



# Gestational Diabetes

Your guide to having a healthy pregnancy



Dear Patient:

Welcome to NorthShore University HealthSystem (NorthShore), bringing you healthcare for what's next. At NorthShore, we are committed to helping you manage your diabetes through our comprehensive education and support programs.

This booklet is designed to get you started with your diabetes care by providing important basic information while you're hospitalized or in the outpatient setting. It also introduces you to our team of inpatient nurses and dietitians as well as our outpatient certified diabetes educators. These team members are specially trained experts in the field of diabetes and are available to provide an individualized treatment plan for you.

Our educators also can assist you in planning for your diabetes care in the areas of diet, exercise, blood glucose monitoring and medication. If your doctor has requested that you test your blood sugar levels, an educator will teach you how to use your blood glucose monitor during your visit.

We invite you to visit us online at [northshore.org/diabetes](http://northshore.org/diabetes) for additional information and resources to help you take charge of your diabetes care.

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## Helpful Information

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### NorthShore Pharmacies

Diabetes supplies are available at the following locations:

- NorthShore Evanston Hospital** (847) 570-2210  
**Outpatient Pharmacy**  
2650 N. Ridge Avenue, Evanston, IL
- NorthShore Glenbrook Hospital** (847) 433-9808  
**Outpatient Pharmacy**  
2050 Pfingsten Avenue, Glenview, IL
- NorthShore Highland Park Hospital** (847) 433-9808  
**Outpatient Pharmacy**  
777 Park Avenue West, Highland Park, IL
- NorthShore Skokie Hospital** (847) 933-6890  
**Outpatient Pharmacy**  
9600 Gross Point Road, Skokie, IL
- Swedish Hospital** (773) 989-3980  
**Galter Medical Pavilion Pharmacy**  
5140 N. California Ave, Chicago, IL

### Outpatient Diabetes Education

- Nutrition and Diabetes Center** (773) 878-8200  
**Swedish Hospital** x 5256  
**part of NorthShore**  
5157 N. Francisco Avenue  
Chicago IL 60625
- Diabetes Education at** (847) 926-5032  
**NorthShore Evanston Hospital**  
2650 N. Ridge Avenue, Evanston, IL
- Diabetes Education at** (847) 926-5032  
**NorthShore Glenbrook Hospital**  
2100 Pfingsten Road, Glenview, IL
- Diabetes Education at** (847) 926-5032  
**NorthShore Highland Park Hospital**  
767 Park Avenue West, Highland Park, IL
- Diabetes Education at NorthShore Skokie Hospital**  
9669 Kenton Avenue, Skokie, IL (847) 926-5032
- Diabetes Education at NorthShore Medical Group**  
15 Tower Court, Gurnee, IL (847) 926-5032
- NorthShore Medical Group/Endocrinology**  
2151 Waukegan Road (847) 663-8540  
Bannockburn, IL  
9977 Woods Drive, Skokie, IL (847) 663-8540

## Chapter 1

# Gestational Diabetes

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What is gestational diabetes? Diabetes that starts during pregnancy is called gestational diabetes. Certain hormone levels increase in pregnancy to support the growth of your baby. These hormones can cause your blood sugar to go too high. Usually this problem corrects itself after your baby is delivered.

### What does this mean for me and my baby?

When high blood sugar levels are not controlled during pregnancy your baby can grow too big. This can cause shoulder injury to your baby during delivery or can cause you to need a c-section. Right after delivery, the baby can have breathing problems, low blood sugar, or jaundice. In the future, the baby is at higher risk for obesity and diabetes. When blood sugars are not controlled, you have a greater risk of getting high blood pressure and developing a condition called pre-eclampsia, which could require hospital care and an early delivery.



### What can I do to manage gestational diabetes?

The best way to manage gestational diabetes is to follow a meal plan that balances the nutrition needed for your baby's growth with food choices needed to control your blood sugar. You will need to test your blood sugar at least four times a day and test a urine sample every morning. Exercise and activity can also help to control your blood sugar. Your OB doctor can tell you how much exercise is right for you.

### During your first visit

You will meet with the Endocrinologist (diabetes doctor) who will set up your treatment plan. A certified diabetes educator will teach you how to do tests at home, record and report your test results, and create a meal plan to help you manage your blood sugar.

### Throughout your pregnancy

Your blood sugar will most likely continue to go up. Because of this, we will plan to see you in the office on a regular basis. The frequency of your visits will be determined during your appointments. We will ask you to report your blood glucose readings in 3–4 days from your initial visit. Subsequent readings and food logs should be reported if high or otherwise instructed. In some cases, following a meal plan is not enough to keep your blood sugar under control. You may need to take insulin shots. If this is the case, we will teach you everything you need to know to give your shots and feel comfortable with this treatment.

### When you are in the hospital

To deliver your baby, our doctors are always available to consult with your care team.

### After delivery

If you used insulin shots during your pregnancy, you will need to have a 2 hour glucose tolerance test six to eight weeks after delivery to make sure that you no longer have diabetes.

