 mg/dl for 2 tests in a row.

## Treating Severely Low Blood Glucose

Severely low blood glucose can cause you to lose consciousness (faint) or have a seizure. If that happens, anything put in your mouth could make you choke.

Glucagon is an emergency medicine that is used if your blood glucose drops too low and it is not safe to give you food. It is given by injection (a shot). Others can safely give you a glucagon injection to help raise your blood glucose from sugar stored in your liver.

**Family, friends, and co-workers should know that if a person taking insulin for diabetes becomes unconscious or has a seizure, they should give the glucagon first, then call 9-1-1.**

Show your family, friends, and co-workers where you keep your glucagon kit and teach them how to use it. They can practice giving a shot by giving you your normal insulin shot with your help. This practice is important. A person who has never given a shot may not be able to do so in an emergency.

## What Family Members and Friends Need to Know

- **Act quickly.** Rapid treatment can lessen health risks. Give the glucagon shot **first**, before calling 9-1-1.
- Do not check the person's blood glucose before giving glucagon unless you can do so easily and quickly. If someone who takes insulin loses consciousness or has a seizure, assume that they have severely low blood glucose.

**But, if the unconscious person is not breathing or has no pulse, do NOT give glucagon. Instead, call 9-1-1 right away and start CPR.**

- Turn the patient on their side to prevent choking in case of vomiting. Nausea and vomiting are common side effects of glucagon.
- Follow the instructions on the next 3 pages to give the glucagon shot.

**Glucagon is an emergency medicine used to treat severe hypoglycemia (when blood sugar drops too low).**

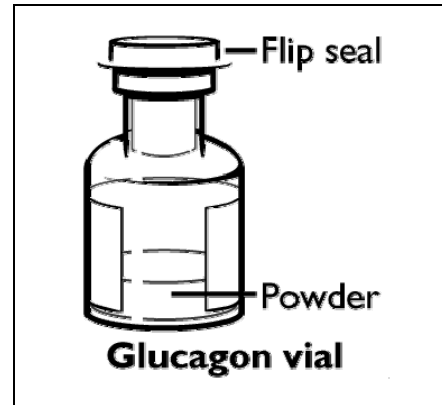
**STEP 1**

Remove  
flip seal



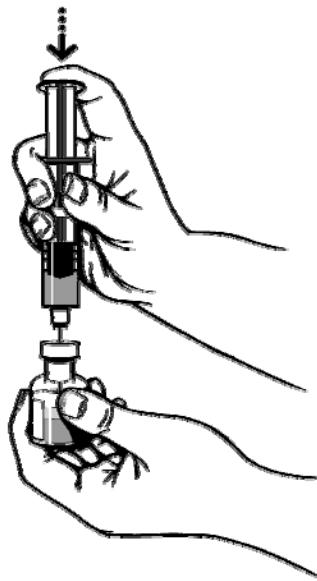
**Prepare the Glucagon**

**Step 1:** Remove the flip-off seal from the bottle of glucagon as shown.



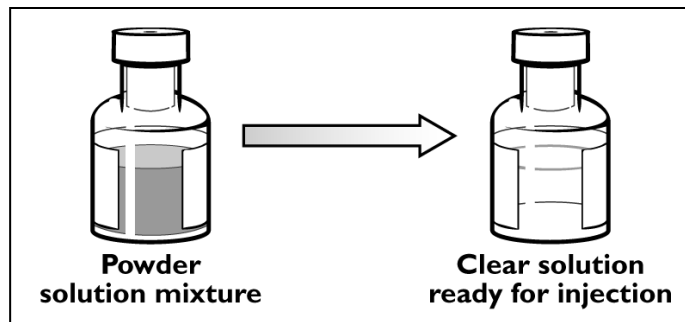
**STEP 2**

**Syringe**  
Plastic  
plunger  
rod  
Diluting  
solution  
Needle hub  
Needle  
Needle  
protector



**Step 2:** Remove the needle protector from the syringe (shot) and inject the entire contents of the syringe into the bottle of glucagon. Remove the syringe from the bottle.



