



Women's Health for Life

***Nutrition for a Woman with
Gestational Diabetes***

Gestational Diabetes

Your blood test shows you have gestational diabetes or glucose intolerance. It is important to both you and your baby to plan your meals. You need to take special care not to overeat, as it will affect your blood sugars. Foods high in carbohydrates have the biggest impact on your blood sugar levels.

General Guidelines:

- Eat your meals and snacks at regular times.
- Eat meals 2-3 hours apart. Smaller frequent meals will be more comfortable with your shrinking stomach area.
- Do not skip meals. Eat about the same time each day. Plan meals and snacks for when you are at work, shopping, or visiting friends.
- Look at the Nutrition Facts label on food products for serving size and total carbohydrates per serving.
- Eat healthy carbohydrates. Snack foods and high sugary foods are generally high in simple carbohydrates and are low in nutrients.
- Watch portion sizes to avoid eating too much food.
- Be physically active with your healthcare provider's permission.
- Exercise with care. Some examples are walking, swimming or supervised prenatal exercise classes.
- Eat a variety of foods. Often it is challenging to get 3 servings of fruit without using fruit juice.
- For pregnant women, nursing mothers, and children: **Do not** eat shark, swordfish, king mackerel, or tilefish.

Carbohydrates are the body's preferred source of energy. About half of your total calories should come from carbohydrates. The body eventually breaks down all carbohydrates to glucose. It is important to look at the total carbohydrates in the diet rather than just the sugars.

Amazing as it sounds, you are not eating for two. We add only 200 calories per day for the first part of the pregnancy. For the last half of the pregnancy we add 300 calories per day.

Many women with gestational diabetes can control their blood sugar through diet and exercise.

High blood sugars will result when large amounts of food are eaten at any one time. Smaller meals are best to help keep the blood sugar in a normal range.

Keep calorie intake between 2000-2400 calories per day, unless directed otherwise by your healthcare team. The calories you need each day depend on your age, your weight before pregnancy, and your activity level.

A healthy diet is good for you and your baby.

- **Proteins** are needed to build and rebuild tissues each day. They are found mostly in meat, eggs, chicken, turkey, fish, tofu, cheese, and beans. Milk has substantial protein, and is counted on for the calcium intake too. You should eat 60-75g protein each day.
- **Carbohydrates** are the body's preferred energy source. Use high fiber sources such as whole grains, fruits, and vegetables to help prevent constipation. Low fiber carbohydrates are sugars, sodas, snack foods and chips. Eat 9 higher fiber servings per day.

- **Fiber:** You should eat up to 25g fiber each day. Be sure to drink enough fluids when increasing fiber intake.
- **Fats** are an important source of energy and vitamins but should be eaten in small amounts, as they are high in calories. Use less saturated or hard fats found in fatty meats and whole milk products.
- **Calcium** is critical for building your baby's bones and retaining the calcium for your own bones. Get between 1200-1500 mg per day. An eight ounce glass of milk is 300 mg. or 30% calcium. All nutrition labels will provide information on the % of calcium in each serving. 100% = 1000 mg, so you will need 120-150% each day to meet your goal.
- **Iron** is needed for the blood to carry oxygen throughout your body and for your baby. It is difficult to get enough iron from the diet, so your doctor may prescribe a prenatal vitamin. Iron is found in lean red meat, dried beans, and dark green vegetables.
- **Folic acid**, or folate, is a vitamin that is recommended as a supplement even before you get pregnant. It helps to prevent neural tube defects. Folic acid is also needed to produce extra blood for you and your baby. It is found in leafy green vegetables, such as broccoli and asparagus, lean beef, oranges, and lentils. Eat at least 5 servings of fruits and vegetables per day.
- **Fluids** are essential for making new cells and maintaining blood volume. Drink at least 8 cups of fluids a day, including water, and decaffeinated coffee and tea.

Food to avoid for pregnant and nursing women:

Fish

Bigger fish eat smaller fish, so mercury is more concentrated in big fish. Mercury cannot be removed by cooking.

- **Saltwater Fish:** According to the FDA, pregnant women, nursing women, young children, and women considering pregnancy should not eat shark, swordfish, king mackerel, or tilefish. These fish could contain enough mercury to harm an infant's nervous system.

