Glycemic Index and Glycemic Load

Maintaining healthy blood sugar levels is very important for your overall health. Diabetes, prediabetes or insulin resistance, hypertension, heart disease, and many other chronic conditions are caused or worsened by poor blood sugar control. Not all foods have the same impact on blood sugar and insulin. The Glycemic Index (GI) and Glycemic Load (GL) are two concepts that can help you select foods for optimal blood sugar balance.

The **Glycemic Index (GI)** is a way to measure the impact of a specific food on blood sugar levels. The GI ranks carbohydrate-containing foods on a scale of 0 to 100 based on how quickly the foods raise blood sugar levels. The GI is a score of a food's impact on blood sugar based on laboratory studies when a specific portion size was eaten.

The **Glycemic Load (GL)** is calculated by multiplying a food's GI (as a percentage) by the number of net grams of carbohydrates (total carbohydrates minus fiber) in a meal or snack. The result is a score of how much that serving of food is likely to increase blood sugar levels. GL takes into account the GI score and the portion size someone is eating. **Because of this, GL is considered a more helpful measure compared to GI.**

Generally speaking, eating appropriate portions of foods lower in both GI and GL helps to stabilize blood sugar throughout the day. Foods are categorized as low, medium, and high as shown in the table below.

	Low	Medium	High
Glycemic Index	55 or less	59–69	70 or higher
Glycemic Load	10 or less	11–19	20 or higher

Tips for Blood Sugar Balance:

- While low-GL and low-GI foods are the best choices, most people will also eat some medium-GL and medium-GI foods. One important tip to remember is that **medium- and high- GL foods should be eaten with protein or fat,** both of which soften the effect of these foods on your blood sugar level.

- GI refers to the increase in blood sugar for a defined portion of a specific food. It does not take into account the actual portion of these foods eaten in real life. For example, watermelon is considered to be high-GI, but the average person eats a slice or two; therefore, the actual glycemic impact of watermelon is low and not concerning.

- There may be differences in how different individuals' blood sugar responds responds to low, medium, or high GI foods. For example, a relatively active person who does not have diabetes may experience a small increase in the blood sugar when a low GI food is eaten. In contrast, someone with prediabetes may experience comparatively higher blood sugars with the same low GI food. Checking your glucose levels regularly is the best way to figure out how specific foods affect your blood sugar.

Glycemic Index and Glycemic Load in the IFM Food Plans

All foods in IFM's Food Plans are low to medium GI and GL at the listed serving sizes. Foods in the Protein, Nuts & Seeds, Fats & Oils, Non-Starchy Vegetables, and Beverages, Spices, and Condiments categories have none or a very small amount of carbohydrate. High-GI and-GL foods are not recommended on a daily basis, as eating these frequently can result in blood sugar imbalances. The table on the following page shows approximate serving sizes for some of the most commonly recommended carbohydrate-containing foods in IFM's Food Plans.

Food	Serving Size	Glycemic Load	GL Category*
Vegetables (Starchy)			
Parsnip	½ cup	5	Low
Yam	½ medium	6	Low
Butternut squash (cubed)	1 cup	8	Low
Beets (cubed)	1 cup	9	Low
Plantain	⅓ cup	12	Medium
Legumes			
Black soybeans	½ cup	<1	Low
Hummus	⅓ cup	<1	Low
Green peas	½ cup	2	Low
Refried beans (vegetarian)	¼ cup	2	Low
Dried beans, lentils, peas	½ cup	4–5	Low
Bean soup	¾ cup	10	Low
Whole Grains			
Quinoa	½ cup	9	Low
Barley	⅓ cup	9	Low
Brown rice	⅓ cup	11	Medium
Oats (rolled)	½ cup	14	Medium
Fruit			
Blueberries	¾ cup	3	Low
Strawberries	1 ¼ cup	4	Low
Orange	1 small	5	Low
Apple	1 small	7	Low
Pear	1 small	8	Low
Pineapple	¾ cup	10	Low
Mango	½ small	11	Medium
Dairy & Alternatives			
Greek yogurt (unsweetened)	6 ounces	1	Low
Milk (cow's)	8 ounces	4	Low
Soy milk	8 ounces	7	Low

*GL category based on the listed serving size

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