

# Carbohydrates

Carbohydrates are classified as either "simple" or "complex". Some common simple carbohydrates include glucose, fructose, and sucrose, and are typically associated with sweet foods and ripe fruits. The complex carbohydrates are either digestible (starches) or indigestible (fiber). The digestible complex carbohydrates are ultimately "digested" to the simple carbohydrate glucose when they are consumed. While the ultimate "fuel" for muscles is glucose, complex carbohydrates usually carry with them other nutrients, such as B vitamins, which are necessary for muscles to get energy from the foods we've eaten. Simple carbohydrates (sugars) on the other hand, do provide energy but may not contain the other nutrients needed to use this energy. Therefore, it is generally recommended that athletes consume no less than 60% of total calories from carbohydrates, and no more than 10% of these calories in the form of simple carbohydrates. Good sources of carbohydrates include pasta, bread, cereal, legumes (beans), fruits, and vegetables.

Glycogen is the storage form of glucose, and it is called upon when muscles need more fuel. Glycogen is needed for both endurance and strength events, but the human body has a limited capacity to store it. Therefore, even though athletes need a lot of it we only have a limited supply. Therefore, it is important to take every opportunity to keep this glycogen "fuel tank" full by making carbohydrates a main part of the foods usually consumed, and by eating carbohydrates before, during, and immediately after exercise. Providing a constant supply of carbohydrates is the best, simplest, and safest means of "glycogen loading". Because glycogen is only efficiently stored when an athlete is well hydrated, it is also important to make certain that plenty of fluids are consumed while eating carbohydrates.

This is a list of some commonly consumed foods with the distribution of carbohydrate, protein, and fat: (Kcal=Calories)

<b>Food</b>	<b>Calories</b>	<b>% Carbohydrate</b>	<b>% Protein</b>	<b>% Fat</b>
1 raw apple	84	100	0	0
10 grapes	36	100	0	0
1 cup orange juice	104	96	4	0
1 oz Rice Crispies cereal	108	93	7	0
1 baked potato	148	92	8	0
1 banana	105	89	3	7
1 cup spaghetti with sauce	198	79	12	9
1 bagel	198	77	14	9
1 slice bread	69	75	12	13
1 oz Cheerios cereal	114	70	14	16