- **Freshwater Fish:**

For a listing of mercury levels of fish go to:

- * Food and Drug Administration's Food Safety
Website: www.cfsan.fda.gov (Under the Program Areas heading, click on Seafood.)
- * Environmental Protection Agency's Fish Advisory
Website: www.epa.gov/ost/fish

Pregnant women can safely eat up to 12 ounces of other types of cooked fish each week. It is important to eat a variety of other kinds of fish. These fish include: shellfish, canned chunk light tuna fish, smaller ocean fish or farm-raised fish (haddock, sole, and scrod, for example). Just pick a variety of different species.

Fruit and Vegetable Juice

Unpasteurized juices that have not had ultraviolet light treatment may contain E Coli bacteria. E Coli bacteria can be harmful to small children and pregnant women. The most common

unpasteurized juice is seasonal cider. Do not drink unpasteurized juices that have not had ultraviolet or other bacteria killing treatments. Pasteurized juices will be labeled as such.

Commercial juice processors who don't pasteurize their products must take germ-killing steps. If ultraviolet light treatment has been performed, or if the peels of citrus fruits have been treated, these juices are safe.

Listeriosis

The FDA and USDA say that pregnant women, older people, and those with weakened immune systems should avoid foods that contain Listeria. Listeria may cross the placenta and infect unborn babies. The infection is called Listeriosis. The foods listed below may contain Listeria. Listeria is destroyed when foods are heated to steaming hot, so heating these foods will make them safe.

- ◆ Hot dogs or processed luncheon meats (i.e. bologna or salami or any meat from the deli designed as ready to eat). Heating them until steaming hot will kill the Listeria.
- ◆ Raw (unpasteurized) milk or foods that contain raw milk may contain Listeria.
- ◆ Soft cheeses made with unpasteurized or raw milk may contain Listeria. Soft cheeses include feta, brie, Camembert, blue-veigned cheeses, and Mexican-style cheeses such as queso blanco fresco. Hard cheeses, semi-soft cheeses such as mozzarella, pasteurized processed cheese, cream cheese and cottage cheese are okay.
- ◆ Store bought refrigerated pates or meat spread may contain Listeria. Canned or shelf-stable pates and meat spreads may be eaten.

- ◆ Refrigerated smoked seafood is not safe unless it has been heated to steaming. This includes smoked salmon, trout, whitefish, cod, tuna, or mackerel. They are most often labeled as “nova-style”, “lox”, “kippered”, “smoked”, or “jerky” and are found in the refrigerator section or deli counter. Canned or shelf-stable smoked seafood is safe.

Eggs

- Keep eggs refrigerated.
- Cook eggs until yolks are firm
- Cook foods containing eggs thoroughly.

** For more Food Safety tips, go to page 16. **

Dawn Phenomenon

There is a common question that many patients have asked. Why do I go to bed with a normal blood sugar and the next morning my blood sugar is high before breakfast? I did not eat anything all night! What is happening?

Everyone, even people without diabetes, may have some higher blood sugars in the morning. This is called the Dawn Phenomenon. It is a natural part of the way our body works. Our bodies use stored energy while we sleep. Remember, our heart is beating, our brain is working and even our stomach and intestinal system is working. Most of this energy comes from carbohydrates stored in the liver as glucose. Proteins are also stored and can be converted to glucose when our bodies need more energy.

Overnight, our bodies release certain hormones that cause an increase in insulin resistance. This causes our blood sugar to rise in the morning even though you have not eaten during the night. You can eat a small snack of carbohydrates and protein in the evening to help keep your blood sugar from changing too much during the sleeping hours.

Eating breakfast will help you get adequate nutrition for the day and help keep your blood sugar from getting too high or too low first thing in the morning.

Reading Labels to Control Blood Sugar

- Carbohydrate (carb) is a broad category and includes starch, sugars, and fiber.
- Carbs are found in many food groups: grains, fruits, milk, and sweets.