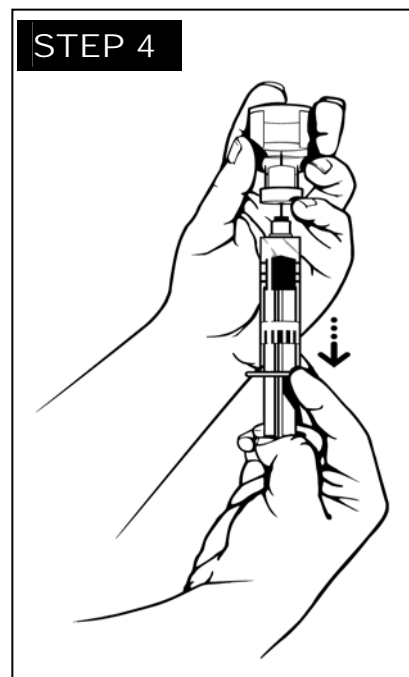


**Step 3:** Swirl the bottle gently until all the glucagon dissolves completely. Glucagon should not be used unless the mixture is clear and looks like water.

**Step 4:** Using the same syringe, hold the bottle upside down and insert the needle. Make sure the needle tip stays in the fluid, then gently pull back on the plunger rod to withdraw all the fluid from the bottle. If the plastic plunger rod separates from the rubber stopper, push the rod back in and turn it clockwise.

### Give the Glucagon Shot

**Step 5:** Insert the needle into the loose tissue of the person's buttock, upper arm, or thigh and inject all of the glucagon fluid. There is no danger of giving too much.



### **After Giving the Glucagon Shot**

**Step 6:** Turn the person on their side. When they wake up, they may vomit. Turning them will help prevent choking if they vomit.

**Step 7: Call 9-1-1 as soon as you have given the glucagon shot. This is a medical emergency! Say that the person has diabetes and has received glucagon.**

### **After Calling 9-1-1**

- Check the person's blood glucose level if you can.
- Feed the person as soon as they wake up and can swallow:
  - If the blood glucose level is under 70 mg/dL, treat with a fast-acting source of sugar such as apple juice or a soda pop that contains sugar.

AND

- When the blood glucose level is over 100 mg/dL, it is OK to offer a snack or meal. Try to provide carbohydrate and protein, such as crackers and cheese or a meat sandwich.
- If the person does not wake up within 15 minutes, give another shot of glucagon.

## Diabetes and Your Delivery Options

During your pregnancy, you and your health care provider will talk about your delivery options. Many (but not all) women with diabetes deliver their babies by Cesarean birth for various reasons, including large fetus size.

You and your provider may schedule your delivery in advance of your due date. Once the delivery date is determined, several things will occur.

### *Two days to 6 weeks before delivery:*

- You will meet with an *anesthesiologist* (a doctor who specializes in treating pain with medicine) to talk about your options for *anesthetics* (pain medicine). This doctor will explain your choices and what they think will be best for you.
- You will have a preoperative exam in our clinic. Medical staff who do your exam will give our Labor & Delivery unit the information they need for your delivery, and will tell them when to expect your arrival.
- You may also have an *amniocentesis* a few days before your scheduled delivery date. For this test, your doctor will insert a long, thin, hollow needle through your abdomen into your uterus. About 1 to 2 teaspoons of amniotic fluid (the fluid around the baby) are drawn up into the needle. This fluid is tested in our laboratory to make sure that the baby's lungs are developed enough to work well outside your uterus.

### *The night before your scheduled Cesarean:*

- If you take NPH insulin or glyburide, take them as ordered.
- **If you take glargine, Levemir, or metformin, ask your health care provider how to take these medicines the last few days before your delivery.**
- If your surgery is scheduled first thing in the morning, DO NOT eat or drink anything after midnight the night before.
- Test your blood sugar at 3 a.m. If your blood sugar is low or you are having symptoms of hypoglycemia (shaking, nausea, jitteriness, etc.), **take 3 to 4 glucose tablets or 4 ounces of CLEAR juice** (such as apple, cranberry, grape – **not** orange or grapefruit).
- Test your blood sugar again in about 15 minutes and then as needed to make sure your blood sugar levels return to and stay within normal limits.

**You may have an amniocentesis done a few days before your scheduled delivery date, to make sure that your baby's lungs are developed enough to work outside your uterus.**

**Call Labor & Delivery at 206-598-4616 and come in to the hospital as soon as you can if you do have a low blood sugar event.** We will want to check you more often and help stabilize your blood sugar!

***Arriving at the hospital:***

- Plan to arrive at Labor & Delivery on 6-East at 7 a.m. on the morning of your scheduled Cesarean. Please call first to confirm your appointment: 206-598-4616.

