

Nutrition for Soccer Players

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The game of soccer is a typical acyclic sport. The intensity during the match changes all of the time. The loading has an interval character, with frequent breaks and short rests. During a game, phosphate and glycogen supply most of the energy, thru anaerobic (without oxygen) and production of ATP (adenosine triphosphate).

Soccer is a diverse game and so are the requirements it places on the player's body. Long-lasting workouts develop endurance, as well as strength and agility, since the players are running plenty of sprints with high speed. The neuropsychological load is considerable, as the matches are emotional and the situation is ever changing. So, during the execution of these max and sub-max efforts lactate builds up in the organism as a result of accelerated metabolism. Waste products are eliminated to a degree during the pauses and the break at the half.

The character of the player's nutrition determines the biochemical changes in their organism. The foods they consume have to cover the energetic deficit, which is around 627 – 646 kJ (149 – 154 cal) per pound of body weight, in order to obtain the essential substances to aid the development of the soccer specific physical characteristics. It is imperative to follow an appropriate diet as well as maintain an adequate liquid intake.

The diet of the players has to be well balanced and include a large range of food at all times, and especially during the pre-season period. It has to contain:

- Enough complete proteins (*necessary for the development of strength and speed*).
- Optimal quantity of carbohydrates (*essential for the increase of glycogen reserves in the body of the soccer player*).
- Less fatty foods
- Sufficient quantities of vitamins, minerals, micronutrients and other biologically active elements.

The ingredients of the food have to vary, considering the character of the loading and the physical qualities, which are being mostly developed at that particular period.

As a result of the **sweating** during a match, the soccer players can **loose from about 2 to up to 7 pounds of their body weight**. Dehydration may occur, which could lead to poor thermoregulation and prevent adequate oxygen and energy supply to the muscles. **That's why it is recommended during the hot months of the year to increase the liquid intake to about 100 ounces per day**. However, more than the required amount of liquids doesn't improve performance or progress.

The food distribution during the day is influenced by time, more specifically, when the major physical effort occurs. If the main training session is in the afternoon, the breakfast should be more substantial and high in calories and lunch should be lighter. If the session is in the morning, breakfast should be lighter and the lunch much more rich and restorative. ***It is recommended to eat four or five times per day if the players workout is twice a day.*** In such cases the meals should be evenly distributed.

It is desirable to increase the carbohydrates part of the diet in order to replenish the glycogen reserves during the last 2 -3 days before a soccer match. The dinner on the pre-competitive day should be somewhat light. In order to rest well that night, the athlete shouldn't take any stimulating foods and drinks, such as chocolate, coffee, tea or any kind of sodas, containing caffeine (Coke, &-UP, Mountain Dew, etc.). The dinner should include moderate quantity lean meat or fish, potatoes, salad, yogurt, canned or fresh fruit.

On the day of the match, the food should be easily digestible, with reduced fibers and small in quantity, but high in calories. The players have to avoid acidic foods, since that would put pressure on the alkaline reserves of the organism.

Also on the day of the match the following foods should be ***absolutely*** out of the menu:

- Any kind of fat dishes
- Fried foods
- Salami and deli meats
- Canned fish and meats
- Hard boiled eggs
- Pickled cucumbers and vegetables
- Beans (sweat peas, lentils, kidney beans, etc.)
- Spices
- Rich deserts

The last meal should be 3 to 3.5 hours before the beginning of the match. Right before the match the players could drink a cup of hot tea with 30-50 grams of honey or glucose. It is a good idea to drink about 200 mg of salty vegetable (tomato, carrots, celery) or meat (chicken, beef) bullion in hot days approximately 30 minutes before the match.

Effective way to boost the energy of soccer players during the break at the half is to have some refreshments. This should be done in order to recover the water, blood sugar, and the electrolytes in the organism. Drinks are better choice than real meals, because of their faster utilization and influence on the metabolism. Recommended are hot tea with honey and lemon, mineral water mixed with glucose and liquid Vitamin C, or electrolyte drinks (Gatorade, etc.). ***The drinks shouldn't be cold because it will take longer to be digested.*** It should be drunk with small sips, slowly. The quantity of the glucose or sugar should not be over 20 grams, because when concentrated, sugar solutions are not digested fast enough in the order to positively influence the game so soon. Drinking milk during the break is strongly discouraged, because the casein (in

milk) curdles in the stomach, which leads to increased mucus and the slowing of absorption.

As refreshment during a long match with overtimes, you could use some salty vegetable bullion as we mentioned before. This could prevent muscle cramps, which occur in soccer players during extremely tough matches. It's acceptable to eat some fresh fruits, like peaches or oranges, in small quantity.

The post-game meal should be 1 to 1.5 hours after the end of the match. This is enough time for recovery of the blood circulation, which would aid the proper digestion and utilization of the food.

The first thing to do during the recovery period should be to fight with the dehydration of the body. A deficiency of adequate amount of water will decrease optimal body functions. Also, timely hydration helps faster release of toxins build up as a result of fatigue. It's recommended to drink 300 grams of hot sweetened tea with lemon or 300 grams of mineral water right after a match. Carbohydrates (glucose, fructose, sugar, honey) intake is suggested in order to compensate part of the energy expenditure and to restore the glycogen reserves in the muscles and the liver.

Do not eat large quantities of meat right after the match, because of the acidity of the meat and meat products. The food should be low fat, because fat slows down the synthesis of the glycogen in the liver.

After the match the players need higher doses of vitamins. They do not contain calories and would not make up for the caloric expenditure, but would help to release the energy stored in carbohydrates, fats, and proteins. It is better if the vitamins come from a natural source, but if you have no choice it's okay to use vitamin supplements instead.