



Perinatal
SPECIALISTS
OF KANSAS CITY

DIABETES IN PREGNANCY
A GUIDE TO LIFESTYLE MODIFICATIONS

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Diabetes in Pregnancy

Perinatal Specialists of Kansas City

A diagnosis of diabetes, whether it is pregestational or gestational, can be overwhelming during pregnancy. Our diabetes education session is designed to provide an educational overview regarding diabetes and methods to control your blood sugars through nutrition and physical activity. At times, medications are needed, which is at the discretion of your physician. The information in our brochure and session are for educational purposes and are not medical advice.

Remember, the diagnosis is “Not your fault.”

What is diabetes?

Diabetes is a disease in which glucose or sugar in your blood is too high. This is a problem with metabolism, or the way your body uses food for energy. When you eat food that contains carbohydrates (starches, sugars, sugar alcohols, and fiber), your body breaks this food down into glucose. Glucose is one source of energy for the body.

How does glucose and insulin work?

For your body to use glucose for energy, the glucose needs to move from your blood into your body's cells.

Glucose enters the cells using insulin. Your pancreas makes insulin. Once glucose is inside your cells, your body can use it for energy.

When you have diabetes, your body either does not produce enough insulin or your cells do not use insulin the correct way. If you cannot get the glucose into your cells, it stays in your blood and causes high blood-glucose levels.

What causes diabetes to develop during pregnancy?

The placenta produces many hormones during pregnancy. These hormones cause insulin resistance. While many hormones interact with maternal changes in metabolism, human placental lactogen is thought to be a key player in driving insulin resistance. This hormone continues to increase throughout gestation, thus women become more insulin resistant as the pregnancy progresses. In most cases, a woman's pancreas can produce enough insulin, but for some, it can't. When your pancreas cannot keep up with your increased need, the glucose stays in your blood, and you have "gestational diabetes".

"Our goal is to provide you with a deeper understanding of the impacts of lifestyle. "

What are risk factors for gestational diabetes?

Risk factors for gestational diabetes include:

- Family history of diabetes.
- Are of African American, American Indian, Asian American, Hispanic American or Pacific Islander descent.
- Are overweight.
- Insulin resistance prior to pregnancy
- Have given birth to at least one baby weighing more than 9 pounds.
- Are older than 25 years of age.

Health and Wellness

Our overall stress levels, mental health, sleep, and sense of wellbeing. It is important to look beyond diet and the role that other interventions play in regulation of blood glucose.

How is diabetes treated during pregnancy?

For your body to use glucose for energy, the glucose needs to move from your blood into your body's cells. With treatment, the majority of women experience healthy outcomes.

Your treatment plan will likely include the following:

1. Checking, tracking and understanding blood glucose numbers.
2. Following a healthy meal plan.
3. Getting regular physical activity.
4. Gaining weight appropriately.
5. Keeping all scheduled medical appointments.
6. Using medications, if needed

“Lifestyle modifications including nutrition, physical activity, and rest are powerful tools.”

Sleep

Did you know that people who sleep less than 6 hours a night have greater insulin resistance compared to individuals who sleep 7-8 hours a night? Sleep is a precious commodity that is undervalued. Try improving your sleep schedule and continue this habit lifelong.

“Lifestyle changes during and after pregnancy can help manage diabetes during pregnancy and potentially prevent or reverse diabetes after delivery.”

Physical activity

It is recommended that pregnant women get a minimum of 150 minutes of physical activity each week. As pregnancy progresses, women should stick with activities that are low fall risks as our balance changes as pregnancy progresses. Activities such as bike riding, high impact aerobics, or activities which require complex movements should be avoided. However, this doesn't mean the absence of physical activity. Avoid exercises which require prolonged time on your back in the second and third trimesters. **A quick 15-30 minute walk post meals is a natural way to assist in blood glucose regulation.** If you have questions regarding which activities are safe during pregnancy, please consult your care provider.