## Chapter 2

# Testing to Control Gestational Diabetes

## Blood Sugar and Ketones

Test your blood sugar \_\_ times every day



- Test first thing in the morning before you eat anything
- Test 1 hour after the start of breakfast, lunch and dinner, and as directed
- Write the numbers down on your blood sugar log
- **Report your log 3–4 days after your first office visit and then at least once weekly thereafter. Report your log sooner if you have 3 glucose readings above goal or if you have been otherwise instructed.**

**GOAL:** 60–90 before breakfast  
 ≤130 one hour after meals

Test your urine for ketones every morning

Ketones show up in your urine when your body is breaking down fat to make sugar. This can occur if your blood sugars are too high, you are not eating enough carbohydrate, you go too long without eating, or you are not drinking enough liquid. Ketones are unhealthy for you and your baby.

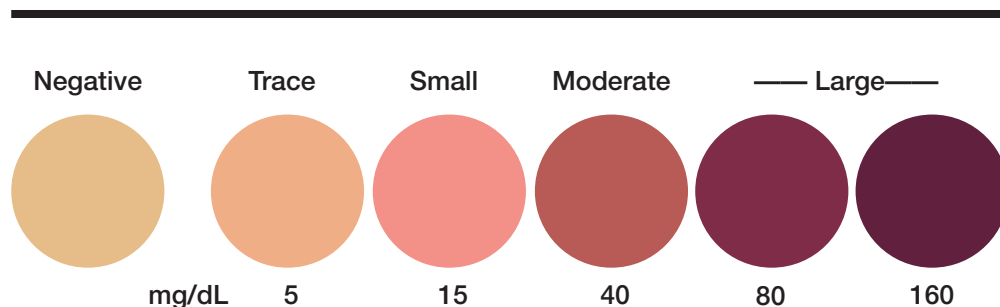
Check for ketones in your urine every morning when you first wake up.

- Collect a urine sample in a cup or urinate directly on the test strip
- If using a cup, dip the test strip into the cup
- Shake off the test strip to remove excess urine
- Wait 15 seconds
- Match the test strip color to the color chart on the test strip bottle

**GOAL: Negative or trace**

Call if your strips show moderate or large ketones at least once and small ketones twice.

### Urine Ketone Interpretation



## Chapter 3

# The ABCs of Pregnancy

## A = About Pregnancy

### Weight Gain During Pregnancy

Recommended weight gain is based on your weight before pregnancy. Overweight women are at risk for problems such as gestational diabetes, high blood pressure, preeclampsia and cesarean delivery. Your weight will be discussed during your visits with the endocrinology and obstetrics team.

### Institute of Medicine Weight Gain Recommendations in Pregnancy

Pre-pregnancy Weight Category	Body Mass Index*	Recommended Range of Total Weight (lb.)	Recommended Rates of Weight Gain† in the Second and Third Trimesters (lb.) (Mean Range [lb/wk])
Underweight	Less than 18.5	28–40	1 (1–1.3)
Normal Weight	18.5–24.9	25–35	1 (0.8–1)
Overweight	25–29.9	15–25	0.6 (0.5–0.7)
Obese (includes all classes)**	30 and greater	11–20	0.5 (0.4–0.6)

\* Body mass index is calculated as weight in kilograms divided by height in meters squared or as weight in pounds multiplied by 703 divided by height in inches squared.

† Calculations assume a 1.1–4.4 lb weight gain in the first trimester.

Source: Acog.org

\*\*BMI > 35 kg/m<sup>2</sup> (kilograms/height in meters squared) may benefit from less weight gain

### Exercise During Pregnancy

Exercise can ease pregnancy aches and prepare you for childbirth. Before you begin an exercise program, talk to your obstetrician. If you have no medical contraindications, exercise at least 30 minutes of moderate exercise 5 days a week. Walking, swimming, prenatal yoga, elliptical machines or stationary bikes are excellent choices. While exercising try to avoid activities that call for jumping, jarring motions or quick changes in direction that may strain your joints and cause injury. You should exercise at a “talking pace” (one at which you can maintain a conversation). Remember to maintain adequate hydration and avoid over-exertion.

# The ABCs of Pregnancy

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## B = Balancing Your Diet

### Nutrition

The foods you eat are the main source of nutrients for your baby. During pregnancy you need more protein, iron, folic acid and calcium. A gradual increase of calories as the baby grows is the best bet. Your caloric intake goals will be individualized. Avoid extra calories by cutting down on foods high in fat and added sugars. Add extra low fat dairy, lean protein, whole grains and fresh fruit to reach your extra calorie needs. Pregnancy is a great time for you to commit to healthy eating!

### Good Sources of Folic Acid

**Good Sources:** Citrus fruits and beans, fortified foods (breads, cereal, pasta, rice and flour), dark green leafy vegetables.

### Good Sources of Iron

**Good Sources:** Lean red meat, dried beans and peas, iron-fortified cereals, prunes.

**Tips:** Add citrus to your iron-containing food like a tomato or orange as it increases the absorption.

### Good Sources of Calcium

Choose at least 4 servings of calcium-rich foods:

- Milk
- Yogurt
- Cheese

### Water: 8 to 12 Cups Daily

### Special Concerns

**Caffeine:** due to conflicting studies regarding caffeine and possibility of miscarriage, it appears to be a good idea to limit caffeine.

Sources: 1–2 cups of coffee (8 oz each) = 91 milligrams

Soft drinks = 35–50 milligrams

8 ounces of iced tea = 15–30 milligrams

(Herbal teas have not been studied during pregnancy and so should be avoided or limited.)

