



The Pilates Connection Weight Loss Challenge

NEWSLETTER

August 30, 2010

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THIS WEEK'S TOPIC... NUTRITION 101 – CARBOHYDRATES

All About Nutrients

-The SparkPeople Resource Center

The carbohydrate world can be very confusing. At times, carbohydrates are accused of being the cause of gaining weight, while other times carbohydrates are viewed as the ideal energy source for the body. Let's take a closer look at the functions of carbohydrates:

- Carbohydrates spare protein so that protein can concentrate on building, repairing, and maintaining body tissues instead of being used up as an energy source.
- For fat to be metabolized properly, carbohydrates must be present. If there are not enough carbohydrates, then large amounts of fat are used for energy. The body is not able to handle this large amount so quickly, so it accumulates ketone bodies, which make the body acidic. This causes a condition called ketosis.
- Carbohydrate is necessary for the regulation of nerve tissue and is the ONLY source of energy for the brain.
- Certain types of carbohydrates encourage the growth of healthy bacteria in the intestines for digestion.
- Some carbohydrates are high in fiber, which helps prevent constipation and lowers the risk for certain diseases such as cancer, heart disease and diabetes.

How Carbs Turn to Fat

The digestion of carbohydrates actually starts in the mouth where an enzyme called salivary amylase starts the breakdown. The rest of the digestion process occurs mainly in the small intestine where enzymes break down large carbohydrate molecules into a simpler form called glucose. Glucose is absorbed into the blood stream and is used in several different ways:

- Much of the glucose is used for immediate energy needs by the cells.

- If there is more glucose than the cells need, then part of the glucose is stored as glycogen in the liver and muscle tissue. If blood glucose levels drop too low, the body can use this stored glycogen to replenish the supply. If levels are too high, the excess continues to be stored as glycogen.
- After energy needs are met and the glycogen stores are filled, any excess glucose can be converted to fatty acids and stored as fat tissue. The fat tissue has unlimited storage capabilities.

Fiber is also a type of carbohydrate but it has a different chemical make-up. Humans do not have the enzymes necessary to break down this type of carbohydrate. Therefore it is not digested and provides no calories or energy. Fiber gives the bulk to the intestinal contents and aids in normal elimination.

Different Types of Carbs

One way to classify carbohydrates is by their chemical make-up:

Monosaccharides	Glucose	Found naturally in fruits, sweet corn and honey. It is also the basic unit of complex carbohydrates. Glucose is the form of sugar normally found in the blood stream and used by the body for energy.
	Fructose	Found in fruits and honey.
	Galactose	Does not occur freely in nature but is produced from the breakdown of milk sugar (lactose).
Disaccharides	Sucrose	Ordinary table sugar. It is found mainly in sugar cane, sugar beets, molasses, maple syrup, and maple sugar. Sucrose is formed when glucose and fructose bond together.
	Maltose	Appears when starch is broken down by the body and also occurs in germinating seeds. It is formed when two units of glucose bond together.
	Lactose	The sugar found in milk. It is made by the combination of glucose and galactose.
Polysaccharides	Starch	Found in grains, roots, vegetables and legumes. It is made up of many (up to 1000) glucose units. Humans can digest it. One only needs to cook and chew the plant cells to break open the cellulose walls. Enzymes release the individual glucose units, which are absorbed into the blood stream.

	Glycogen	The storage form of carbohydrates in man and animals and is the primary source of glucose and energy. Muscle glycogen is used directly as energy. Liver glycogen may be converted to glucose and carried by the blood to the tissues for their use.
	Cellulose	Made up of many glucose molecules and is the supportive framework of plants. Cellulose cannot be digested by humans. Therefore, it provides bulk to the stool. Cellulose is a type of fiber.
	Hemicelluloses	Includes pectin and agar-agar. The body does not digest them. However they do absorb water, form a gel and increase the bulk of the stool, which gives a laxative effect. Pectin is found in ripe fruit and agar-agar comes from seaweed.
	Fiber	Only found in plant foods. It is the part of plants that the body cannot digest. There are two kinds of fiber, and it is important to have both kinds in the diet every day.
		<ul style="list-style-type: none"> □ Soluble fiber is found in beans, peas, lentils, oats, and barley. Some fruits and vegetables also have soluble fiber, such as apples, carrots, plums and squash. Eating foods with soluble fiber may help to lower blood cholesterol and decrease your risk of heart disease. These foods may also help lower blood sugar levels, which is important if you have diabetes.
		<ul style="list-style-type: none"> □ Insoluble fiber is found in foods like wheat bran, whole grains and all vegetables and fruits. It is often called roughage or bulk because it keeps the digestive system running smoothly. This helps with constipation, hemorrhoids, and other digestive problems. It may help to prevent some types of cancer.

