

# The Basics

Soccer is a sport that requires both power and endurance. During training periods, an athlete's daily food intake influences their ability to build muscle, sustain energy, and recover quickly. In order to perform at maximum capacity, an athlete needs the proper balance of carbohydrate, protein, fat, vitamins, minerals and fluids.

Food can be broken down into 3 macronutrients: carbohydrates, protein and fat. Training athletes should balance their daily calories by these percentages:

50-60% Carbohydrates

15-20% Protein

20-30% Fat

## Power Sources

When training, athletes need to increase their daily calorie intake. Energy and endurance come from an athlete's ability to store and utilize food in the form of dietary carbohydrates, fats and proteins.

### Carbohydrates and fats are the primary suppliers of the energy.

Protein is spared from being used for energy so that it can focus on growth, repair and maintenance of muscle.

Daily Training Needs	
Weight (lbs)	Carbs (grams) Protein (grams)
60	138 - 192 48 - 54
70	161 - 224 56 - 63
80	184 - 256 64 - 72
90	207 - 288 72 - 81
100	230 - 320 80 - 90
110	253 - 352 88 - 99
120	276 - 384 96 - 108
130	299 - 416 104 - 117
140	322 - 448 112 - 126
150	345 - 480 120 - 135

Example Food Choice	Carbs (grams)
1 slice whole wheat bread	13
1 med plain bagel	30
1/2 cup granola	32
2 cups pasta	80
1 medium banana	28
1/4 cup raisins	33
1 medium orange	15
1 cup low fat milk	12
1 cup lowfat fruit yogurt	32
Food Choice	Protein (grams)
1/4 lb beef burger	27
3 oz beef steak	26
3oz chicken breast	25
1/2 can tuna	16
2 tbsp peanut butter	7
1 cup low fat milk	8
1 cup lowfat fruit yogurt	7

**References**  
 American Dietetic Association. (2006). *Sports Nutrition: A Practice Manual for Professionals* 4<sup>th</sup> ed. U.S.A.: Library of Congress Catalog in-In-Publication Data.  
 Ryan, Monique. (2005). *Performance Nutrition for Team Sports*. Boulder Colorado: Peak Sports Press.

THE POWER OF FOOD ENERGY

Daily Performance Nutrition for Young Soccer Athletes



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## Carbohydrates

**Carbohydrates are, by far, the preferred energy source for athletes.** Carbohydrates convert to glucose that is used to provide energy to muscles and the brain. Excess glucose is stored as glycogen in muscles and the liver and lastly as fat. Stored glycogen is the fuel burned during exercise. Fatigue is felt once glycogen stores have been depleted. Training increases the ability of an athlete's muscle to store glycogen. Well-trained athletes can endure longer because their muscles can store more glycogen or fuel.

General Training Needs  
Carbohydrate

2.3 – 3.2 grams / lb / day

## Quality “Carbs”

Foods rich in carbohydrates are: grains, beans, breads, fruits, starchy vegetables, dairy products and sweets. **Athletes should focus on nutrient dense carbohydrates such as whole grains, fresh fruits and vegetables and low fat dairy products.** These foods not only supply carbohydrate but can also be a good source of vitamins, minerals, fiber and protein. Refined or processed foods and sweets generally have poor nutrient content and provide little more than carbohydrate calories.

## Protein

Athletes are commonly mistaken about the role of protein. **Eating extra protein DOES NOT build extra muscle and may increase the risk of dehydration.** The primary role of protein is to build and repair muscle tissue, grow hair and fingernails, produce hormones, boost your immune system, and replace red blood cells. Athletes should consume adequate but not excessive protein daily. Excess protein is stored as fat and small amounts of glycogen.

General Training Needs  
Protein

0.8 – 0.9 grams / lb / day

## Quality Proteins

**The most concentrated forms of protein come from animal sources in the form of meats, poultry, fish, and eggs.** These are also good source of iron and zinc. Low-fat dairy foods are also excellent sources of protein as well as calcium. **High quality plant based sources of protein include soy products, dried peas, beans and lentils.** Protein powders or supplements are expensive and not required if an athlete is eating a balance diet inclusive of protein sources.

## Fats

**Fat is an energy source and an important part of an athlete's diet.** Fat provides energy, maintains body temperature and protects organs. In addition, dietary fats are the only source of essential fatty acids and carriers to transport fat-soluble vitamins and carotenoids.

## Quality Fats

There are 3 main types of fat: saturated monounsaturated and polyunsaturated.

**Saturated fats, which include trans fats, have a negative effect on blood cholesterol and may increase the chances of developing heart disease.**

Saturated fats come from animal products such as meats, poultry, cheese and whole milk. Butter, lard, palm oil and coconut oil also contain saturated fats. Trans fats or hydrogenated fats are found in margarine, commercially baked goods and processed foods. *Saturated fats and trans fats are solid at room temperature.* Saturated fats should be limited to 10% of an athlete's total daily fat intake.

**Mono- and poly- unsaturated fats are “good” fats and can have a positive effect on blood cholesterol and heart health.** Sources of monounsaturated fat include olive and canola oil, avocados, almonds, and hazelnuts. Sources of polyunsaturated fat include corn, safflower and sunflower oil, walnuts and sunflower seeds. *Unsaturated fats, “good fats”, are generally liquid at room temperature.*