Stress and mental health

Our glucose levels are responsive to outside stimuli and sources of stress. Often, we believe stress is part of life. While a healthy amount of awareness for your surroundings is necessary for pursuing personal goals, finances, safety, etc. excessive stress can be detrimental. If you find yourself overwhelmed, the addition of meditation and affirmations could be of benefit. Some suggest meditation for all, regardless of stress level. The Calm app is an excellent resource for those wanting to give meditation a try. Even starting a minute a day can be powerful.

Carbohydrate Counting for Gestational Diabetes

Carbohydrate counting can help you control your blood sugar level to keep you and your baby healthy.

All foods are made up of **macronutrients** including **carbohydrates, protein, and fat.**

Carbohydrates affect blood sugar levels.

Which Foods Have Carbohydrates?

- Pasta, rice, and grains
- Bread, crackers, and cereals
- Fruit
- Cow or soy-based milk and yogurt
- Starchy vegetables (corn, peas, potatoes, beans and winter squash)
- Beans and legumes
- Sweets such as cakes, cookies, ice cream, jam, jelly
- soda/pop-(including "diet"), energy drinks, sweet tea, flavored coffee or coffee creamer

What are Free Foods?

Free foods contain little to no carbohydrates and do not have the same impact on blood sugar. These foods include:

- Proteins (meat, chicken, eggs, fish, cheese, nuts/nut butter)
- Healthy fats (olive oil, avocado, butter)
- Non-starchy vegetables-(carrots, broccoli, spinach, onions, peppers, tomatoes..etc)

Carbohydrate Servings

In diabetes meal planning, 1 carbohydrate serving is equal to 15 grams of carbohydrates.

- Refer to **“Simple Carb Counting”** handout for more information on carbohydrate servings of common foods.

Strategies for Blood Sugar Control

- Eat 3 meals per day, spaced 4 to 5 hours apart.
 - Be sure to eat breakfast within 1 to 2 hours of waking up.
 - Eat your nighttime snack 1 to 2 hours before going to sleep.
- Stay within the carbohydrate range provided at each meal and snack. Avoid carbohydrate stacking (borrowing from other meals)
- Include a protein with every meal or snack.
- Snacking is optional. If you are not hungry, don't eat.
- When you are full, stop eating.

Diabetes Label Reading Tips

“Remember to always check the Nutrition Facts on Food labels”

Nutrition Facts	
Serving Size 3 pieces (90g)	
Servings Per Container about 3	
Amount Per Serving	
Calories 200	Calories from Fat 50
% Daily Value	
Total Fat 6g	9%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 5mg	2%
Sodium 490mg	20%
Total Carbohydrate 30g	10%
Dietary Fiber 3g	12%
Sugars 2g	
Protein 6g	
Vitamin A 4%	Vitamin C 8%
Calcium 0%	Iron 10%

Serving Size for this product is 3 pieces.

The number in parenthesis shows the **weight**. One serving weighs 90 grams when using a food scale.

There are 3 servings in the whole package.

One serving, which is 3 pieces of this product, provides 30 g of carbohydrate.

Dietary fiber is part of the total carbohydrates. Fiber does not digest so you can subtract the grams of fiber from the total carbohydrate grams.

The grams of sugar are already included in the total carbohydrate count. The natural sugars in milk and fruit, along with added sugars are all grouped together.

Simple Carbohydrate Counting

Carbohydrate (in orange) = anything sugary or starchy

My meal plan: _____ carbs at Breakfast _____ carbs at Lunch _____ carbs at Dinner _____ carbs at snacks

****Carbohydrates have the biggest effect on your blood sugar, they are not to be avoided as they provide a good source of energy, just balanced throughout the day!****