Subtract fiber from total carb.

$$22\text{g total carb} - 4\text{g fiber} = 18\text{g}$$

Each 15g counts as 1 carb choice.

$$18\text{g to }15\text{g} = 1\text{ carb}$$

Serving Sizes and individual daily needs may vary from person to person. You may need from 150g to 250g per day.

| Nutrition Facts | |
|---|------------------------------|
| Serving Size 1 cup (30g) | |
| Servings Per Container about 10 | |
| Amount Per Serving | |
| Calories 100 | Calories From Fat 10 |
| % Daily Value* | |
| Total Fat 1g | 2% |
| Saturated Fat 0g | 0% |
| Cholesterol 0mg | 0% |
| Sodium 240mg | 10% |
| Total Carbohydrate 22g | 7% |
| Dietary Fiber 4g | 13% |
| Sugars 4g | |
| Protein 4g | |
| Vitamin A | 15% |
| Vitamin C | 0% |
| Calcium | 4% |
| Iron | 40% |
| * Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs: | |
| | Calories: 2,000 2,500 |
| Total Fat | Less than 65g 80g |
| Sat Fat | Less than 20g 25g |
| Cholesterol | Less than 300mg 300mg |
| Sodium | Less than 2,400mg 2,400mg |
| Total Carbohydrate | 300g 375g |
| Fiber | 25g 30g |
| Calories per gram: | |
| Fat 9 | * Carbohydrate 4 * Protein 4 |

Your Own Menu

Make copies of this page and design a menu with the foods you like to eat.

Breakfast:

2 starch/grain = 30g _____

1 protein _____

1 dairy = 15g _____

1 fat _____

Total Carbohydrates = 45g

Morning Snack:

1 fruit = 15g _____

1 protein _____

Total Carbohydrates = 15g

Lunch:

2 grain/starch = 30g _____

2 protein _____

1 vegetable _____

1 dairy = 15g _____

1 fat _____

Total Carbohydrates = 45g

Afternoon Snack:

1 grain/starch = 15g _____

1 fruit = 15g _____

Total Carbohydrates = 30g

Dinner:

2 grain/starch = 30g _____

3 protein _____

1-2 vegetables _____

1 dairy = 15g _____

1 fruit = 15g _____

2 fats _____

(1 optional) _____

Total Carbohydrates = 60g

Evening Snack:

1 grain/starch = 15g _____

1 dairy = 15g _____

1 protein _____

Total Carbohydrates = 30g

Daily Totals = ~225g carbohydrate, 2,000 calories

Choice Samples:

| Grains & Starches | Amount (grams) | Carbohydrates |
|------------------------------------|-----------------------|----------------------|
| Bread | 1 slice | 15g |
| English Muffin | 1 whole | 30g |
| Hamburg Roll | 1 whole | 30g |
| Cereal | ¾ - 1 cup | 15g |
| Rice, Pasta | ⅓ c. cooked | 15g |
| Beans, Lentils (plus 1 protein) | ½ c. cooked | 15g |
| Graham Crackers | 3 squares | 15g |
| Saltines | 6 crackers | 15g |
| Popped Corn | 3 cups | 15g |
| Corn, Peas | ½ cup | 15g |
| Winter Squash | 1 cup | 15g |
| Mashed, Baked Potatoes | ½ cup | 15g |

| Fruit | Amount (grams) | Carbohydrates |
|--|-----------------------|----------------------|
| Orange, Apple | 1 small | 15g |
| Banana, Nectarine, Kiwi | 1 small | 15g |
| Grapes, Cherries, Raisins | 12 ea. or 2 TBS | 15g |
| Melon, Watermelon, Cantaloupe, Strawberries | 1 cup | 15g |

| Dairy | Amount (grams) | Carbohydrates |
|----------------------------------|-----------------------|----------------------|
| Milk (skim, 1%, 2%, or whole) | 1 cup | 15g |
| No Sugar Added Frozen Yogurt | ½ cup | 15g |
| Milk, soy | 1 cup | 15g |
| Yogurt, lite | ½ cup | 15g |
| Yogurt, fruited | ¾ - 1 cup | 30-45g |
| Yogurt, plain | 1 cup | 15g |
| Pudding, Sugar Free | ½ cup | 15g |

| Combination Foods | Amount (grams) | Carbohydrates |
|--------------------------|-----------------------|----------------------|
| Cream Soups | 1 cup | 15g |
| Macaroni and cheese | 1 cup | 30g |
| Sub Sandwich | 6" | 45g |
| Pizza, thin crust | 1 slice, medium | 15g |
| Pizza, thick crust | 1 slice, medium | 30g |
| Hamburger with bun | 1 burger | 30g |
| Burrito, bean | 1 burrito | 45g |

