MYRTUE Medical Center

Glycemic Index, Fiber and Diabetes

Dietary fiber comes from the indigestible part of a plant that provides the plant with its structure. There are two types of fiber: soluble and insoluble. Soluble fiber is found in fruits, vegetables, dry beans and peas and some whole grain cereals. Soluble fiber seems to help reduce the risk of heart disease and help control blood sugar. Insoluble fiber is found in whole grain foods, wheat bran, and in some vegetables. Insoluble fiber helps to reduce risk of certain cancers, aide in weight control, regulate the intestinal tract and help prevent diverticular disease. When you eat a food that is high in fiber, it is broken down slower and does not cause your blood sugar to rise as quickly as a food that is lower in fiber. The rate at which your body breaks down foods (mainly carbohydrates) is also called the Glycemic index.

What is the Glycemic Index (GI)?

The ***Glycemic index*** ranks foods on how quickly they affect our blood sugar levels. This index measures how much your blood sugar increases in the two or three hours after eating. **This does not change the fact that all Carbohydrates will raise your blood sugar; this is truly just talking about the rate the raise will occur.**

The Glycemic index is about foods high in carbohydrates. Foods high in fat or protein don't cause your blood sugar level to raise much. A lot of people still think that it is plain table sugar that people with diabetes need to avoid. The experts used to say that, but the Glycemic index shows that even complex carbohydrates, like baked potatoes, can be even worse.

Recent studies of large numbers of people with diabetes show that those who keep their blood sugar under tight control best avoid the complications that this disease can lead to. The experts agree that what works best for people with diabetes—and probably the rest of us as well—is regular exercise, little saturated fat, and a high-fiber diet. That is excellent advice—as far as it goes.

Many high-carbohydrate foods have high Glycemic indexes, and diabetics need to watch their portion sizes with these items. Other carbohydrates break down more slowly, releasing glucose gradually into our blood streams and are said to have lower Glycemic indexes.

Before the development of the Glycemic index beginning in 1981, scientists assumed that our body's absorbed and digested simple sugars quickly, producing rapid increases in our blood sugar level. This was the basis of the advice to avoid sugar; a prescription relaxed by the American Diabetes Association and others.

Now we know that simple sugars don't make your blood sugar rise any more rapidly than some complex carbohydrates do. Of course, simple sugars are simply empty calories, and still should be minimized for that reason.

Many of the Glycemic index results have been surprises. For example, baked potatoes have a Glycemic index considerably higher than that of table sugar.

The Glycemic index can be useful to people with diabetes who want to plan their diets to minimize the incidence of high blood sugar, or spikes. It measures how fast the carbohydrate of a particular food is converted to glucose and enters the bloodstream. The

lower the number the slower the action. Sources of Glycemic index do vary a bit and can be different based on how food is prepared or cooked, where it is grown in the world, degree of ripeness, combination with other foods and an individual's response.

Fiber Content and Glycemic Index of Foods

FOOD	SERVING SIZE	DIABETIC EXCHANGE	FIBER (GRAMS)	GLYCEMIC INDEX
Cereals:				
All-Bran	1/3 cup	1 CHO	8.5	44
Bran Chex	2/3 cup	1 ½ CHO	4.6	56
Cheerios	1 ¼ cup	2 CHO	1.1	74
Corn Bran	2/3 cup	1 ½ CHO	5.4	75
Oatmeal, cooked	¾ cup	1 ½ CHO	1.6	49
Vegetables, cooked:				
Potato with skin	1 (small)	1 CHO	2.5	121
Fruits:				
Apple with skin	1 (small)	1 CHO	3.5	38
Apricots	3	1 CHO	1.8	64
Bananas	1	2 CHO	2.4	62
Oranges	1 (small)	1 CHO	3	43
Peach with skin	1 (small)	1 CHO	1.9	42
Pear with skin	1 (small)	1 CHO	3.1	36
Raisins	¼ cup	2 CHO	3.1	64
Strawberries	1 cup	1 CHO	3.0	32
Legumes:				
Baked beans	½ cup	1 CHO	8.9	43
Kidney beans, cooked	½ cup	1 CHO	7.3	27
Navy beans, cooked	½ cup	1 CHO	6.0	38
Breads:				
White bread, crackers, buns, bagels,	1 slice	1 CHO	.4	72
Whole wheat bread	1 slice	1 CHO	1.4	72
Pasta and Rice:				
Macaroni/pasta	1 cup	2 CHO	1	46
Rice	½ cup	1 ½ CHO	.2	47
Juices: most kinds	½ cup	1 CHO	.5	46-55

CHO = carbohydrate serving
Remember that even though a food has a low Glycemic index, it still has carbohydrate and will make your blood sugar rise, and as always-watch those portion sizes!

Sources:
www.mendosa.com
www.diabetesnet.com