Grains 15 g carb each	Starchy Vegetables 15 g carb	Fruit 15 g carb each	Dairy/Milk 15 g carb each	Sweets & Starchy Snacks 15 g carb each	Combination Foods 15 g carb each	Protein Foods: 0-5 g carb each	"Free" Foods 0-5 g carb each
★ Choose 100% whole grain	★ Choose fresh, frozen, or canned without salt	★ Choose fresh, frozen, or canned in juice	★ Choose low fat or fat-free dairy	★ Choose low-sodium, 100% whole grain, and/or low-fat	★ Choose low-sodium and low-fat	★ Choose <i>Lean</i> meats and fatty fish; take off skin and cook without fat	★ Choose fresh, frozen, or canned without salt
• Bagel, ¼ large • Bread, 1 slice or 1 ounce • Cereal, unsweetened, ½ cup • English muffin, ½ of muffin • Granola Bar, 3.5 oz • Hamburger or Hot dog bun, ½ of bun • Muffin, ½ small • Oatmeal, ½ cup cooked or ¾ cup dry • Pancake, 4" dia • Pasta, 1/3 cup • Rice, 1/3 cup • Roll, 2-inch X 2-inch • Taco shell, 2 • Tortilla, 6-inch	• Beans, ½ cup • Corn, ½ cup • French Fries, ½ small order • Mixed vegetables, 1 cup • Peas, ½ cup • Potatoes, ½ cup • Spaghetti • Sauce, 1 cup • Sweet Potatoes, ½ cup • Winter Squash (butternut or acorn), 1 cup	• Apple, small • Banana, ½ large • Berries, 1 cup • Canned, ½ cup • Cherries, 1 cup • Clementine, 2 small • Grapefruit, 1 medium • Grapes, ½ cup • Juice, ½ cup • Kiwi, 2 small • Melon, 1 cup (watermelon, cantaloupe) • Nectarine, small • Orange, small • Peach, small • Pear, small • Plum, 2 small • Raisins, 2 • Tablespoons	• Milk, 1 cup • Rice Milk, 1 cup • Soy Milk, 1 cup • Yogurt, 1 cup	• Brownie, 2" square • Candy bar, 1 fun-sized • Cheesecake, 1/6 of cake • Chips, 15 chips • Cookie, 3 ½-inch diameter • Hard candy, 3-5 pieces • Honey, sugar, jelly, or syrup, 1 • Tablespoon • Ice cream, ½ cup • Jell-O, ½ cup • Large crackers (saltines, Triscuits), 6 • Popcorn, 3 cups • Pretzels, 53 sticks • Wheat Thins, 16 crackers	• Asian entrée (no rice), 1 cup • Burrito, ½ • Casserole with pasta or rice, ½ cup • Chili, 1 cup • Lasagna, 2" X 3" X 2" piece • Pasta or potato salad, ½ cup • Pizza, thick crust, 1/16 of 14" pizza • Pizza, thin crust, 1/8 of 14" pizza • Soup, 1 cup	Lean meats: • 95% lean ground • Chicken or turkey (white meat) • Deli meat (ham, turkey, prosciutto) • Fish • Ham • Loin, sirloin, tenderloin • Round roast Other meat • Beef • Lamb • Lunchmeat • Pork • Venison Meat alternatives: • Cheese • Egg • Nuts/seeds • Peanut Butter • Tofu	• Artichokes • Asparagus • Beets • Broccoli • Brussels sprouts • Cabbage • Carrots • Cauliflower • Celery • Cucumbers • Eggplant • Green Beans • Lettuce • Mushrooms • Okra • Onions • Peppers • Spinach • Tomatoes • Zucchini • Broth • Mustard/Ketchup • Seasonings • Sugar-free gelatin

Fats: 0-5 g carb each

Butter Oil Salad Dressing Mayo Bacon/Sausage
Olives Cream Avocado Margarine Gravy

