

Your Free Glycemic Guide

GI vs GL — What the Difference Means for Your Blood Sugar

Includes:	GI vs GL explained in plain language
	The formula — how to calculate GL yourself
	20 foods with GI, GL and recommended portion sizes
	Starchy vegetables including roots and tropical staples
	Portion sizes in grams, ounces and fluid ounces
	Daily GL targets for diabetes management
From:	GlycoMeal.com — powered by USDA & Brand-Miller data

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■ Welcome to Your Free Glycemic Guide

Congratulations on taking a step toward smarter diabetes management through food. This guide explains two of the most important — and most misunderstood — concepts in diabetes nutrition: **Glycemic Index (GI)** and **Glycemic Load (GL)**.

Understanding the difference between them will change how you think about every meal. And once you understand GL, you will see exactly why GlycoMeal was built around it.

What this guide covers

- What Glycemic Index (GI) measures — and its important limitation
- What Glycemic Load (GL) measures — and why it tells the fuller story
- The simple formula for calculating GL yourself
- A reference table of 20 foods including Caribbean staples
- Portion sizes in grams, ounces and fluid ounces
- Daily GL targets for managing Type 2 diabetes
- How GlycoMeal uses this science to build your meal plans

A note on our data: All GI values in this guide come from the peer-reviewed *International Tables of Glycemic Index and Glycemic Load Values* (Atkinson, Foster-Powell & Brand-Miller, *Diabetes Care*, 2008) — the same published science that underlies the University of Sydney GI database. Macronutrient data is sourced from the USDA FoodData Central database.

■ Part 1 — Glycemic Index (GI)

What is the Glycemic Index?

The **Glycemic Index** is a scale from 0 to 100 that ranks carbohydrate-containing foods by how quickly they raise blood glucose levels compared to pure glucose (which scores 100 as the reference point).

Foods are tested by giving 50 grams of available carbohydrate to a group of people and measuring their blood sugar response over two hours. The result is compared to the response from 50g of pure glucose.

LOW GI 55 or below	MEDIUM GI 56 to 69	HIGH GI 70 or above
Slow release Gentle blood sugar rise Ideal for diabetes	Moderate release Acceptable in balanced meals	Fast release Rapid blood sugar spike Limit or avoid

The Problem with GI Alone

Here is where many people go wrong. GI measures blood sugar response to **50 grams of carbohydrate from a food** — but that is not always a realistic portion. This creates a misleading picture for some foods.

The Watermelon Problem

Watermelon has a **HIGH GI of 76** — which sounds alarming for a diabetic. But to get 50g of carbohydrate from watermelon, you would need to eat **approximately 700g (25 oz) of watermelon in one sitting** — about 7 thick slices. A realistic serving of 150g (about 1.5 cups diced) contains only 11g of carbohydrate and has a **LOW Glycemic Load of just 8**. GI alone made watermelon look dangerous. GL tells the true story.

This is why **Glycemic Load was developed** — to account for both the quality AND the quantity of carbohydrates in a realistic serving.

■ Part 2 — Glycemic Load (GL)

What is Glycemic Load?

Glycemic Load combines two things into one number: how quickly a food raises blood sugar (the GI) AND how much available carbohydrate is actually in your serving. It gives you a single, practical number for every meal.

The Formula

$$GL = (GI \times \text{Available Carbohydrates in grams}) \div 100$$

Available carbohydrates = Total carbohydrates – Dietary fiber. Fiber slows digestion and does not significantly raise blood sugar, so it is subtracted from the total before calculating GL.

Worked Example — Brown Rice

Step	Calculation	Value
1. GI of brown rice	From published tables	68
2. Serving size	Standard cooked serving	150g (5.3 oz)
3. Total carbs in 150g	USDA data: 77.2g per 100g → × 1.5	115.8g
4. Fiber in 150g	USDA data: 3.5g per 100g → × 1.5	5.25g
5. Available carbs	115.8 – 5.25	110.5g
6. GL calculation	$(68 \times 110.5) \div 100$	GL = 75
7. Classification	GL over 20 = High GL	■■ High — keep portion smaller

Notice: brown rice has a moderate GI of 68 but a HIGH GL of 75 for a standard serving — because rice is carbohydrate-dense. This is why portion control with rice is so important for people with diabetes. A smaller portion of 75g (half cup cooked) would give GL of approximately 38 — still high but more manageable.