**Mercury:** pregnant women should only eat 12 oz of safe fish weekly due to the potential risk to the developing fetus.

Unsafe fish: shark, swordfish, king mackerel, tilefish or albacore tuna.

Safe fish: shrimp, canned light tuna, salmon, Pollock and catfish.

**Honey:** raw honey may cause botulism.

**Listeriosis:** Listeriosis is an illness caused by bacteria that can be in some foods. Avoid the foods listed below:

- Unpasteurized, raw milk or milk products
- Soft cheese: blue, brie, goat, feta, queso blanco or fresco UNLESS it says made with pasteurized milk.
- Prepared meats: lunchmeats, deli meats, or hot dogs UNLESS they are reheated until steaming hot.
- Bean sprouts
- Unwashed fresh fruit and vegetables UNLESS you wash them.

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# The ABCs of Pregnancy

## C = Common Complications

### Morning Sickness Tips

- Get lots of sleep.
- Get up slowly and allow plenty of time to get ready while doing your tasks.
- Keep a little food in your stomach at all times.
  - Every 2 hours
  - A little something before getting out of bed in the morning and before going to bed. Keep dry foods like crackers or dry cereal by the bedside. Have them 15 minutes before rising.
  - Best foods: crackers, dry toast or bland foods.
- Eat small meals and drink water between meals rather than with meals.
- Try to avoid an empty stomach or a full stomach. Avoid lying down for at least 2 hours after eating.
- Avoid foods or smells that trigger nausea like greasy foods or high fat content foods, spicy foods or caffeine-containing or carbonated beverages.
- Cold foods may be better tolerated than hot since they have less smell.
- Avoid strong odors when possible by keeping the windows open, using a fan, or having someone else cook or bring in food so you can stay out of the kitchen.

### Heartburn Tips

- Eat smaller meals more often and slowly.
- Avoid foods or beverages containing caffeine, pepper, nutmeg, chocolate, peppermint, garlic, onion and fatty foods or fried foods.
- Drink fluids after meals, not before.
- Don't bend over or lie down right after eating. Sleep with your upper body propped up in an incline.
- Serious conditions may require medication so consult with your doctor.

### Constipation Tips

- Drink plenty of liquids—12 (8 oz) daily
- Try to eat on a regular schedule
- Do not delay going to the bathroom
- Eat more high fiber foods: fruits, vegetables and whole grains.
- Try fiber supplements: Metamucil or Citrucel (consult with your physician)
- Exercise moderately every day
- Talk to your doctor about your prenatal vitamins as the iron could be causing constipation and there may be an alternative if you don't need the extra iron.

## Resources

- My Pyramid Plan for Moms (Pregnancy and Breastfeeding)—[mypyramid.gov/mypyramidmoms](http://mypyramid.gov/mypyramidmoms). This website has a calculator for your own calorie needs and number of servings per food groups as well as other important tips for nutrition during pregnancy and breastfeeding.
- The Mayo Clinic Guide to a Healthy Pregnancy
- Baby Fit website – track your nutrition and activity (no cost) at [babyfit.com](http://babyfit.com)
- *Baby Bites* by Bridge Swinney, RD—How to feed your infant and toddler
- *Child of Mine: Feeding with Love and Good Sense* by Ellyn Satter, RD
- Source: Nutrition During Pregnancy patient education brochure by American College of Obstetricians and Gynecologist, August 2010
- [Acog.org](http://Acog.org)—FAQ pregnancy, gestational diabetes and FAQ nutrition in pregnancy
- [Choosemyplate.gov](http://Choosemyplate.gov)—For Moms to Be
- [Eatright.org](http://Eatright.org) > women > eating in pregnancy, Tips for Healthy Post-Partum Weight Loss



## Chapter 4

# Eating to Control Gestational Diabetes

## Introduction to Carbs

### What are carbohydrates?

The foods we eat contain protein, fat, and carbohydrate. Carbohydrates provide the body with energy. When you are pregnant, you need to eat carbohydrates according to the goal suggested at your first visit. Examples of carbohydrates include:

- Starches like bread, tortillas, rice, cereal, pasta
- Starchy vegetables like potatoes, peas, corn, lentils
- Fruit
- Milk and yogurt
- Sweets and desserts

### Why is a special meal plan needed?

Carbohydrate foods make your blood sugar go up. Since you and your baby need them for healthy growth and energy, spreading out your choices throughout the day will help to keep your blood sugar under control. Here are some general guidelines:

- **AVOID** juice, regular soft drinks, candy, and sweet desserts
- **LIMIT** milk, rice, and pasta to 1 cup portions at a time
- **YOU MAY HAVE** decaffeinated coffee and tea, diet soft drinks and sugar substitutes in moderation
- **TIME** your meals so that there is no more than 10 hours without food at night and no more than 5 hours in between meals throughout the day. Include a snack in between meals

### How much carbohydrate should I eat?

This will vary from person to person, but here is a guide to get you started. Try to eat the same amount of carbohydrate at each meal from day to day.