Gestational Diabetes Sample 1-Day Menu

Breakfast 30 grams of carbohydrates = 2 Servings of carbs 1 or More - Protein Serving of choice	1 slice whole wheat toast (1 carbohydrate serving) (pick 2) 1 cup fat-free milk (1 carbohydrate serving) ½ cup pineapple (1 carbohydrate serving) 1 scrambled egg- Protein
Morning Snack 15 grams of carbohydrates = 1 Serving With a protein of choice	1 tablespoons of peanut butter 5 celery sticks 5 Crackers of choice
Lunch 45 grams of carbohydrates = 3 carb servings With a protein+ Veggie of choice	2 slices whole wheat bread (2 carbohydrate servings) OR 1/3 cup hummus (1 carbohydrate serving) 1 cup strawberries (1 carbohydrate serving) 3 ounces chicken breast, baked or grilled 1 ounce low-fat cheese 1 tablespoon of mayonnaise 2 leaves lettuce 2 tomato slices 5 carrot sticks 5 celery sticks
Afternoon Snack 15 grams of carbohydrates = 1 Serving With a protein of choice	½ cup sliced cucumbers 2 tablespoons reduced fat ranch dressing
Evening Meal 45 grams of carbohydrates = 3 carb servings With a protein+ Veggie of choice	3 ounces salmon 2/3 cup cooked brown rice (2 carbohydrate servings) ½ cup black beans (1 carbohydrate serving) ¾ cup cooked broccoli 1 cup green salad ¼ cup avocado 2 tablespoons salad dressing 6 ounces Greek yogurt, fruited (1 carbohydrate serving)
Evening Snack 5 grams of carbohydrates = 1 Serving With a protein of choice	5 whole grain crackers (1 carbohydrate serving) 1½ ounces reduced fat cheddar cheese
Additional Snack Ideas	• Carrot sticks with ranch • Cheese stick • Hardboiled egg • Sliced bell peppers with guacamole

	● Handful of nuts (almonds, walnuts, etc).
Additional Snack Ideas	● Small fruit (size of baseball) with peanut butter (~15 grams of carb) ● ½ cup cottage cheese and ½-1 cup of fruit (~15-30 grams of carb) ● ½ cup edamame (~15 grams of carb) ● 1/3 cup hummus with ~15 Wheat Thins plus carrots and celery sticks (~30 grams of carb)

Blood Glucose Meter Instructions:

- After washing your hands, insert a test strip into your meter.
- Pick a finger, and massage the finger to bring blood cells to the fingertip.
- Use your lancing device on the side of your fingertip to get a drop of blood.
- Clean off the first drop of blood, use the second drop for accurate testing.
- Touch and hold the edge of the test strip to the drop of blood and wait for the result.
- Your blood glucose level will appear on the meter's display.

Check Fastings-upon waking up before eating or drinking other than water

2 hour post meals: 2 hours after breakfast, lunch, and dinner

1 hour post meals: for some, it is easier to check one hour after meal

You may check Fastings and either 1 or two hours post meal (1 hour after meals <140)

Blood Sugar Log



If our team manages your glucose
Send by Wednesday of each week
through your Patient Portal

Name _____ Medication(s) _____ ☐ No medications

Date	Fasting (<95)	Breakfast Time	2 Hours After Breakfast (<120)	Lunch Time	2 Hours After Lunch (<120)	Dinner Time	2 Hours After Dinner (<120)

Thank you for trusting Perinatal Specialists of Kansas City to care for you during your pregnancy.
Our clinic policy is to review glucose logs weekly for all diabetic patients (gestational, Type 1, or Type 2), unless instructed otherwise.
Feedback to you from our team may occur though the secure patient portal, during a telehealth appointment, or in person at an office visit.

A note about continuous glucose monitors (CGMs)

- CGMs are a recent advancement in diabetes surveillance that alleviate the need to stick your finger multiple times per day.
- These devices offer a considerable amount of data with regard to your glucose control over a 24-hour period.
- Please let your care team know if you utilize a CGM; we may, at times, ask for additional information you can view on your app during glucose log review.
- **We will not routinely log into your profile** to review your glucose control.
- It is the responsibility of the patient to complete the log and send to our office weekly.