



Carbohydrates



Carbohydrates are the major source of energy in the human diet. Carbohydrates, like protein and fat, are major nutrients in the food we eat. The body converts carbohydrate to glucose, which is sometime called blood sugar. The hormone insulin helps glucose enter cells where it can be used for energy or stored for use later. Glucose is a major fuel source and the body uses it 24 hours a day, even while asleep. Glucose is the preferred fuel of the brain and red blood cells and required for nerve tissue. Eating an **appropriate** amount of carbohydrates at meals and snacks can help control blood glucose levels. Carbohydrates in the diet are actually necessary for body fat stores to be broken down and used as energy. In fact, too little carbohydrate in the diet will cause the breakdown of protein stores – your muscles and organs – to be used as energy. Too much carbohydrate and total calories in the diet will be stored as fat and increase weight and for those with blood sugar problems, cause high blood sugar levels.

Carbohydrates are found in starches like grains, beans, and cereals, as well as fruits, vegetables, milk and milk products and sugars. Carbohydrate foods are a good source of dietary fiber, B vitamins, folic acid, vitamins C, A, and D, calcium and other minerals. Foods containing carbohydrate should be part of each meal. The number of servings needed daily varies depending upon many factors such as HIV status and level of physical activity, and whether you have diabetes or insulin resistance. The general recommendation is that 45-65% of total daily calories in the diet should come from carbohydrate sources.

Category	Nutrients & Calories Per Serving	Examples	Serving Size	Suggested Daily Servings
Starches	15 grams carbohydrate 3 grams protein 0-1 gram fat 80 calories	Rice Beans Oatmeal Potato	1/3 cup, cooked 1/2 cup, cooked 1/2 cup, cooked 3 ounces	6-11
Fruits	15 grams carbohydrate 0 grams protein 0 grams fat 60 calories	Apple Banana Grapes Fruit juice 100%	1 medium 4 inch piece 15 small grapes 1/3-1/2 cup	2-4
Vegetables	5 gram carbohydrate 2 grams protein 0 grams fat 25 calories	Broccoli Spinach Tomatoes Vegetable juice	1 cup raw or 1/2 cup cooked Same as above 1/2 cup juice	3-5
Milk* & Milk Products**	12 gram Carbohydrate 8 grams protein 0-8 grams fat 90-240+ Calories Check food labels!	Milk, soy or cow Plain yogurt Fruit yogurt**	1 cup 1 cup 4-8 ounces	2-3

*Milk ranges in calories from 90 to 150 per cup due to different amounts of fat in non-fat (less than 0.5g fat, 90 calories), low-fat (2.6 g fat, 102 calories), reduced-fat or less-fat (4.7 g fat, 122 calories), or regular milk (8 g fat, 150 calories). Check food labels.

**Milk products range in calories because of the different amounts of fat and added sugars. Check food labels.

For more information or to sign up for a nutrition class call:

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