NATURAL HEALTH
MEDICINE

Functional Nutrition & Naturopathy

Glycemic index

WHAT IS GLYCEMIX INDEX (GI)?

All carbohydrate foods behave differently in our bodies and the Glycemic Index (GI) is a way to differentiate the ranking of foods according to their effect on our blood sugar levels. High GI foods produce high levels of blood sugar and when your diet mainly consists of these foods, the body produces more insulin (the hormone which controls the movement of glucose in and out of your blood) compared to when you eat lower GI foods.

So the GI of a food is the measure of the blood glucose-raising potential of the carbohydrate content of a food compared to a reference food like pure glucose/sugar. These foods are given a number and classified as either low, moderate or high.

High GI = 70 to 100
Medium GI = 50 to 70
Low GI = below 50

WHAT IS THE GLYCEMIC LOAD (GL)?

Just to complicate matters GI is not the only thing that needs to be considered! When you eat responses to how your blood sugar levels behave in your body will also depend on how processed the food is, the fibre content in that food and what other types of foods you eat them with!

The glycemic load (GL) measures how certain foods impact blood sugar levels using the glycemic index and the number of carbohydrates in a meal. This takes into account the quality and quantity of carbohydrates that influence blood sugar control.

High GL = 20 +
Medium GL = 11 to 19
Low GL = 10 or less

WHY EAT A LOW GI/GL DIET?

Well, there are many beneficial effects on the body and diets low in carbohydrates and low glycemic index are effective in managing chronic diseases.

LOW GI FOODS:

- are able to balance blood glucose levels more effectively than in other diets and particularly in those with type 2 diabetes
- control appetite and delay hunger
- may help prevent heart disease, diabetes, obesity, hypoglycemia, hyperinsulinemia, chronic diseases
- may help maintain and lose weight

IN CONTRAST HIGH GI FOODS:

- can cause carbohydrate cravings and increase appetite
- cause significant fluctuations in blood sugar and insulin levels, which can cause a vicious cycle of overeating

EXAMPLES OF FOODS DEPENDING ON THEIR GI INDEX

	Low GI Foods (0-55)	Medium GI Foods (56-69)	High GI Foods (70+)
Grains	• Barley • Bulgur • Buckwheat • Steel cut oats • Rye bread (100%) • Sourdough bread • Soba noodles	• Couscous • Wholegrain bread • Pita bread • Pumpernickel bread • Quinoa	• Amaranth • White bread • Pasta • White rice
Vegetables	• Artichokes • Asparagus • Bean sprouts • Beans • Beet greens • Broccoli • Brussel Sprouts • Cabbage • Cauliflower • Celery • Collard • Cucumber • Daikon • Eggplant • Kale • Leeks • Lettuce • Mushrooms • Mustard Greens • Okra • Onions • Radishes • Raw Carrot • Red Peppers • Spinach • Squash • Sugar Snap Peas • Swiss Chard • Tomatoes • Watercress • Zucchini	• Corn • Beetroot • Pumpkin • Sweet potato	• Cooked Carrot • Parsnips • Potato • Swede • Sweet Corn • Turnips

	Low GI Foods (0-55)	Medium GI Foods (56-69)	High GI Foods (70+)
Fruit	• Apples • Berries • Cantaloup • Grapefruit • Grapes • Mango • Orange • Pear • Peach • Plum • Prunes	• Ripe Banana • Cherries • Kiwi • Pineapple • Raisins • Dates	• Overripe banana • Watermelon
Legumes and nuts	• Chickpeas • Kidney beans • Lentils • Black beans • Pinto beans • Nuts		• Broad beans
Dairy and dairy alternatives	• Full cream milk • Coconut milk • Almond milk • Oat milk • Greek yoghurt • Kefir		• Rice milk • Tofu
Processed foods	• Corn chips	• Bran muffins • Crossant • Pastry • Shortbread cookies	• Cookies • Lollies • Chips • Soft drinks • Fruit juices • Sweet snacks etc

