

Type 2 Diabetes and Pregnancy

Maternal Fetal Medicine (MFM) Specialists of the Mountain States



What to Expect

- ▶ Weekly appointments either by phone, virtually, or in person to review blood sugars and plan of care. Please schedule these appointments.
- ▶ Ultrasounds monthly, or as recommended
- ▶ Fetal Echocardiogram around 24 weeks
- ▶ Fetal Non-Stress Tests starting at 32 weeks
- ▶ A1c each trimester or as recommended
- ▶ Eye exams with eye specialist
- ▶ EKGs, labs and other exams are sometimes ordered

Our physicians will go over the plan with you.

Risks of Diabetes in Pregnancy

▶ Risks to Baby

- ▶ Birth defects
- ▶ Miscarriage/Stillbirth
- ▶ Large baby or small baby (IUGR)
- ▶ Polyhydramnios (increased fluid in amniotic sac)
- ▶ Preterm birth
- ▶ Hypoglycemia (low blood sugar), jaundice, respiratory distress, NICU admission
- ▶ Greater risk for obesity and diabetes later in life

▶ Risks to You

- ▶ High blood pressure and pre-eclampsia
- ▶ Frequent urinary tract infections, yeast, or vaginal infections
- ▶ Difficult delivery and increased risk for need of c-section

How do I manage diabetes?

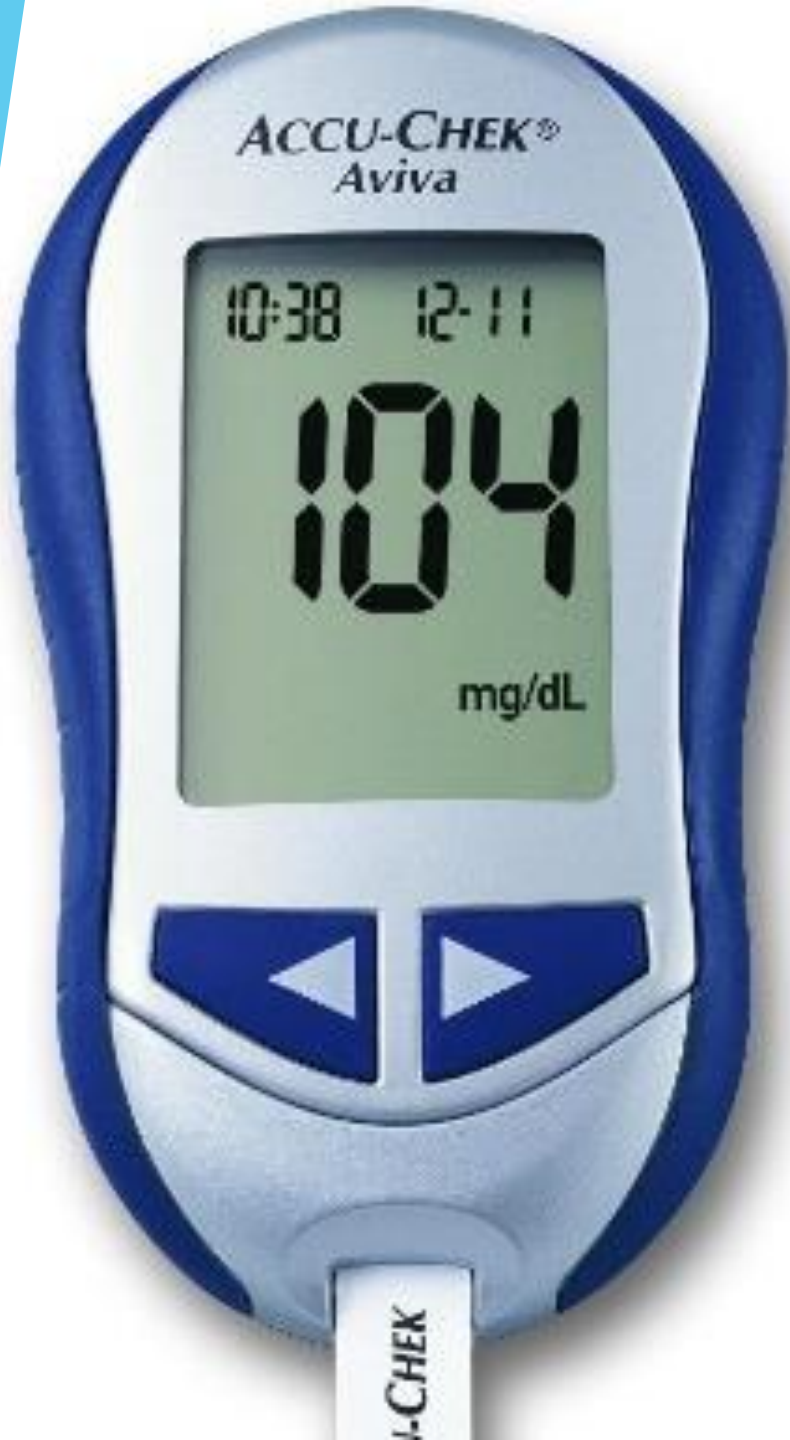
- ▶ Blood sugar monitoring
- ▶ Eating a well-balanced diet
- ▶ Exercise and staying active
- ▶ Stress management
- ▶ Getting good sleep
- ▶ Medication, if needed
- ▶ Weekly appointments to review blood sugars and plan of care