Meal Plan	Grams of Carbs	My Personal Plan
Breakfast	15–30	_____
Morning Snack	15–30	_____
Lunch	45–60	_____
Afternoon Snack	15–30	_____
Dinner	45–60	_____
Bedtime Snack	30	_____

**GOAL:** Eat between \_\_\_\_\_ to \_\_\_\_\_ grams of carb daily

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# Eating to Control Gestational Diabetes

## Gestational Food Log

Ketone Level \_\_\_\_\_

Time	Blood Sugar	Food Item/Amount	Grams of Carb	Insulin Dosage
	Before Breakfast: (Goal: 60-90) _____ After Breakfast: (Goal: ≤130) _____	Breakfast:	_____ Total:	
		A.M. Snack:	_____ Total:	
	After Lunch: (Goal: ≤130) _____	Lunch:	_____ Total:	
		P.M. Snack:	_____ Total:	
	After Dinner: (Goal: ≤130) _____	Dinner:	_____ Total:	
		Bedtime Snack:	_____ Total:	

# Eating to Control Gestational Diabetes

## Reading a Food Label

### Understanding Nutrition Facts Label

1. Start with **Serving Size** and **Servings Per Container** because the rest of the label is based on this information. Measure foods to determine how many servings you're consuming.
2. In order to determine your carb intake, use the **Total Carbohydrate** (NOT sugar) grams and the **Serving Size** to count how many grams of carb you are eating. Your doctor or certified diabetes educator will recommend how many grams of carb to eat for each meal.
3. Look for foods that are **High in Fiber, Vitamin D, Calcium, and Iron**. Monitor potassium as recommended by your healthcare provider.
4. Look for foods that are **Low in Total Fat, Saturated Fat, Trans Fat, Cholesterol and Sodium**.
5. To gain an appropriate amount of weight during pregnancy, look at **Calories**. Your doctor or certified diabetes educator will recommend how many calories to choose each day.
6. The weight listed next to the serving size is the actual weight of one serving. This does NOT provide any information about the carb content of the food.

<b>Nutrition Facts</b>	
8 servings per container	
<b>Serving size</b>	<b>2/3 cup (55g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>230</b>
	<b>% Daily Value*</b>
<b>Total Fat</b> 8g	<b>10%</b>
Saturated Fat 1g	<b>5%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 160mg	<b>7%</b>
<b>Total Carbohydrate</b> 37g	<b>13%</b>
Dietary Fiber 4g	<b>14%</b>
Total Sugars 12g	
Includes 10g Added Sugars	<b>20%</b>
<b>Protein</b> 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

\* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

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# Eating to Control Gestational Diabetes

## Resources for Estimating Carbs

Each choice listed is = to 15 grams of carbohydrate

### STARCH

#### Bread

Bagel.....	¼ large (1 oz)
Bread, White/Whole Wheat/Rye .....	1 slice (1 oz)
Chapati/Roti 6-inch .....	1 (1 oz)
Cornbread .....	1¾-inch cube (1½ oz)
English Muffin .....	½
Hot Dog/Hamburger Bun .....	½ (1 oz)
Idli .....	1 (3 in round)
Pita.....	½
Roll, plain.....	½ small (1 oz)
Tortilla, corn/flour, 6 inch.....	1
Waffle, 4 inch.....	1



#### Cereals and Grains

Bran Cereals.....	½ cup
Bulgur Wheat, cooked.....	½ cup
Cereals, cold unsweetened.....	¾ cup
Cornmeal/Flour.....	3 tbsp dry
Couscous, cooked.....	⅓ cup
Granola, low-fat.....	¼ cup
Grits, cooked.....	½ cup
Kasha.....	½ cup
Millett.....	¼ cup
Muesli.....	¼ cup
Oats, cooked.....	½ cup
Pasta, cooked .....	⅓ cup
Polenta, cooked .....	⅓ cup
Puffed Cereal.....	1½ cups
Quinoa .....	⅓ cup
Rice, White or Brown, cooked .....	⅓ cup
Shredded Wheat .....	½ cup
Sugared Cereal.....	½ cup
Tabbouleh.....	½ cup

#### Beans, Peas and Lentils

Baked Beans.....	⅓ cup
Beans.....	½ cup
Chickpeas .....	½ cup
Dhal, cooked.....	½ cup
Hummus .....	⅓ cup
Lima Beans .....	½ cup
Lentils.....	½ cup
Miso .....	3 tbsp

#### Starchy Vegetables

Corn.....	½ cup, ½ large cob (5 oz)
Peas, green .....	½ cup
Plantain .....	½ cup
Potato, baked or boiled .....	1 small, ¼ large (3 oz)
Potato, mashed.....	½ cup
Squash, Winter, Acorn.....	1 cup
Sweet Potato, Yam.....	½ cup

# Eating to Control Gestational Diabetes

## Resources for Estimating Carbs

### Crackers/Snacks

Animal Crackers .....	8
Graham Crackers .....	3 squares
Matzoh .....	¾ oz
Melba Toast .....	4 slices
Oyster Crackers .....	24
Popcorn, low-fat popped.....	3 cups
Potato Chips, fat-free .....	15–20 (¾ oz)
Pretzels, 3 ring.....	7–8 (¾ oz)
Rice Cakes, 4 inch.....	2
Saltine-type Crackers .....	6
Tortilla Chips .....	12 chips
Wheat Crackers, low-fat .....	2–5 (¾ oz)

