

CARBOHYDRATES - NOT ALL EQUAL

Carbohydrates are absorbed into the blood as glucose or sugar at varying rates. It was once thought that all simple carbohydrates (syrup, fruit, juice, honey, brown and white sugar) were quickly absorbed and produced a rapid rise in blood sugar levels. Similarly, we thought that complex carbohydrates (starches) were more slowly absorbed and had a less dramatic effect on blood sugar. We now know that this is not always the case. Different carbohydrate foods, whether simple or complex, affect blood sugar differently.

The insulin response

Rises in blood sugar cause a hormone, insulin, to be released into the blood. The higher the rise in blood sugar, the more insulin is released. The longer it stays high, the more insulin is needed. Insulin allows the sugar in the blood to move into the cells where it can be used as fuel. High insulin levels stimulate the appetite and can set off a chain of hormonal events leading to fatigue, irritability, and more hunger. In addition, high levels of insulin promote fat storage and raise cholesterol levels. Moderating the rise of blood sugar may help control appetite and fat storage, as well as help control reactive swings of low blood sugar or hypoglycemia.

Glycemic index

The glycemic index of a carbohydrate-containing food is a measure of how high blood sugar rises and how long it stays high after that food is eaten alone. For each food, this measurement is compared to the standard of white bread which has a glycemic index of 100. The list below shows the glycemic index values of some common foods. The numbers reflect average values from several studies.

A high glycemic index for a food means that the food causes blood sugar to rise in a way that demands more insulin. A high glycemic index, however, does not mean a food is "bad" To use this information to help control blood sugar levels, we suggest:

1. Listen to your body. How you feel and how your hunger is satisfied after eating certain foods is very important, regardless of the numbers.
2. Eat higher glycemic index foods along with other foods that contain a small amount of protein and/or fat. Protein and fat both have the effect of lowering the glycemic index of the meal.
3. Eat higher glycemic index foods along with lower glycemic index foods to reduce the insulin response. The glycemic index of a meal is essentially the average of the glycemic indices of the individual foods.
4. Include several lower glycemic index foods each day.

Glycemic Index of Common Foods

138%

Glucose

120-130%

Cornflakes

Honey

110-120%

Baked potato

Instant potatoes

100-110%

White bread

Whole wheat bread

Millet

Puffed wheat cereal

Plain crackers

90-100%

Shredded wheat cereal

Mashed potatoes

Raisins

Corn chips

80-90%

Brown rice

White rice

Sweet corn

Oatmeal

New potato

Banana

White table sugar

70-80%

All bran cereal

Oatmeal cookies

Sweet potato

Canned baked beans

Canned kidney beans

Orange juice

60-70%

European style pumpernickel bread

Spaghetti

Bulgur

Converted rice

Canned garbanzo beans

Green peas

Canned pinto beans

50-60%

Apple

Orange

Yogurt

40-50%

Dried kidney beans

Dried garbanzo beans

Apple juice

Milk

<40%

Barley

Dried lentils

Canned or dried soybeans

Fructose (GI of 26)

Peanuts (GI of 15)