Blood Glucose Monitoring

- ▶ Blood sugars will be reviewed weekly and sometimes twice weekly if needed.
- ▶ During pregnancy, we recommend checking your blood sugars at least fasting, 1 or 2 hours after meals, and as needed. Our team will go over your specific recommended testing schedule.
- ▶ This is a great time to consider getting a continuous glucose monitor (CGM) if you do not already have one.





Meter Tips and Information

- ▶ Never share your meter or testing supplies.
- ▶ Use new lancets each time, wash hands or use alcohol.
- ▶ Store used needles/syringes and lancets in a sharp's container; never throw sharps in the garbage.
- ▶ Don't leave your sharps out and keep them away from children and pets.
- ▶ Contact your local waste management when you are ready to throw your container away. They will give you instructions; different cities might have different rules.

Blood Sugar Goals

- ▶ Fasting: 70-95
- ▶ 1 hour after meals: less than 140
- ▶ Or 2 hours after meal: less than 120
- ▶ Premeal: less than 95
- ▶ Middle of the night: 70-120

A1C goals:

- 6-6.5%
- Main goal is to get blood sugars in range without having hypoglycemia.



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Hyperglycemia (high blood sugar)

Elevated blood sugar can be caused by:

- Consuming too many carbohydrates
 - Or not taking enough diabetes medication for the carbs you are eating
- Lack of Sleep, stress
- Illness
- Increased insulin resistance as pregnancy progresses



If your blood sugars are consistently out of range, please call our office to schedule an appointment!



Hypoglycemia (Low blood sugar)

Low blood sugar can be caused from taking too much medicine, not eating enough, or exercise.

1. If you feel shaky, sweaty, weak, confused or not well-check your sugar.
2. If sugar is less than 70, have 15 grams of carbohydrates. Example: fruit snacks, 1/2 cup of juice or four glucose tablets
3. Recheck blood sugar in 15 min.
4. Repeat until blood sugar is above 70 and eat a meal within one hour.
5. Treat any low blood sugars and contact MFM or your provider if you are having blood sugars less than 70.



CGMs

If you would like information on obtaining a continuous glucose monitor (CGM), please talk with our MFM diabetes team.

CGMs are not FDA approved during pregnancy, but they can make monitoring your sugars easier and provide alarms for safety.





Diet

A healthy diet is known to decrease risks to mom and baby.

Poor nutrition can have negative effects on baby before birth and later in life.

Importance of Nutrition and Pregnancy

- ▶ According to the American Journal of Obstetrics and Gynecology, “A diet with balanced macronutrient intake provides the best chance for a healthy pregnancy and optimal perinatal outcomes. Nutritious diets are those that include ample quantities of vegetables, fruits, whole grains, nuts, legumes, fish, oils enriched in monosaturated fats, and fiber AND are lower in fatty red meat and refined grains. Furthermore, healthy diets avoid simple sugars, processed foods and trans and saturated fats.”

Nutrition Recommendations from the American Diabetes Association (ADA) on Pregnancy and Diabetes



Protein: at least 71 grams per day, and 50 additional grams if you are having twins.