LISTS OF COMMON FOODS

Fruit	GLYCEMIC INDEX	GLYCEMIC LOAD
Apples 120g	44	7
Apricots 60g	34	5
Bananas 120g	47	7
Banana, overripe	57	9
Dates, dried 60g	56	8
Figs, dried 90g	54	8
Grapefruit 250g	47	7
Grapes, green 300g	54	8
Grapes, black 300g	59	9
Mangos 120g	51	7
Orange 120g	48	7
Peach 120g	42	5
Pear 260g	33	5
Strawberries 120g	40	6
Prunes 70g	29	4
Vegetables		
Asparagus 100g	15	0.6
Broccoli 100g	15	0.5
Cabbage 100g	15	0.9
Carrot 80g	35	2
Green peas 80g	51	4
Leafy greens 100g	15	0.3
Mushroom 100g	36	1.9
Onion 100g	15	1.6
Potato, Desiree 450g	100	20
Potato, Nicola 450g	58	12
Parsnip 80g	97	10
Pumpkin 100g	65	4.5
Spinach 100g	15	0.3
Sweet potato 150g	70	22
Tomato 100g	30	1
Zucchini 100g	15	0.5
Other		
Meat	0	0
Olive oil	0	0
Honey 25g	61	12

Legumes and nuts	GLYCEMIC INDEX	GLYCEMIC LOAD
Chickpeas, canned 130g	35	5
Kidney beans, canned 160g	36	5
Lentils, canned 180g	42	6
Cannellini beans, canned 170g	31	5
Almonds 50g	15	1.9
Brazil nuts 50g	15	0.2
Cashews 50g	27	1
Peanuts 50g	10-14	1
Walnuts 50g	15	1.1
Grains		
Sourdough 1 slice	54	8
Sourdough rye 1 slice	48	7
White bread 1 slice	60-90	9-13
Dark rye bread 1 slice	53	8
Quinoa 50g	50-55	23
Buckwheat 150g	45-55	22
White rice 50g	75-80	34
Basmati rice 50g	57	26
Jasmine rice 50g	80	36
Brown rice 50g	70	30
Brown Doongara rice 50g	55	23
Rice crackers 25g	82	17
Pasta, white 180g	46	22
Pasta, white, boiled 20min 180g	58	26
Pasta, whole-meal 180g	42	17
Mung bean pasta 180g	42	19
Couscous 150g	65	9
Instant oat porridge 80g	87	17
Rolled oats 80g	50	10
Steel-cut oats 80g	48	10
Dairy and alternatives		
Full cream milk 550ml	30	3
Greek yoghurt 240g	12	1
Reduced-fat, fruit yoghurt	20-40	5-9
Almond milk	30	3.9
Soy milk 100ml	30-40	2-4
Rice milk 100g	92	29
Coconut milk 100ml	40	1.1
Oat milk 100ml	69	16
Butter 100g	14	0.1
Egg	0	0

CARBOHYDRATE SERVES

Keeping control of your carbohydrate intake can benefit some people with diabetes or people who are limiting their carbohydrate intake. It is a good way to achieve a consistent intake of carbohydrates and control portion sizes or match insulin to food intake. The amount of carbohydrates needed for each person is different so discuss with your practitioner to determine your optimal level.

The table below shows foods that contain approximately 15g of carbohydrates.

Grains	
1 slice of sourdough bread	1/2 cooked barley
1/3 cup cooked quinoa	2 tbsp of flour or corn flour
1/3 cup cooked white rice	1/3 cup cooked spaghetti or penne
1/3 cup cooked brown rice	1/4 cup raw rolled oats/porridge
1/3 cup of cooked couscous	
Milk and milk products	
300ml full cream milk	250g Greek yoghurt
220ml oat milk (Oatly Organic)	270ml soy milk (Bonsoy)
125ml rice milk	470ml almond milk (Nutty Bruce Unsweetened)
Legumes:	
1/2 cup baked beans	1/2 cup cooked/canned chickpeas
3/4 cup cooked/canned lentils	1/2 cup cooked/canned kidney beans
1/2 cup cooked/canned bean mix	
Starchy Vegetables:	*Nicola and Carisma potatoes have a lower GI
1 small-medium potato (120g)*	1/2 cup mashed potato/sweet potato
Small piece of sweet potato (110g)	1/2 cup sweet corn kernel
Dried fruit	
1 heaped tbsp of sultanas	6 dried apricots halves
Fruit juice	
200ml orange juice (with no added sugar)	
Fresh fruit	***Although melons have med-high GI they have a lower GI load in this portion size
1 med size fruit e.g. apple, pear, orange or peach	3 prunes or dates
1 small banana	1/2 cup grapes
2 smaller fruits e.g. mandarins, kiwifruits or nectarine	1 1/2 cup diced rockmelon, watermelon or honeydrew***
1/2 mango (140g serve)	1 cup of fresh fruit slad or cherries

References:
https://glycemic-index.net/
https://extension.oregonstate.edu/sites/default/files/documents/1/glycemicindex.pdf