



Eat Low-GI Foods.

CHALLENGE
 Avoid high-GI foods such as white bread and refined sugar.



Requirements to Complete this HEALTH CHALLENGE™

1. Read "What's glycemic index (GI)?" and "The importance of GI."
2. Each day, focus on foods that have a GI less than 80, including low-starch vegetables, most fresh fruits, whole grains, nuts, and legumes.
3. To complete the Challenge, you must eat primarily low-GI food for at least 22 days. Use your monthly Health Challenge™ Calendar to keep track.
4. Keep records of your completed Challenge in case your organization requires documentation.

What's glycemic index (GI)?

Glycemic index (GI) measures how fast and how much blood sugar rises after eating a carbohydrate food (e.g., grains, fruits, vegetables, sugar). White table sugar, white bread, and refined carbohydrates raise your blood sugar levels the fastest. These foods contribute to increased risk of heart attacks, diabetes, and obesity.

Some foods – like beans, whole grains, and non-starchy vegetables – release glucose slowly because they break down slowly. Glucose is what gives your body the energy to move, metabolize, and think. Eating low-GI foods provides a number of health benefits:

- Keeps energy levels in your body more constant
- Increases your body's sensitivity to insulin
- Helps prevent diabetes – or helps you manage it better if you already have it
- Reduces the risk of heart disease
- Reduces blood cholesterol levels
- Helps you feel full longer
- Helps you lose and control weight
- Increases physical endurance

How GI is determined

When researchers began testing how quickly specific foods like beets and oatmeal convert to glucose (blood sugar), they set a standard measure – how quickly will 50 grams of the particular food's carbohydrates turn to glucose in comparison to white table sugar or white bread. At first, when researchers wanted to determine how fast certain foods cause a rise in blood sugar levels they used table sugar as their base number (giving it a score of 100). But most people didn't like eating pure sugar, so researchers began using white bread as their base. White bread raises blood sugar levels about 70% as much as table sugar, but when it's used as the base, it's given a score of 100.

To convert a GI value...

From sugar to bread, divide by 0.7

From bread to sugar, multiply by 0.7

Today, table sugar and white bread are used almost interchangeably as a base for glycemic level research. It's important for you to know which was used as the base (sugar or white bread), because the GI numbers will differ. For example, pinto beans and plums have a GI of 55 if white bread is the base, but a GI of 39 if sugar is the base. Unfortunately, not all GIs identify what was used.

More than 600 foods have been tested to determine their GI, and researchers have found that not all carbohydrates are the same. For example, mashed potatoes have a GI of 119 (compared to white bread's 100). Brown rice, on the other hand, has a GI of 79 (again using white bread as the reference base), and cruciferous vegetables like broccoli, cabbage, and cauliflower have a GI of 20.



Glycemic Index (GI) Values

	Based on table sugar	Based on white bread
High	70 and above	100 and above
Medium	56-69	80-99
Low	55 or less	less than 80

Source: University of Sydney

Factors that affect the GI of a food include:

- **Physical form.** Foods that are highly processed, such as finely ground white flour, are absorbed much more quickly than a chunky grain such as sprouted or bulgur wheat.
- **Type of starch in the food.** Some starches are quickly absorbed by the body, such as potatoes. By comparison, the starch in sweet potatoes is broken down and absorbed more slowly. You can't tell by looking at a food what its GI will be.
- **Fiber content.** Foods that are higher in fiber generally have a lower GI. Fiber seems to slow the breakdown and digestion of carbohydrates, especially oat bran.
- **Fat and acid content of the food.** The higher the amount of fat or acid in a food, the lower the glycemic index.
- **Ripeness.** Riper fruits tend to have more sugar and less starch in them so they are absorbed more quickly.



It's pretty easy to eat low-GI foods:

- Choose a wide variety of non-starchy vegetables (e.g., peppers, greens, broccoli)
- Replace refined foods with whole-grain products
- Eat high-fiber fruits (e.g., cherries, grapefruit, apples, peaches)
- Eat more legumes (e.g., soybeans, lentils, pinto beans, navy beans)
- Use healthy fats – nuts, seeds, grains, fish, and liquid oils (olive, canola, soybean, etc.)

The importance of GI

When you eat low-GI foods, blood sugar levels are more stable and you are not as likely to get hungry so soon. On the other hand, high-GI foods cause the blood sugar (glucose) to rise too quickly and too high after a meal, which puts a large demand on the pancreas to produce insulin. Eating a lot of high-GI foods is linked to increased risk of both heart disease and diabetes and also thought to increase the risk for obesity.

Low-GI foods help keep blood sugar levels in the range desirable for good health. In the Nurses' Health Study, women who ate lower GI foods had only half the death rate from coronary heart disease as those women eating high-GI meals. In the Nurses' Health Study II, which followed more than 91,000 women for eight years, women who ate high-GI foods were 59% more likely to develop diabetes than women who ate low-GI foods.

To help prevent heart disease, diabetes, and obesity, the World Health Organization (WHO) and the Food and Agriculture Organization recommend the glycemic index should "be used to compare foods of similar composition within food groups" to help people eat low-GI foods. Some foods on the Australian market already show their GI rating on the nutrition information panel. In the future, other countries might require a food's GI to be listed on the nutrition panel.

Choose primarily low-GI foods

Eating a few high-GI foods occasionally is not a problem. But for best health, choose primarily unrefined, whole foods such as brown rice, beans, peas, apples, oranges, salads, veggie burgers, lentils, sprouted-wheat bread, steel-cut oats, nuts, and other low-GI foods.



Low-GI foods (Eat more of these)	High-GI foods (Eat less of these)
Brown rice, especially Basmati rice	White rice
Whole-grain bread, stone-ground or made from sprouted wheat	White bread, white dinner rolls
High-fiber vegetables (e.g., tomatoes, greens, cucumbers, summer squash)	Pastry, cookies, cake, and muffins – all made from white flour
High-fiber fruits (e.g., apples, oranges, pears, plums, cherries, berries)	Cranberry juice, sugar-sweetened canned fruit and drinks, fruit leather
Oatmeal, steel-cut oats, bran flakes	Refined and sweetened breakfast cereals
Nuts, nut butters, and seeds	Sugar, jams
Whole-grain pasta or pasta with soy added	Chips and snack foods
Legumes (e.g., peas, beans, lentils, soy), sweet potatoes	Potatoes (i.e., baked, French fries, hash browns)
Water, 100% juice (e.g., orange juice), low-fat milk, soymilk	Soft drinks

To learn more about GI, read: *Glycemic Index: What You Need to Know* at www.wellsource.info/wn/Glycemic-Index.pdf and visit this website: www.glycemicindex.com

Sources: *American Journal of Clinical Nutrition*; *Harvard School of Public Health*; *World Health Organization*; *University of Sydney*. 2010.



Eat Low-GI Foods.

Instructions

1. Post this calendar where you will see it daily (bathroom, kitchen, bedroom, etc.).
2. Record each day you choose primarily low-GI foods.
3. At the end of the month, total the number of days you ate low-GI foods. You must meet this goal at least 22 days during the month to complete the Challenge. Then keep up this practice for a lifetime of good health.
4. Keep this record for evidence of completion.

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MONTH:							HC = Health Challenge™ ex. min. = exercise minutes
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	Weight & weekly summary
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_____ Number of days this month I ate low-GI foods

_____ Number of days this month I got 30+ minutes of physical activity such as brisk walking



Other wellness projects completed this month:

Name _____ Date _____