GL Classification Scale

LOW GL 10 or below	MEDIUM GL 11 to 19	HIGH GL 20 or above
Minimal blood sugar impact Ideal choice	Moderate impact Acceptable in balanced meal	Significant impact Use carefully, smaller portions

Daily GL Targets

Target Group	Daily GL Target	Notes
Type 2 Diabetes management	80 to 100	Standard guideline — aim to stay under 100
Prediabetes / prevention	100 to 120	Lower is better — reduce gradually

General healthy eating	Under 120	Anything under 120 considered healthy
Low-GL therapeutic diet	Under 80	Sometimes recommended by dietitians

Always follow the specific targets set by your healthcare provider or registered dietitian. These are general guidelines only.

■ Part 3 — Food Reference Table

The table below shows GI values, GL per standard serving, and recommended portion sizes for 20 common foods including Caribbean staples. GL is calculated using the formula above with USDA macronutrient data. Portions are given in grams, ounces and fluid ounces (for liquids).

Colour coding: **green = low GL**, **yellow = medium GL**, **red/orange = high GL**. Remember: GL is per the standard portion listed — smaller portions always give lower GL.

Food	Std Portion	GI	GL	GL Level	Notes
GRAINS & STARCHES					
White rice (cooked)	150g (5.3 oz)	73	27	■ HIGH	High — limit to ½ cup cooked
Brown rice (cooked)	150g (5.3 oz)	68	19	■ MED	Medium — ½ cup cooked max
White pasta (cooked)	180g (6.3 oz)	49	21	■ HIGH	Medium — al dente lowers GI
Whole wheat pasta (cooked)	180g (6.3 oz)	42	15	■ MED	Medium — better choice
White bread	30g (1.1 oz (1 slice))	75	10	■ LOW	Low-medium — 1 slice only
Wholegrain bread	30g (1.1 oz (1 slice))	53	6	■ LOW	Low — preferred choice
STARCHY VEGETABLES & ROOTS					
Oats — rolled (cooked)	240g (8.5 oz / 1 cup)	55	15	■ MED	Medium — steel-cut oats lower at GI 42
Quinoa (cooked)	185g (6.5 oz / 1 cup)	53	18	■ MED	Medium — higher protein than most grains
Irish potato (boiled)	150g (5.3 oz)	78	18	■ MED	Medium — cooling increases resistant starch
Sweet potato (boiled)	150g (5.3 oz)	63	16	■ MED	Medium — better than Irish potato
Breadfruit (cooked)	150g (5.3 oz)	68	21	■ HIGH	High — moderate portions recommended
Green banana (boiled)	120g (4.2 oz)	38	9	■ LOW	Low — unripe banana significantly better than ripe
Dasheen / Taro (cooked)	150g (5.3 oz)	54	15	■ MED	Medium — widely eaten root vegetable
FRUITS					
Watermelon	150g (5.3 oz / 1.5 cups diced)	76	8	■ LOW	Low GL despite high GI — small portion
Orange (1 medium)	130g (4.6 oz)	43	5	■ LOW	Low — whole fruit, not juice
Orange juice	250g (8.5 fl oz / 1 cup)	50	13	■ MED	Medium — whole fruit far better
Strawberries	150g (5.3 oz / 1 cup)	40	3	■ LOW	Low — excellent choice
Blueberries	150g (5.3 oz / 1 cup)	53	10	■ LOW	Low — rich in antioxidants
Mango	120g (4.2 oz)	51	8	■ LOW	Low — limit to half a mango

LEGUMES					
Lentils (cooked)	180g (6.3 oz / ¾ cup)	29	6	■ LOW	Low — excellent diabetes food
Chickpeas (canned)	150g (5.3 oz / ¾ cup)	28	8	■ LOW	Low — very blood sugar friendly

GI source: Atkinson FS, Foster-Powell K, Brand-Miller JC. International tables of glycemic index and glycemic load values: 2008. Diabetes Care. 2008;31(12):2281-2283. Macronutrient data: USDA FoodData Central (fdc.nal.usda.gov).