### Fruit

Apple, unpeeled .....	1 small (4 oz)
Applesauce, unsweetened.....	½ cup
Apples, dried .....	4 rings
Apricots, fresh .....	4 whole (5½ oz)
Banana.....	1 small or ½ large (4 oz)
Blackberries .....	¾ cup
Blueberries .....	¾ cup
Cantaloupe.....	1 cup cubes (11 oz)
Cherries, sweet, fresh.....	12 medium (3 oz)
Cherries, sweet, canned.....	½ cup
Dates.....	3
Figs, fresh.....	1½ large or 2 med (3½ oz)
Fruit Cocktail .....	½ cup
Grapefruit .....	½ large (11 oz)
Grapes .....	17 small (3 oz.)
Honeydew Melon .....	1 cup cubes (10 oz)
Kiwi .....	1 fruit (3½ oz)
Mango.....	½ small fruit (5½ oz)
Nectarine.....	1 small (5 oz)
Orange .....	1 small (6½ oz)
Peach, fresh .....	½ large (4 oz)
Pear, fresh .....	½ large (4 oz)

Pineapple, fresh.....	¾ cup
Pineapple, canned.....	½ cup
Plums.....	2 small (5 oz)
Prunes.....	3
Raisins.....	2 tbsp
Raspberries .....	1 cup
Strawberries .....	1¼ cup whole berries
Tangerines .....	2 small
Watermelon .....	1¼ cups cubes (13½ oz)

### Milk/Yogurt

Milk, skim or 1% .....	1 cup
Nonfat Buttermilk.....	1 cup
Plain nonfat yogurt.....	¾ cup (6 oz)
“Lite” fruit yogurt with sugar sub .....	1 cup (6 oz)

### Other

Sugar, Honey.....	1 tbsp
Syrup .....	1 tbsp
Light Syrup .....	2 tbsp
Jam, Jelly .....	1 tbsp
Ice Cream.....	½ cup
Brownie, unfrosted .....	2-inch square (1 oz)
Vanilla Wafers .....	5 cookies
Cookies .....	2 small
Cookies, sugar-free .....	3 small
Cake, unfrosted.....	2-inch square (1 oz)
Spaghetti Sauce .....	½ cup
Jell-O, regular .....	½ cup

Each choice listed is = to 15 grams of carbohydrate

### Website Resources

www.calorieking.com  
 www.eatright.org  
 www.myfitnesspal.com

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# Eating to Control Gestational Diabetes

## Sample Meal Plans

15 grams of carb = 1 carb serving

### 15–30 gram Breakfast Meals

#### (1–2 servings)

- **NO fruit, cereal, milk, or juice for breakfast**
- 1–2 slices of whole grain bread (1–2) with peanut butter or cream cheese
- ½–1 whole English muffin (1–2) with cream cheese or 1 egg/cheese
- 1–2 whole grain waffles (1–2) (no syrup) with smart balance spread or egg
- 1–2 whole wheat tortilla (2) with eggs or cheese
- 1 whole wheat roti (1) with ½ cup potato or lentil curry (1)



### 45–60 gram Lunch/Dinner Meals

#### (3–4 servings)

- Turkey sandwich on 2 slices whole grain bread (2) with 1 oz cheese, lettuce, tomato; 1 fruit servings (1 serving = 2" across apple OR 1¼ cup watermelon OR 15 small grapes) 8 oz milk low fat (1); 1 cup of soup (1); small salad with oil & vinegar dressing.
- Salad with diced chicken, 1 oz shredded cheese, ½–1 cup black beans (1–2), dressing, 8 oz milk (1), small fruit (1)
- ⅓ cup rice cooked (1); ½ cup beans (1); 1–2 tortillas (1–2); salad; chicken, beef or fish
- ⅓ cup hummus (1) in ½ whole wheat pita (1) with lettuce & tomato, 8 oz milk (1) or small fruit (1)
- Pasta salad with ⅔ cup whole wheat noodles (2) and vegetables (broccoli, mushrooms, cucumbers, tomato) with vinaigrette dressing, depending on carb content and amount of dressing you could add small fruit (1) or 8 oz milk (1)
- ⅓–⅔ cup whole wheat noodles (1–2), ½ cup pasta sauce (1); 2–3 oz ground meat with salad and 8 oz milk (1)
- Grilled chicken breast, ⅓–⅔ cup rice (1–2), small fruit (1), 8 oz milk (1)
- Grilled meat, ½ large baked potato (2) with smart balance/vegetables, small fruit (1), 8 oz milk (1)
- 1 whole wheat chapit (6") (1); ½ cup potato or lentil curry (1); ⅔ cup rice (2)

# Eating to Control Gestational Diabetes

## Sample Meal Plans

### 15–30 gram Snacks

#### (1–2 servings)

- Try to include protein or fat in your snack
- 1 oz cheese or peanut butter and 6–12 crackers (1–2)
- 1 oz cheese or peanut butter and small–medium size fruit (1–2)
- Cottage cheese and small – medium fruit (1–2)
- Trail mix & nuts—be careful with dried fruit amount (check label)
- 3–6 cups plain popped popcorn (1–2), 1 handful nuts
- 1.5 oz pretzels (2) with 1 oz cheese stick
- 8 oz plain yogurt (1) with  $\frac{3}{4}$  cup blueberries (1)
- Celery w/ peanut butter, small–medium fruit (1–2)



