

The Complete Guide to Carbohydrates

Glycemic Index, Glycemic Load, and How to Structure Your Diet

Not all carbohydrates affect your blood sugar the same way. Understanding glycemic index and glycemic load helps explain why a bowl of rice and a bowl of watermelon can behave very differently in your body, and how to structure your meals — South Indian staples included — for steadier energy and better blood sugar control.

What Is Glycemic Index (GI)?

Glycemic Index ranks how quickly a food raises your blood sugar compared to pure glucose, on a scale of 0-100. It only measures how fast, not how much total carbohydrate you're eating.

- **Low GI:** 55 or below — slow, steady blood sugar rise
- **Medium GI:** 56-69 — moderate rise
- **High GI:** 70 or above — fast, sharp blood sugar spike

What Is Glycemic Load (GL)?

Glycemic Load accounts for both how fast a food raises blood sugar (GI) AND how much carbohydrate is in an actual serving. It's calculated as: **GL = (GI × grams of carbs per serving) ÷ 100**. This is why GL is often more useful in real life than GI alone.

- **Low GL:** 10 or below
- **Medium GL:** 11-19
- **High GL:** 20 or above

Example — GI vs GL in action: Watermelon has a high GI (~72), but a typical serving has very little actual carbohydrate, giving it a low GL (~4) — a normal portion doesn't spike blood sugar much. White rice also has a high GI (~73), but a typical serving carries far more carbs, giving it a high GL (~30+) — meaning it genuinely raises blood sugar more. Same GI range, very different real-world impact.

High-GI Foods (Including South Indian Staples)

Food	GI Value	Note
1. White Rice (cooked)	~73	A daily staple, but large portions significantly raise the glycemic load of a meal.
2. Idli (regular batter)	~70-77	Despite fermentation, the polished rice base keeps it in the high-GI range.
3. Poori	~80+	The combination of refined maida and frying spikes blood sugar quickly.
4. White Bread	~75	Refined flour digests and absorbs into the bloodstream very fast.
5. Boiled Potato	~78	One of the higher-GI vegetables commonly eaten across India.
6. Watermelon	~72	High GI, but low glycemic LOAD per serving — see the GI vs GL section below.

Low-GI Foods (Including South Indian Staples)

Food	GI Value	Note
1. Ragi (Finger Millet)	~54	A traditional low-GI grain and an easy swap for rice a few times a week.
2. Brown Rice	~50-55	Retains the fibre-rich bran layer, which slows glucose release.
3. Whole Wheat Roti	~45-50	A steadier carb option than white rice or bread for most meals.
4. Toor Dal / Legumes	~20-30	Among the lowest-GI foods that exist, plus high protein and fibre.
5. Oats	~55	A solid low-GI breakfast option, especially with fruit or nuts.
6. Sweet Potato	~50-55	Lower GI than regular potato, with more fibre and vitamin A.

How to Structure Your Diet

- Build most meals around low-to-medium GI complex carbs — ragi, brown rice, whole wheat, millets, and legumes — as your everyday base.
- Reserve high-GI simple carbs (white rice, poori, sugary items) for specific moments, like right before or after intense training, when fast energy is genuinely useful.
- Pair high-GI foods with protein, fat, or fibre to blunt their impact — white rice with dal, vegetables, and curd has a much gentler overall effect than rice alone.
- Swap gradually rather than all at once: try mixing brown rice into your regular rice, or having ragi dosa/mudde a few times a week instead of only idli or dosa made from polished rice.
- Choose whole fruit over juice, and boiled/roasted preparations over deep-fried ones — both lower the effective glycemic impact of a meal.

A Sample Low-GI South Indian Day

Meal	What to Eat	Why It Works
Breakfast	Ragi Dosa + Sambar + Chutney	Ragi lowers the GI compared to a regular rice dosa; sambar's dal adds protein and fibre.
Lunch	Brown Rice (or Rice + Millet Mix) + Sambar + Poriyal + Curd	Dal, vegetables, and curd all slow down the meal's overall glycemic impact.
Evening Snack	Roasted Chana or a Whole Fruit	Both are low-GI, fibre-rich options that keep energy steady.
Dinner	Whole Wheat Roti + Dal + Vegetable Curry	A lighter, steadier combination to close out the day.

Note: GI and GL values are approximate averages and can vary by ripeness, variety, cooking method, and what a food is eaten with. This guide is for general education, not medical or dietary prescription — consult a doctor or dietitian for advice specific to your needs, especially if you have diabetes or prediabetes.