The Glycemic Index

A new system for classifying carbohydrates is the glycemic index. The glycemic index ranks foods on how they affect blood sugar level by measuring how much the blood sugar increases after one eats. For example, white bread is digested quickly into glucose, causing blood sugar to spike quickly. Therefore white bread has a high glycemic index number. In contrast, brown rice is digested more slowly, causing a lower, more gentle change in blood sugar. It therefore has a lower glycemic index number.

Diets filled with high glycemic index foods, which cause quick and strong increases in blood sugar levels, have been linked to an increased risk for diabetes and heart disease.

Using the glycemic index can be somewhat confusing. Some foods that contain complex carbohydrates, such as potatoes, quickly raise blood sugar levels, while some foods that contain simple carbohydrates, such as whole fruit, raise blood sugar levels more slowly.

The Bottom Line

The basic message is simple when it comes to selecting the amount and type of carbohydrate foods. Carbohydrates should make up 45% - 65% of the total daily calories in a healthy diet. At least 130 grams of carbohydrate should be included in the diet to prevent ketosis. Whenever possible, replace highly processed/refined grains, cereals, and sugars with minimally processed whole-grain products.

The harder your body has to work to convert the carbohydrate into glucose (and ultimately fat), the lower the food's glycemic number. Therefore, anything that slows the digestion and absorption of a carbohydrate-containing food will lower its glycemic index. These factors include:

- Particle size. Larger particle sizes found in stone-ground flour, as opposed to finely processed flours, will slow digestion and lower the glycemic index.
- Soluble fiber. This type of fiber, found in some fruits, vegetables, legumes, oat bran, and oatmeal, slows digestion and lowers the glycemic index.
- Fiber coverings. Foods with a fibrous cover such as beans and seeds are digested more slowly and have a lower glycemic index.
- Acidity. The acid found in some fruits, pickled foods, and vinegar slow digestion and lowers the glycemic index.
- Type of starch. Starch comes in many different configurations. Some are easier to break into sugar molecules than others.
- Ripeness. Some ripe fruits and vegetables tend to have more sugar than unripe ones, and so tend to have a high glycemic index.
- Fat. Fat slows digestion and lowers the glycemic index.

Carbohydrates: The Energizers

Choose More Often	Choose On Occasion	Choose Seldom
<u>whole grain products:</u> breads, cereals, crackers	<u>refined, white flour products:</u>	<u>sweets and snacks:</u> pastries, donuts, candy, cake

pancakes, muffins, bagels, pasta, brown rice, oats, bulgur, vegetables and fruits, legumes, low fat dairy products

bread, cereals, crackers, pancakes, muffins, bagels, pasta, white potatoes, white rice, fruit juice

pie, cookies, sugared cereals, soft drinks, table sugar, honey, ice cream, sherbert, fruit drinks, potato chips, pretzels, snack crackers

Take this Spark People Quiz to see if you are really prepared to meet your goals:

[*Quiz - Are You Prepared to Meet Your Goals?*](#)

Weight Loss Challenge Winner of the Week:

Cheryl Truman is this week's biggest loser! She lost 1.33%! Congratulations Cheryl...enjoy your free classes.

RECIPE

HEALTHIFIED SOUTHWESTERN SALAD

Here's a great salad for a Labor Day cookout!

- 2 6-inch corn tortillas
 - Nonstick cooking spray
 - 1 box (9 oz) Green Giant® Simply Steam® Niblets® frozen corn
 - 1/2 cup fat-free sour cream
 - 1/4 cup snipped fresh cilantro
 - 2 tablespoons fat-free milk
 - 1 teaspoon olive oil
 - 1 clove garlic, minced
 - 1/2 teaspoon chili powder
 - 1/2 teaspoon finely shredded lime peel
 - 1/4 teaspoon salt
 - 1/4 teaspoon black pepper
 - 6 cups torn romaine lettuce
 - 4 plum tomatoes, chopped (2 cups)
 - 1 can (15 oz) Progresso® black beans, rinsed and drained
 - 1/2 cup shredded reduced-fat cheddar cheese (2 ounces)
 - 1 avocado, halved, pitted, peeled, and chopped
 - Snipped fresh cilantro (optional)
1. Preheat oven to 350°F. Cut tortillas into 1/2-inch-wide strips; place in a 15x10x1-inch baking pan. Coat tortillas lightly with cooking spray. Bake for 15 to 18 minutes or just until crisp, stirring once. Cool on a wire rack.
 2. Meanwhile, prepare corn according to package directions. Cool.
 3. For dressing: In a small bowl, stir together sour cream, the 1/4 cup cilantro, the milk, oil, garlic, chili

power, lime peel, salt, and pepper.

4. Place lettuce in a large glass serving bowl. Top with tomatoes, beans, cooled corn, cheese, and avocado. Add dressing and sprinkle with tortilla strips. If desired, garnish with additional cilantro.

Servings 6. 240 Calories. 1.5 Starches, 1.5 Vegetables, 2 oz. Protein.

Recipe from eatbetteramerica.com

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