Carbohydrates: at least 175 carbs per day

Fiber: 28 grams per day.
Examples: beans, fruit, and veggies.

Healthy fats: 6-8 teaspoons per day, depending on your trimester. 1 tsp = 4-5 gm
Examples: olive oil, nuts, avocado.



Carbohydrates

- This is *not* a low carb diet.
- Babies need carbohydrates for brain development and fetal growth. Do not restrict carbohydrates.
- Our nurses can help you with carb counting. You can also meet with a nutritionist/dietician for further nutritional assistance. Please let our staff know if you would like a referral.

Reading a Food Label

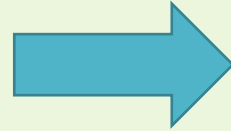
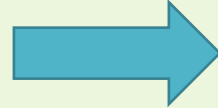
Important things to look for on a food label:

Serving Size

Carbohydrate

Protein

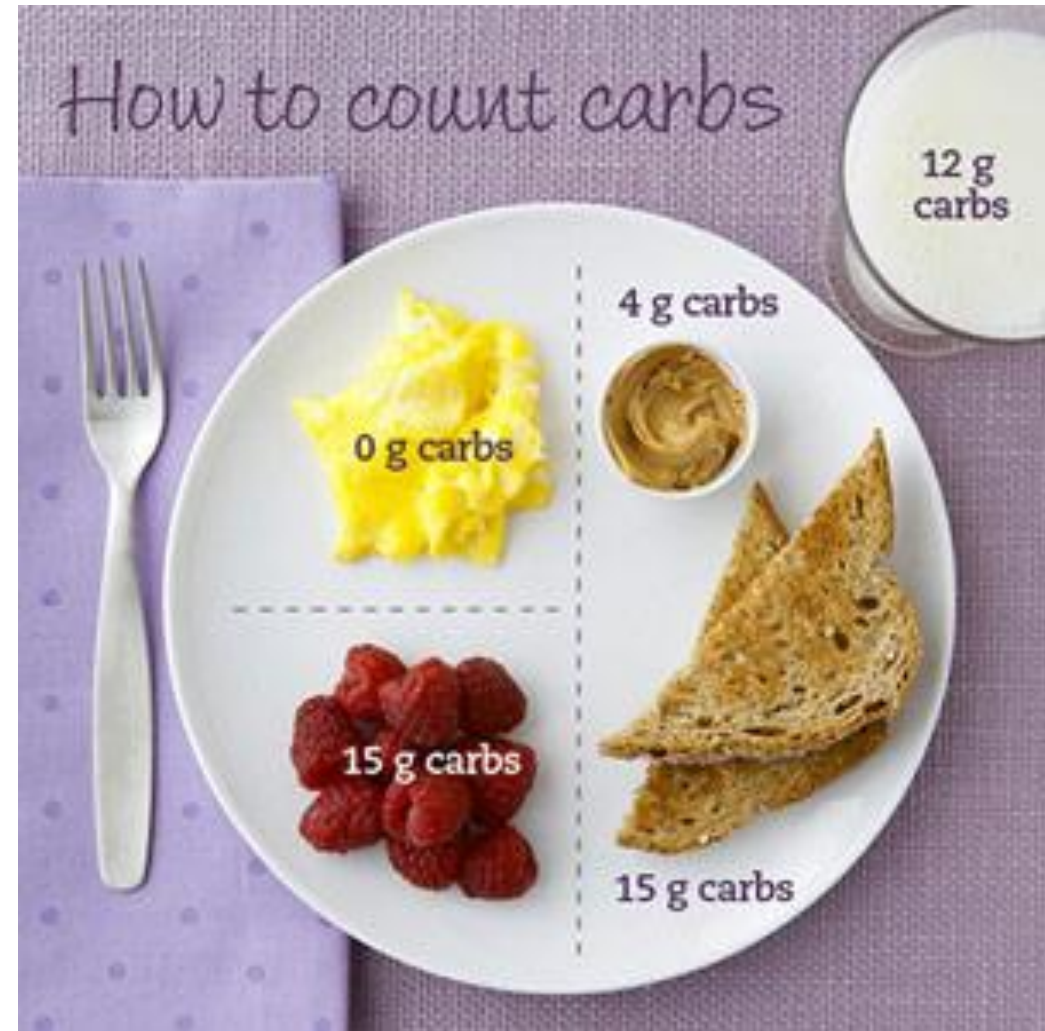
Using a smart phone, an app or a smart home device such as an Alexa or Google Home can help in finding nutritional content in food.