Sample Menus

Breakfast:

2 starch/grain 2 slices whole wheat toast **or**
1 English muffin
1 protein 1 egg **or** 1 Tbs. peanut butter
1 dairy 1 cup low fat or skim milk
1 fat 1 tsp. margarine

Morning Snack:

1 fruit 1 apple **or** 1 peach **or** ½ banana, sliced
1 protein 1 ounce cheddar cheese (low fat) **or**
¼ cup cottage cheese

Lunch:

2 grain/starch 2 slices whole wheat bread
2 protein 2 ounces sliced home-cooked turkey **or**
2 ounces sliced roast beef
1 vegetable lettuce and tomato slices **or** baby carrots
1 dairy 1 cup low fat or skim milk
1 fat 1 tsp. mayonnaise **or** 2 tsp. light margarine

Afternoon Snack:

1 grain/starch 3 cups popcorn **or** 3 graham cracker squares
1 fruit 1 orange **or** ½ cup applesauce

Dinner:

2 grain/starch 1 medium baked potato **or** ⅔ cup brown rice
3 protein 3 ounces broiled chicken breast **or**
3 ounces stir-fry chicken/beef
1-2 vegetables 1 cup steamed broccoli and small dinner salad
or 1 cup mixed broccoli, peppers and carrots,
stir fried
1 dairy 1 cup low fat or skim milk
1 fruit 1 peach, sliced **or** 1 cup berries
2 fats (1 optional) 1 tsp. margarine for potato **or**
1 tsp. oil for stir fry
1 Tbs. salad dressing

Evening Snack:

1 grain/starch ½ English muffin **or** 6 saltines
1 dairy 1 cup low fat or skim milk
1 protein 1 Tbs. peanut butter **or**
1 oz. peanuts, almonds, or cashews

Shopping List:

Meal planning for a busy day requires buying the foods you need to eat ahead of time. Shopping lists will allow you to plan the nutritious meals and snacks that you will need each day. Lists will also help you avoid the empty calorie snacks such as chips, candy and soda that are so easy to find when you are hungry.

Read labels for the total grams carbohydrates and portion size.

Foods for Meals:

- ✓ **Protein:** Chicken, beef, turkey, peanut butter, fish, cheese, cottage cheese, nuts, tofu, eggs
- ✓ **Milk:** Milk, lite yogurt, and no sugar added frozen yogurt. Take calcium supplements, if you don't drink milk or eat yogurt each day.
- ✓ **Vegetables:** Look for lots of color which have more nutrients.
- ✓ **Fruits:** Fresh, frozen without added sugar, canned and drained. Look for pre-portioned fruits for travel or work. No juices.

Foods for Snacks:

- ✓ Plain cookies (no frosting, no chocolate chips), graham crackers, vanilla wafers, gingersnaps
- ✓ Small fruits or individual portioned fruits, drained.
- ✓ Crackers: Look at serving size for correct number for a 15g carbohydrate portion size.
- ✓ Cheese, especially low fat or reduced fat cheeses, cottage cheese.
- ✓ Peanut butter, nuts, eggs.

Shopping List:

Starch / Grains:

Fruits (Fresh and Canned):

applesauce - no corn syrup

Dairy Products:

Supplements:

Food Safety Guidelines

- ✓ Wash hands and work areas often.
- ✓ Do not use the same work surfaces for preparing raw and cooked foods without cleaning between use.
- ✓ Thaw foods in the refrigerator, **not on the counter**.
- ✓ Put foods in refrigerator soon after returning from shopping.
- ✓ Cook all foods to the proper temperature.
- ✓ Avoid all raw seafood.
- ✓ Do not leave food out over two hours.
- ✓ Put leftovers in small containers so they can cool quickly.
- ✓ Keep leftovers no longer than 2 days before using.
- ✓ Avoid raw milk.
- ✓ Avoid unpasteurized commercial fruit/vegetable juices or cider.

Dartmouth-Hitchcock Medical Center is a charitable organization and has a financial assistance policy.



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Revised / PE 9/14/05
RL: 8.8