### 30 gram Bedtime Snack (carb + protein + fat)

#### (2 servings)

- **NO fruit, cereal, milk, or juice at bedtime**
- $\frac{1}{2}$  –1 cup plain ice cream (2) with nuts (not low fat or sugar free)
- 2 sheets of graham crackers (2) with 2 tbsp peanut butter
- 2 slices whole wheat bread (2) with 1–2 slices regular fat cheese
- 2 slices whole wheat bread (2) with peanut butter
- 10 whole grain crackers (2) with 1–2 slices regular fat cheese
- 1 whole wheat pita (2) with 2 tbsp hummus
- 2 6-inch whole wheat tortillas (2) with cheese
- Regular yogurt (2) with nuts

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# Eating to Control Gestational Diabetes

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## Low Carb Food Choices

### Low Calorie Vegetables

*5 grams of carb per  
½ cup cooked or 1 cup raw*

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Artichoke Hearts  
Asparagus  
Baby Corn  
Bamboo Shoots  
Beans—green/wax/Italian  
Bean Sprouts  
Beets  
Borscht  
Broccoli  
Brussels sprouts  
Cabbage  
Carrots  
Cauliflower  
Celery  
Chayote  
Cucumber  
Daikon  
Eggplant  
Green Onions  
Greens  
Hearts of Palm  
Jicama  
Kohlrabi  
Leeks  
Mixed Vegetables Corn/Peas  
Mushrooms  
Okra  
Pea Pods  
Peppers  
Radishes  
Rutabaga  
Salad Greens  
Sauerkraut  
Spinach  
Summer Squash  
Sugar Snap Peas  
Swiss Chard  
Tomato  
Turnip  
Water Chestnuts  
Zucchini

### Meat/Protein

*0 grams of carb,  
7 grams of protein per ounce*

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**Lean (0–3 grams fat/ounce)**  
Beans, Peas, Lentils  
(also count as 1 carb choice)  
Beef, select/choice, trimmed of fat  
Cheese, less than 3 grams/oz  
Egg, whites or substitute  
Fish, fresh, frozen, plain, canned  
Game, buffalo, rabbit, venison  
Lamb, chop, leg, roast  
Pork, lean  
Poultry, without skin  
Shellfish, clams, crab, lobster,  
scallops, shrimp  
Veal, loin chop, roast

### Medium Fat (4–7 grams fat/oz)

Beef, corned beef, ground, prime  
Cheese, 4–7 grams fat/oz  
Egg  
Fish, any fried type  
Lamb, ground, rib roast  
Poultry, with skin  
Sausage, 4–7 grams fat/oz  
Veal, cutlet

### High Fat (8+ grams fat/oz)

Bacon, pork or turkey  
Bologna  
Cheese, most regular types  
Hot dog, all types  
Pork, ground, sausage, spare ribs  
Salami  
Sausage:  
Bratwurst  
Chorizo  
Italian  
Knockwurst  
Polish  
Smoked  
Summer

### Fat

*0 grams of carb,  
5 grams of fat per serving*

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#### Monounsaturated

Avocado, 1 oz  
Nut Butters  
Nuts:  
6 Almonds/Cashews/Mixed  
2 Brazil  
5 Filberts  
3 Macadamia  
10 Peanuts  
4 Pecans  
16 Pistachios  
Oil, 1 tsp, canola, olive, peanut  
Olives, 8 black, 10 green

#### Polyunsaturated

Margarine:  
1 tsp regular  
1 tbsp reduced fat  
Mayonnaise, 1 tsp  
Nuts:  
Pinenuts, 1 tbsp  
Walnuts, 4 halves  
Oil, 1 tsp, corn, cotton seed,  
flax seed, grape seed, safflower,  
soybean, sunflower  
Salad Dressing:  
Regular, 1 tbsp  
Light, 2 tbsp  
Seeds, 1 tbsp, flaxseed, pumpkin,  
sunflower, sesame  
Tahini or Sesame Paste, 2 tsp

#### Saturated

Bacon, 1 slice  
Butter, 1 tsp  
Coconut, 2 tbsp  
Coconut milk, 1½ tbsp  
Coconut milk, light, ⅓ cup  
Cream Cheese, 1 tbsp  
Lard/Shortening, 1 tsp  
Oil, coconut/palm  
Sour Cream, 2 tbsp

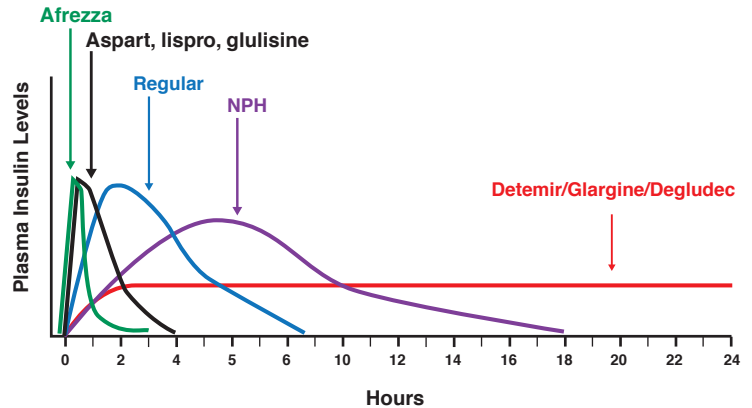


# Chapter 5

## Taking Insulin

Insulin is divided into 4 different groups for pregnancy, depending on its onset of action (when it starts working), peak action (when it's working the hardest) and effective duration (when it stops working).

