

# Nutritional Strategies to Support Healthy Blood Glucose Levels and Promote Cardiovascular Health

## What is low glycemic eating and why is it important for me?

We are what we eat. A balanced plan for eating is important maintaining optimal health. Balanced means we eat appropriate amounts of protein, carbohydrates, fats, vitamins, minerals, and other food components.

To help maintain healthy blood glucose levels and reduce the incidence of accompanying health problems, follow a plan that is low in fat, less than 30% of total calories, high in complex carbohydrates, and rich in soluble fiber. Glycemic stability is important in keeping insulin levels in balance; when insulin levels are high, the extra energy produced is stored as fat. Also, foods which are high on the glycemic index can increase appetite, and contribute to carbohydrate craving, which can lead to overeating and subsequent weight gain.



levels in our blood stream convert blood sugar to energy and store extra energy as fat. This means when insulin levels are high you store more fat, when insulin levels are normal you burn fat more effectively.

## What is the glycemic index?

The glycemic index (GI) is a ranking of carbohydrates on a scale from 0 to 100 according to the extent to which they raise blood sugar levels after eating. Foods with a high GI are those which are rapidly digested and absorbed and result in marked fluctuations in blood sugar levels. Low-GI foods, by virtue of their slow digestion and absorption, produce gradual rises in blood sugar and insulin levels, and have proven benefits for health. Low GI diets have been shown to improve both glucose and lipid levels in people with diabetes (type 1 and type 2). They have benefits for weight control because they help control appetite and delay hunger. Low GI diets also reduce insulin levels and insulin resistance.

## What is Insulin?



Insulin is a hormone produced in the pancreas that has many roles in the body. Of key importance is its role in regulating fat metabolism and controlling blood sugar levels. Blood sugar is the basic fuel that is used by our cells to make energy. Optimally, the body keeps our blood sugar level stable in a fairly narrow range – not too low (hypoglycemia) and not too high (hyperglycemia) – to maintain balance. This glucose stability is important to prevent significant health problems such as Type 2 Diabetes, Obesity, and other serious health issues. Insulin responds to what we eat and the amount we eat. So, Insulin normally rises with each meal or snack we consume. When insulin levels are high from eating foods that are high glycemic index foods, our body responds by producing higher levels of insulin than it would if you ate low glycemic foods. High insulin

Recent studies from Harvard School of Public Health indicate that the risks of diseases such as type 2 diabetes and coronary heart disease are strongly related to the GI of the overall diet. In 1999, the World Health Organization (WHO) and Food and Agriculture Organization (FAO) recommended that people in industrialized countries base their diets on low-GI foods in order to prevent the most common diseases of affluence, such as coronary heart disease, diabetes and obesity. ([www.glycemicindex.com](http://www.glycemicindex.com))

## How do I eat to maintain optimal health using low glycemic foods?

Stay hydrated, water makes up 60% of the weight in the body; it helps to dilute and break down toxicity in the liver, stabilize the acid/base balance, and balances the nutrient intake with toxic waste



removal across the cell membrane. Replace saturated fats, which should be no more than 10% of total fat intake, with mono- and polyunsaturated fats. Monounsaturated fats, which are best for cooking, include oils such as olive, canola (grape seed), almond and sesame. Olive oil contains the highest amount of monounsaturates (73%), and is more stable at higher temperatures. Avocado, another source of monounsaturated fat, is rich in potassium, important in the regulation of heart rhythm and blood pressure. The consumption of good fats, along with a diet that is high in fiber is important for helping slow the rate of digestion, thereby improving carbohydrate and lipid metabolism and improving glycemic control. Eat frequent smaller meals, utilizing nutrient dense foods; protein is important, cold-water fish, such as salmon,



mackerel, and sardines are good choices, nuts and seeds such as walnuts, almonds, cashews, sesame, and pumpkin. Increase the amount of fresh whole vegetables, they are low on the glycemic index, rich in complex carbohydrates, and fiber, and contain pure water which is important for cellular hydration. Choose vegetables that are rich in color; they contain higher amounts of antioxidants and beta-carotenes. Dark leafy greens contain high amounts of chlorophyll, important in cleansing the blood of impurities, as well as building the blood with important nutrients, and inhibiting cellular damage. Sea vegetables, such as nori, dulse and kelp are rich in anti-microbial agents to protect the gut, and soluble fibers that remove bad fats. These dark leafy greens, including the sea vegetables contain significant amounts of omega-3 essential fatty acids. Other sources of omega-3 EFAs include flax seed, hemp seed, walnut, and cold-water fish. Omega-3s help regulate blood sugar levels, and keep hunger at bay, helping to reduce the risk of diabetes and obesity and accompanying complications such as arteriosclerosis.

HEALTHY FATS	PROTEINS	COMPLEX CARBOHYDRATES	
Cold-water fish: salmon, mackerel, sardines, tuna	Cold-water Fish	Apples	Green Peas, Squash - all varieties, Eggplant, Mushrooms
Olive Oil (Extra Virgin), Flaxseed Oil, Grape seed Oil, Sesame Oil	Lean Meats (Organic is best)	Berries and Cherries	Tomatoes
Nuts and nut butters: Almonds, Walnuts, Cashews	Eggs	Barley	Plain Yogurt
Seeds: Pumpkin, Sunflower, Sesame	Nuts	Grapefruit	Peppers: Red and Green
Avocado	Beans and Legumes	Legumes: Lentils, Beans, Peanuts, Chick-peas	Dark Leafy Greens: Collards, Kale, Spinach, Bok Choy
	Dairy	Nuts: Almonds, Walnuts, Soy nuts	Cabbage: Red and Green
		Oatmeal	Seaweed: Nori, Dulse, Kelp



## What other things can I do to support glucose levels and cardiovascular health?



Physical activity, such as walking is a good way to improve overall health. Resistance training helps to increase muscle mass while increasing metabolism. Both activities help to maintain even blood glucose levels, effectively reducing insulin resistance and decreasing insulin levels. Exercise allows you to burn instead of store fat. At least 30-minutes of exercise a day is recommended. Start slow beginning with 10-minute intervals and working up to 30-minutes. Make it a family activity.

