

# The Glycemic Index and Choosing Carbohydrate Foods

Note to the Health Care Provider: Topics in this handout are discussed in Chapter 6 of the *American Dietetic Association Guide to Gestational Diabetes Mellitus* (1).

## **Counseling considerations for the use of the glycemic index (GI) in women with gestational diabetes mellitus include the following:**

- Teach the GI only to women who already understand carbohydrate counting and are interested in more intensive nutrition interventions.
- Teach the woman to include a variety of foods in her food plan to provide the nutrients essential to maternal tissues and fetal and placental development.
- Explain that the GI does not correlate with nutrient density or fiber content.
- Explain how the woman can evaluate the glycemic response to carbohydrate foods by monitoring postprandial blood glucose levels. The results can be used to determine which foods have the greatest effect on glycemic levels.

## **Reference**

1. Thomas AM, Gutierrez YM. Medical nutrition therapy. In: *American Dietetic Association Guide to Gestational Diabetes Mellitus*. Chicago, IL: American Dietetic Association; 2005:45-64.

## **Further Reading**

Sheard NF, Clark NG, Brand-Miller JC, et al. Dietary carbohydrate (amount and type) in the prevention and management of diabetes: a statement by the American Diabetes Association. *Diabetes Care*. 2004;27:2226-2271.

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Carbohydrates provide energy for your body. Foods with carbohydrates include milk, yogurt, starchy vegetables, fruits, bread, rice, cereal, pasta, cakes, candy, cookies, and drinks made with sugar.

When you have gestational diabetes, the types and amounts of carbohydrate foods that you eat affect your blood glucose level. You may want to use the glycemic index (GI) to help choose carbohydrate foods while keeping your blood glucose in the normal range.

Using the GI may seem hard at first, but practice will make it easier. Your registered dietitian (RD) will help you decide whether using the GI is right for you.

## What Is the Glycemic Index?

The GI ranks all carbohydrate foods according to how much they raise blood glucose levels. Each food is given a GI number. Often, foods are divided into three groups: low-GI foods, medium-GI foods, and high-GI foods.

## Low-GI Foods

Foods with low GIs take longer for your body to break down into glucose than foods with higher GIs. Your body absorbs low-GI foods slowly, so they raise your blood glucose level slowly.

Foods with a **low GI** have numbers less than 55. See Table 1 for examples.



| <b>Food</b>           | <b>Glycemic Index</b> |
|-----------------------|-----------------------|
| Plain yogurt          | 14                    |
| Prunes                | 15                    |
| Most vegetables       | Less than 15          |
| Barley                | 25                    |
| Nuts                  | 25                    |
| Whole milk            | 30                    |
| Soy milk              | 30                    |
| Fat free milk         | 32                    |
| Chick peas, cooked    | 34                    |
| Fruit yogurt          | 36                    |
| Apple                 | 36                    |
| Tomato soup           | 38                    |
| Carrots, cooked       | 39                    |
| Apple juice           | 41                    |
| Spaghetti             | 41                    |
| Grapes                | 43                    |
| Baked beans           | 44                    |
| Macaroni              | 46                    |
| Old fashioned oatmeal | 49                    |
| Chocolate bar         | 49                    |
| Pumpnickel bread      | 49                    |
| Kidney beans          | 52                    |
| Pound cake            | 54                    |
| Sweet potatoes        | 54                    |

## Medium-GI Foods

Foods with a **medium GI** will raise your blood glucose more quickly than low-GI foods, but not as fast as high-GI foods. Medium-GI foods have numbers between 55 and 70. See Table 2.

| <b>Food</b>         | <b>Glycemic Index</b> |
|---------------------|-----------------------|
| Corn                | 55                    |
| Brown rice          | 55                    |
| White rice          | 56                    |
| Potato chips        | 56                    |
| Oatmeal cookies     | 57                    |
| Bran muffins        | 60                    |
| Cheese pizza        | 60                    |
| Hamburger buns      | 61                    |
| Ice cream           | 61                    |
| Regular sugar       | 65                    |
| Instant oatmeal     | 66                    |
| Croissants          | 67                    |
| Thin wheat crackers | 67                    |
| Rye bread           | 68                    |
| Whole wheat bread   | 69                    |



## High-GI Foods

Your body quickly breaks down high-GI foods into glucose. This means they raise your blood glucose level quickly.

Foods with a **high GI** have numbers higher than 70. See Table 3.

| <b>Table 3: Foods with a High Glycemic Index (GI &gt; 70)</b> |                       |
|---|-----------------------|
| <b>Food</b>   | <b>Glycemic Index</b> |
| White bread   | 71                    |
| Bagels, plain   | 72                    |
| Corn chips  | 72                    |
| Watermelon  | 72                    |
| Mashed potatoes   | 73                    |
| Honey   | 73                    |
| Puffed wheat cereal   | 74                    |
| Doughnuts   | 75                    |
| French fries  | 75                    |
| Vanilla-flavored wafers                                       | 77                    |
| Jelly beans   | 80                    |
| Pretzels  | 81                    |
| Rice cakes  | 82                    |
| Crispy rice cereal  | 82                    |
| Instant mashed potatoes                                       | 83                    |
| Baked potatoes  | 85                    |
| Instant rice  | 91                    |
| French bread  | 95                    |
| Parsnips  | 97                    |
| Dates   | 103                   |



## Tips for Guessing the Glycemic Index of a Food

Even if you can't look up a food's GI, you can still estimate whether that food has a low, medium, or high GI. Just ask these questions:



- **What form is the food in?** Is it whole, mashed, or juiced? Whole foods usually have a lower GI than mashed foods or juices.
- **Is the food ripe or overripe?** A very ripe food can have a higher GI than an less ripe food.
- **Is the food raw or cooked?** A food's GI is lower when it is raw and higher when it is cooked.
- **How much fiber or fat is in the food?** High-fiber and high-fat foods usually have a low GI.

## Beyond the Glycemic Index: Other Keys to a Healthy Eating Plan

The GI may tell you how quickly foods affect your blood glucose. However, you also need to consider other issues when planning what you eat.

Here some points to remember:

- **Choose foods that give you enough calories.** It is not healthy to eat only low-GI foods. They may not give you all the calories (energy) your baby needs to grow.
- **Eat plenty of foods that give you healthy nutrients, like vitamins, minerals, and fiber.** Not all low-GI foods are healthy foods. A candy bar has a lower GI than a slice of whole wheat bread. Why? Because the candy bar has a lot of fat in it, so your body breaks it down more slowly than the bread, which is low in fat. This does **not** mean the candy bar is the healthier choice!
- **Use the results from your glucose meter to find out which foods affect your blood glucose the most.** These results can be more helpful than the GI for keeping your blood glucose normal.
- **Always follow the advice of your RD to help you choose the right kinds of foods.**