Insulin helps move glucose into your cells for your body to use as energy. Learning how to prepare and administer insulin is an important part of your diabetes care plan.



### Insulin Types

Insulin Name (Generic Name)	Onset	Peak	Duration
<b>Rapid Acting/Bolus</b>			
Glulisine (Apidra®)	5–15 minutes	1–2 hours	3–4 hours
Lispro (Humalog®) 100 u/mL or 200 u/mL /Admelog®)	5–15 minutes	1–2 hours	3–4 hours
Aspart (NovoLog®/ Fiasp®)	5–15 minutes	1–2 hours	3–4 hours
<b>Short Acting</b>			
Regular	30–60 minutes	2–3 hours	5–8 hours
<b>Intermediate</b>			
Humulin N	2–4 hours	4–10 hours	10–16 hours
Novolin N			
<b>Long Acting/Basal</b>			
Detemir (Levemir®)	2–4 hours	None	Up to 24 hours
Glargine 100 u/ml (Lantus®/Basaglar®)	2–4 hours	None	Up to 24 hours

continued >>

*continued >>*

## Taking Insulin

Before you begin taking any medication, such as insulin, be sure to talk with your certified diabetes educator about any side effects. For instance, some side effects may include the following:

- Low blood sugar
- Weight gain
- Low blood potassium (primarily with insulin)
- Changes in fat tissue at the site of injection
- Allergic reactions

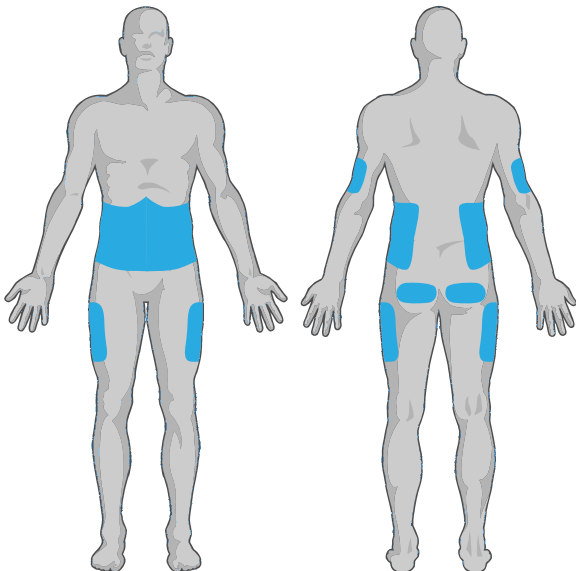
### Injecting Insulin

The first time you do something new, you may feel uncertain about how to do it correctly. This is true for taking insulin to treat your diabetes. But once you learn how to inject insulin, you'll feel more confident in your ability to take this medication.

The injection technique is the same for those who use a syringe or an insulin pen.

Some general instructions for taking injections are to choose an area of your body where you'll inject the insulin, and change the site for each injection. Use fatty tissue such as your belly, the top of your thigh, your hips or buttocks. Arms should be used as a last site choice due to access and arm variability.

Be sure to wash your hands before you begin. Then clean the injection site with soap and water, or use an alcohol wipe.



### Using Insulin Pens and Injectables

An insulin pen and pen needle, which may be more expensive, can be used instead of a syringe to inject insulin. Several types of insulin pens are available for purchase. Be sure to read the instructions carefully if you decide to use one of these devices, and always check the label on the insulin to make sure you're using the correct insulin type.

Below are some general instructions for using insulin pens:

- Inspect insulin and clean rubber tip with alcohol.
- Attach a new needle before each injection. Never leave a needle on the insulin pen.
- Always prime your insulin pen before injecting by removing the needle cap and shooting two units of insulin into the air. If you don't see insulin after repeated priming, don't use the pen because it may not administer the correct amount of insulin you need.
- Be sure the dose window shows "0" after the priming test. Then select your required dose.
- Insert the needle into your skin and inject your dose by pressing the injection button all the way in. Hold the button in that position and count to 10 (the window should be back to "0"), then withdraw the needle.
- Remove pen needle. Recap pen and store.



# Taking Insulin

**Be sure to store your unopened vials or pens in the refrigerator.** Don't freeze or allow insulin to become warmer than 86 degrees, and be sure to use it before the expiration date. Open vials may be refrigerated or kept at room temperature for one month. Avoid heat and direct light.

Pens, cartridges and vials are good for a limited time after their first use. Record the date you use them and store them at room temperature. Store unopened vials, pens and cartridges in the refrigerator, and be sure to check their expiration dates.

## Drawing Up Insulin— Single and Mixed Doses

Some patients take a single dose of insulin; others take a "mixed dose," which involves combining two different types of insulin medication in one injection. It's important to talk with your certified diabetes educator about the steps you must follow to "draw up," or prepare, either a single or mixed dose.

Be sure to wash your hands thoroughly before you prepare your insulin doses. If your insulin is "cloudy" in appearance, roll it between the palms of your hands and mix it well. Never shake a bottle of insulin.