■ Part 4 — Key Insights from the Table

• Orange juice vs whole orange

Orange juice (GL 13, medium) vs a whole orange (GL 5, low). The juice has the same GI but 2.5x the carbohydrates because it takes 3–4 oranges to make one glass and you lose the fiber. Always choose the whole fruit over juice.

• Watermelon — the GI trap

Watermelon has a high GI of 76 but a low GL of just 8 per 150g portion. GI alone would tell you to avoid it. GL tells you it is perfectly fine in a normal serving. This is the most common GI misconception.

• Green banana vs ripe banana

Unripe green bananas have a GI of 38 (low) compared to fully ripe bananas at GI 51–62. As a banana ripens, resistant starch converts to simple sugars, raising both GI and GL. For blood sugar management, choose less ripe bananas whenever possible — this applies anywhere in the world.

• Breadfruit — portion it carefully

Breadfruit (GL 21) crosses into the high GL zone at a standard 150g serving. This does not mean avoid it — it means portion it carefully. A 100g serving drops GL to approximately 14 (medium). The same principle applies to plantain and taro.

• Lentils and chickpeas are your best friends

Both have GI values under 30 and GL under 10 even for generous portions. They are high in fiber, protein and slow-release carbohydrates. Including them regularly is one of the most impactful dietary changes for blood sugar management.

• Pasta vs rice

Whole wheat pasta (GL 15) beats brown rice (GL 19) at equivalent portions, and both beat white rice (GL 27) significantly. Cooking al dente (firm) further reduces pasta's GI by slowing starch digestion.

• Sweet potato vs Irish potato

Sweet potato (GL 16) is modestly better than Irish potato (GL 18) and offers more vitamins and fiber. Both are reasonable choices in controlled portions — neither is off the table.

■ ■ Part 5 — Putting It Into Practice

5 Simple Rules to Lower Your Daily GL

- 1 Choose whole fruit over juice**
Juice removes fiber, concentrating the sugar. Whole fruit always has a lower GL.
- 2 Default to smaller grain portions**
Rice, pasta and bread are all high GL at large servings. Half the portion — half the GL.
- 3 Add legumes to every meal you can**
Lentils, chickpeas and beans are the most powerful GL-lowering foods available.
- 4 Let carbs cool before eating**
Cooled rice, pasta and potatoes develop resistant starch, which lowers their GI. This is why cold potato salad has a lower GI than hot boiled potato.
- 5 Pair high-GL foods with protein and fat**
Eating brown rice with salmon and vegetables slows carbohydrate absorption significantly, reducing the GL impact of the whole meal.

■ Track Your GL Automatically with GlycoMeal

Now that you understand GL, imagine having every meal automatically calculated for you. GlycoMeal does exactly that — using the same USDA and Brand-Miller data behind this guide.

Your free account includes 48 recipes with full GL tracking and a daily planner. Upgrade to Premium for 400 recipes, a 7-day weekly planner, and an auto-generated shopping list.

→ glycomeal.com/app/ — your free planner is waiting

Medical disclaimer: This guide is for educational purposes only and does not constitute medical advice. Glycemic responses vary between individuals based on food preparation, portion size, meal composition, physical activity and individual physiology. Always consult your healthcare provider or registered dietitian for personalised diabetes management advice.

GI data source: Atkinson FS, Foster-Powell K, Brand-Miller JC. Diabetes Care. 2008;31(12):2281. doi:10.2337/dc08-1239 | Macronutrients: USDA FoodData Central (fdc.nal.usda.gov) | GL formula: Brand-Miller et al. Diabetes Care. 2003;26(8):2261.

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