**Remember, if you have a low blood sugar event in the middle of the night, we want you to come to the hospital as soon as possible. Do not wait until morning!**

- Bring your glucose meter and test strips, insulin, syringes and other supplies with you to the hospital. If you are using an insulin pump, please bring extra infusion sets, batteries, and reservoirs because you will be in the hospital for several days after your baby's birth. (Some supplies are not available through the hospital pharmacy.)
- Please feel free to ask us any questions or to share any concerns you have about these instructions or other aspects of your care.

## Breastfeeding and Diabetes

If you have diabetes, breastfeeding may offer special health benefits for you and your baby. It is a good idea to talk with your health care provider or *lactation consultant* (a nurse with special training in helping with breastfeeding) about your choice to breastfeed, before your baby is born, so that they can help you to be successful.

### *Why should I breastfeed?*

Babies who breastfeed for at least 3 months may have a lower risk of type 1 diabetes, and may be less likely to become obese as adults. Some research links early exposure to cow's milk and cow's milk-based formula to type 1 diabetes.

Studies also show that women who had gestational diabetes who breastfeed have improved pancreas function. This may reduce their chances of developing diabetes later in life. Having gestational diabetes is a risk factor for developing type 2 diabetes.

Some women say they have better overall health and need less insulin during breastfeeding. This could be because their body is adjusting naturally to its changes after the baby is born. In fact, there is a sharp drop in a woman's need for insulin within just hours after giving birth. The stress-busting hormone (*oxytocin*) that a woman's body releases during breastfeeding can also help a diabetic mother feel better, both physically and emotionally.

### *What should I do after my baby is born?*

- Nurse as soon as possible after your baby is born. If your baby is born early or you cannot nurse right away, pump your breasts to get the milk supply going and to help prevent breast engorgement. When you have diabetes, your milk may take 5 or 6 days (rather than 3 or 4) to come in. Until then, your baby will drink *colostrum* – a rich fluid that is packed with good nutrition – from your breasts.
- Keep your baby “skin-to-skin” with you as much as you can right after birth. Studies show that this kind of “kangaroo care” is linked to better blood sugar levels in the baby.
- Since babies born to moms with diabetes may arrive before their due date, breastfeeding gives your baby a head start on a healthy life. It also may help your baby's own blood sugar levels adjust. The nurses will monitor your newborn right after birth to make sure this happens safely. Little or none of the medicine you use to control your blood sugar passes through your breast milk to your baby. This is true for both insulin and oral diabetes medicines.

### **What is breast engorgement?**

**Breast engorgement occurs when the milk comes in and the breast gets painfully swollen (filled with milk). It is relieved by nursing more often.**

- Ask the hospital lactation consultant to help you if you have any problems. They are here to answer your questions before and after your baby is born.

***How can I get off to a good start with breastfeeding?***

Here are some tips to help you get started:

- Eat a snack with carbohydrate and protein before and while breastfeeding, especially during nighttime feedings. Nursing your baby requires a great deal of energy, so add about 200 calories to your pregnancy diet while you nurse to avoid sudden drops in blood sugar. Bedtime snacks should include 1 to 2 carbohydrate exchanges and 1 to 2 protein servings.
- Test your blood sugar from time to time before and after breastfeeding to see how breastfeeding affects your blood sugar.
- Aim for blood sugars no higher than 150 to 160 mg/dl after meals.
- Drink plenty of fluids (at least 6 to 8 ounces) each time you breastfeed your baby.
- Lose weight slowly. Talk with your dietitian for help with a meal plan.
- Meals and medicine changes may be needed as your body makes more milk.
- Position your baby carefully to prevent cracked nipples and breast infections that can lead to *diabetic ketoacidosis* (DKA), if untreated. A lactation consultant can help you with positioning if you need it. Please ask your nurse for our handout, "Position and Latch for Breastfeeding."
- Our goal is to help make breastfeeding a good experience for both you and your baby.

## Questions?

Your questions are important. Call one of the phone numbers on this page if you have questions or concerns.

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## Staff and Phone Numbers

Registered Nurse ..... 206-598-4070

Triage Nurse ..... 206-598-4070

### Maternal and Infant Care Clinic (MICC)

Appointments and scheduling ..... 206-598-4070

Fax ..... 206-598-4694

### Labor & Delivery

After clinic hours and on weekends ..... 206-598-4616

Nurse Practitioner/Diabetes Educator ..... 206-685-1149

Attending Doctor ..... 206-543-3714

To speak with your doctor, call the phone number for the **Triage Nurse** or **Labor & Delivery**.

**UW Medicine**

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### Maternity and Infant Center

Box 356079  
1959 N.E. Pacific St. Seattle, WA 98195  
206-598-4616