Nutrition Facts	
Serving Size 1 Cup (227g)	
Servings per Container About 4	
Amount per Serving	
Calories 160	Fat Cal 80
%Daily Value	
Total Fat 9g	14%
Saturated Fat 6g	30%
<i>Trans</i> Fat 0g	
Cholesterol 30mg	10%
Sodium 110mg	5%
Potassium 370mg	11%
Total Carbohydrate 12g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 8g	16%
Vitamin A 8%	• Vitamin C 0%
Calcium 30%	• Iron 0%
Vitamin D 25%	

What Carb Counting Looks Like:

- ▶ Start counting your carbohydrates.
- ▶ It is recommended to eat:
 - ▶ 45 grams of carbs at EACH meal.
 - ▶ 15-30 grams of carbs at EACH snack.
 - ▶ A pregnant woman should eat at least 175 grams of carbs each day, eating 3 meals per day and 2 to 3 snacks per day.
 - ▶ Every meal and snack should include a carbohydrate and a protein.





Eating Carbohydrates

▶ KEEP EATING HEALTHY CARBS

- ▶ Choose healthy carbs such as: fruits, vegetables, beans, whole grains and whole wheat.
- ▶ Try to avoid processed foods and white products such as white rice and white bread.
- ▶ Try not to eat more than a ½ cup- 1cup of pasta or rice in any meal, or more than a ½ of a large potato.
- ▶ Cereal, regardless if it's "healthy" or not, will typically cause elevations in blood sugar. This might be a food you want to avoid during pregnancy.
- ▶ Try to avoid fruit juices, sugary drinks, candy, cakes, cookies, added sugar and processed sugary snacks.

Proteins

- ▶ Protein is very important to our body's function. It slows down the rate we digest sugar and helps to maintain a healthy blood sugar during digestion.
- ▶ Protein is highly recommended at each meal and snack. Pregnant women should eat 71 grams of protein per day. If you are pregnant with twins, you should have an additional 50 grams of protein daily.

Protein	Amount
3 oz. of Fish	19-26 grams of protein
4 oz. of Chicken	30 grams of protein
4 oz. of Beef	33 grams of protein
One Egg	6 grams of protein
Cottage Cheese ½ cup	12 grams of protein
Greek Yogurt	13-18 grams of protein
8 oz. of Milk	8 grams of protein
Protein nut bar	5-10 grams of protein
1 TBS of Peanut Butter	4 grams of protein
½ cup Lentils	7 grams of protein
2 TBSP of Chia Seeds	6 grams of protein



Some of the foods listed above may contain carbohydrates too.



Here are examples of 45-gram carbohydrate meals with a protein.

Make sure to add extra veggies to each meal. Ideally, each meal will include a $\frac{1}{2}$ a plate of veggies.





Snack ideas

- ▶ Eating 6 times a day can be challenging. Here are some ideas to get you started.
- ▶ Each of the snacks below contains 15-30 grams of carbohydrates and a protein or healthy fat.

1 English Muffin with Peanut Butter

1 Large Apple with Peanut Butter

Fruit with String Cheese

Crackers and Cheese Slices

Trail Mix

3 cups of popcorn with $\frac{1}{4}$ Cup of Nuts

Whole Wheat Avocado Toast

Greek Yogurt Smoothie (watch carb count)

Small Whole Wheat Chicken and Veggie Wrap

1-2 Cups of Melon and $\frac{1}{2}$ Cup of Cottage Cheese

2 Graham Crackers w/ Peanut Butter and Milk

Crackers, $\frac{1}{2}$ Cup of Cottage Cheese, and Tomatoes

Wheat Toast with Cream Cheese and Cucumbers

Greek yogurt, berries and nuts

$\frac{1}{2}$ Pita with Hummus and Veggies and Nuts

Egg Salad Sandwich or Peanut Butter Sandwich

1 Protein Bar and 1 Cup of Milk

A routine is helpful!