### For a single dose:

**Wipe the top of the insulin bottle with an alcohol swab.**

- Take off the cap and pull the plunger down to the units of insulin you need.
- Put the needle into the vial and push the plunger down, pushing air into the vial.
- Turn the vial and syringe upside down and pull the plunger down to draw the units of insulin you need into the syringe.
- Check for air bubbles and push insulin back into the bottle if you see any sign of bubbles.
- Push the needle through the skin and push down the plunger.
- Count to 10 and pull the needle out of your skin.



## Chapter 6

# Treating Hypoglycemia

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## Hypoglycemia (Low Blood Sugar)

A blood sugar reading below 60 mg/dL is considered a lower-than-normal level of sugar in the bloodstream. (When not pregnant, a blood sugar level below 70 mg/dL is considered below normal.) Some people may have no symptoms, but typical signs and symptoms of low blood sugar include the following:

- Sweating
- Shakiness
- Anxiety
- Nervousness
- Rapid heartbeat
- Dizziness/light-headedness
- Headache
- Sudden hunger
- Weakness
- Impaired vision
- Confusion
- Numbness or tingling around the mouth or lips

Low blood sugar is caused by several factors. Below are some of the most common causes:

- Missing or delaying a meal
- Eating a meal that's smaller than usual
- Taking an insulin dose that's mismatched with the amount of carbohydrate you eat at a meal
- Taking too much insulin or other diabetes medication
- Taking rapid-acting insulin too early before the start of a meal
- Being more physically active than usual



If you're having any symptoms of low blood sugar, you must **test your blood sugar immediately**. Always carry your blood glucose meter with you.

If your blood sugar is less than **60 mg/dL**, you need to treat it immediately by eating or drinking 15 grams of fast-acting carbohydrate.

If your blood sugar is **less than 50 mg/dL**, you need to double the portion size listed below and eat or drink 30 grams of fast-acting carbohydrate.

# Treating Hypoglycemia

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## How to Treat Low Blood Sugar

### Use the “The Rule of 15”

1. The following examples contain approximately 15 grams of fast-acting carbohydrate.
  - 3–4 glucose tablets
  - ½ cup of apple juice
  - 4–6 ounces of regular (not diet) soda
  - 1 tablespoon of sugar, honey (not raw honey) or syrup
  - 5–7 Lifesavers® hard candy
  - 8 ounces of skim milk
2. Check your blood sugar 15 minutes after eating or drinking the fast-acting carbohydrate food source. Once your blood sugar is above 60 mg/dL, you can have a snack if your next meal is longer than one hour away. In your snack or meal, be sure to include foods with carbohydrate, protein and fat. An example of a snack may be half a sandwich with a piece of fruit.
3. If your blood sugar is still below 60 mg/dL after 15 minutes, eat or drink another 15 grams of fast-acting glucose, wait 15 minutes and test your blood sugar again.
4. Document all of your low blood sugar episodes on your log sheet and discuss them with your diabetes care team. By recognizing the patterns that cause low blood sugar, you can take steps to prevent them in the future.
5. Untreated low blood sugar or low blood sugar that does not improve with the above treatment can become an emergency involving loss of consciousness or a seizure. You may also faint. Contact your doctor or 911 if your symptoms do not improve and your blood glucose remains below normal despite multiple attempts to treat it.

## Chapter 7

# After Gestational Diabetes

Gestational diabetes is one risk factor for getting type 2 diabetes in the future. Other factors that increase the chance of getting type 2 diabetes include:

- Close family members with type 2 diabetes
- Excess weight
- Too little activity and exercise
- Ethnic background—non-Caucasian
- Advancing age
- Health conditions such as high blood pressure, high triglycerides or low levels of good cholesterol, and polycystic ovary syndrome

**Goal weight:** \_\_\_\_\_



To stay healthy and reduce the chances of getting type 2 diabetes:

### Eat a Healthy Diet

- Eat high fiber foods like fruits and vegetables
- Eat foods that are low in saturated fat
- Limit sweets and watch portion sizes
- Avoid fast foods and processed foods

### Breastfeed Your Baby

- Breastfeeding your baby can reduce the risk of getting diabetes for both you and your baby.
- Continue the same diet used during pregnancy while breastfeeding.

### Stay Active

- Walk or do other exercise at least 30 minutes, 5 days a week.

### Maintain a Healthy Weight

- If you are overweight, make a plan to get to your goal weight within one year.

### Follow Up With Your Healthcare Provider

- Go to the lab for a 2 hour glucose tolerance test 6–8 weeks after delivery (if you took insulin during your pregnancy).
- Have your blood sugar and A1c tested once a year as part of your general check-up.
- Make sure your blood sugar is in a normal range before you plan to get pregnant again.

## My Gestational Diabetes Check-list

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- Test blood sugar before breakfast and one hour after the start of each meal



Contact office if I have 3 results that are outside my goal.



Communicate my testing results and food logs 3–4 days after the first visit and then at least once weekly, sooner when 3 glucose readings are above goal.

**Goals are:** 60–90 before breakfast  
≤130 one hour after meals

- Test urine for ketones every morning with the first void



Contact office if my ketones are small twice or more than moderate/high once

- Eat 3 meals and 3 snacks daily with minimum of \_\_\_\_\_ grams of carbohydrates

- Write down my readings and food choices in my log sheet

- Exercise daily as permitted by my OB/GYN

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**Medical Group**