- ▶ To keep blood sugar steady throughout the day, it is best to eat every 2-3 hours.
- ▶ Eating 3 meals a day with snacks in between can help prevent your blood sugar from dropping too low or becoming too high.
- ▶ A bedtime snack is important to make sure you have enough food to last while you are sleeping.
- ▶ Routine is important and will help regulate your blood sugars. Eat well and try to get good sleep each night.





Sugar Substitutes

Sugar substitutes are found in sugar free or diet foods and drinks. They are a sweetener added to foods and drinks that do not elevate blood sugars. Below are examples of sweeteners that have been approved in moderation during pregnancy.

- ▶ Examples: Splenda, Equal, Stevia, Sunett, NutraSweet, Newtame
- ▶ Contact MotherToBaby if you are unsure if a sweetener or other item is safe during pregnancy.
- ▶ MotherToBaby is a helpful resource to find out the safety of medications, chemicals and substances while pregnant and breastfeeding.
- ▶ [MotherToBaby Link](#)

Exercise and Pregnancy

- ▶ 150 minutes of exercise per week is encouraged. Examples are walking, cleaning, dancing, yoga, and exercise programs for pregnancy.
- ▶ You should not exercise if you are on bedrest, or you are on restrictions.
- ▶ Always consult your doctor before starting an exercise program.
- ▶ Schedule walks into your day. Walking for 10 minutes after eating will help decrease your blood sugars.
- ▶ Do not lift heavy weights or engage in activities where you can lose your balance.
- ▶ Always stay hydrated. If you are on medication for your diabetes, it's best to exercise after a meal or snack. Do not exercise if your blood sugar is less than 100. Keep a snack and your meter close by for symptoms of hypoglycemia.



Medications for Diabetes During Pregnancy and After Delivery

Metformin and Insulin are medications commonly used for diabetes during pregnancy. If medications are needed, our specialists will help you through this process.

Medication adjustments are made frequently, sometimes weekly, to keep up with the increase in insulin resistance that happens during pregnancy.

Many times, people who are on metformin will need to switch to insulin as the pregnancy progresses.

If you have type 2 diabetes, the need for postpartum medications will be assessed after delivery. It is important to have a plan before leaving the hospital after delivery.



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Daily Fetal Kick Counts

Do fetal kick counts daily starting at 28 weeks gestation

Do a fetal kick count each day.

Pick a time, each day, when your baby is most active. Monitor the movements around this same time each day.

Have something to eat and drink before starting.

Look at the clock and starting counting movements.

Make sure you feel 10 kicks in one hour. You can stop counting after 10 kicks are felt.

If you DO NOT feel 10 kicks in the hour contact your doctor right away.

Management During Your Labor and Delivery Stay

- ▶ Every laboring is patient is different. It is a great idea to discuss your labor plan with your OB provider.
- ▶ If you are on insulin, and you have a scheduled cesarean section or induction, please talk with MFM about your medication dosages leading up to your scheduled date.
- ▶ Your sugars will be checked in labor. Goal for blood sugars in labor is ~70-125. This decreases the risk for your baby to have low blood sugars and low oxygen levels (hypoxemia) at birth.
- ▶ After delivery, the newborn nurse will monitor you baby's blood sugars per hospital protocol.

Follow Up Care After Delivery

- ▶ Make sure you know if medication will be needed after you deliver. If so, make sure you know the type of medication and dosages. This should be discussed prior to leaving the hospital after delivery.
- ▶ If you need insulin after delivery, the dosages will be much less than during pregnancy.
- ▶ Breastfeeding is recommended and lactation nurses are available in the hospital to help you get started.
- ▶ Patients with Type 2 diabetes should resume care with their endocrinologist or primary care provider within a couple weeks after delivery, or sooner if needed.





Thank You!

Please reach out to our staff if you have any questions or concerns.

If you have concerns after hours, please call your OB provider and follow the prompts to reach a provider after hours.

- Below is our website. You will find our locations, phone numbers and other helpful information.
- [Maternal-Fetal Medicine Specialists of the Mountain States | Pediatrix \(mednax.com\)](https://www.mednax.com)