



Sport-Specific Nutrition: Soccer

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Soccer players are athletic individuals that must be conditioned and fueled properly for utilization of all the body's energy systems throughout competition. One's aerobic system (cardiovascular) must be conditioned to support several hours a week of play and the periods of low intensity play. Your anaerobic systems (ATP-CP and lactic acid cycles) must be trained for the high bursts of all-out effort. Nutrition (glucose) also plays a role in your central nervous system's split-second decision making abilities, which are vital to fast-paced games like soccer.

Nutrition Recommendations for Soccer Players

- **Focus on carbohydrate-rich foods for energy before AND after practices and competitions.**

Energy needs for soccer players are high. The best way to fuel your body appropriately is to consume adequate amounts of carbohydrate-rich foods for meals and snacks. Every individual is different but, players should be eating about 8 grams of carbohydrate (CHO) per kilogram of body weight.

Weight (pounds)	Approximate grams CHO needed per day
140	500 grams
165	600 grams
185	675 grams

This amount of carbohydrate must be consumed from a variety of sources. Carbohydrates can come from breads, cereals, whole grains, fruit, milk, yogurt, starchy vegetables, sports drinks, nutritional beverages and appropriate snack foods. A more specific list of these foods can be found on the ICYF "Athlete Shopping List" guide. For a more detailed plan ensuring adequate carbohydrate intake for superior performance, work with a sports nutritionist/dietitian.

Pre-Event: Being properly fueled before walking onto the field is important. Your pre-game fuel should leave you neither full nor hungry. The amount of food you consume pre-event is based on your body weight and how close you are to the start of your training. As trainings lasting longer than 60 minutes get closer, meal/snack size should decrease whereas larger meals should be consumed if eating 3-4 hours beforehand. As a general guide for every hour before training, consume 1 gram of carbohydrate per kilogram of body weight up to 4 hours in advance.

Hours before training	Grams of carbohydrate to consume for a 140-pound athlete
3- 4	200 grams - pasta with meat sauce, bread, salad, milk
2- 3	150 grams - ham sandwich on bagel, banana, 100% juice
1	64 grams - sports drink, fig bar or cereal bar

Remember that everyone is different. Don't forget to trust your gut. Everyone reacts to foods differently so do not try any new or unfamiliar foods pre-game.

Think about when you last ate BEFORE putting on your uniform. If it's been more than 3-4 hours, a small snack would more than likely benefit you. Pick a snack that is high in carbohydrates and low in fiber and fat. This blend of macronutrients will facilitate gastric emptying and fuel utilization. A list of snacks can be found on the ICYF "On the Go Snacks for Athletes" guide.

Post-Event: It is also important to refuel after a game or practice to ensure that your muscle glycogen stores and being replaced and muscle repair can occur.

- It is ideal to eat something within 30 minutes of an event when muscle enzymes are active.
- Refuel with carbohydrates and a little bit of protein.



- The amount of food to eat post-event will depend on your weight (0.5 – 1.5 grams carbohydrate per kg bodyweight.) and schedule. If you cannot eat a meal within 30 minutes, consume a snack.

- Some ideas include low-fat chocolate milk, peanut butter sandwich, meal replacement shake, or sports drink with string cheese.

• Take in carbohydrates during play

Soccer is a game of high intermittent activity. To avoid fatigue late in the match, athletes should be consuming carbohydrates in the form of sports drinks *during* play. This allows for available fuel when glycogen utilization, especially in the leg muscles, is high. Start fueling with a sports drink within the first 15 minutes of play. Studies done on soccer players show that consuming 30-60 grams of carbohydrate per hour in the form of a 6 – 8 % carbohydrate solution is optimal. (1) Most sports drinks, gels and blocks are designed with this in mind. Consuming sports drinks are good way to maintain hydration. If you prefer to use gels or blocks, be sure to drink several sips of plain water at the same time. Most gels pack and blocks are about 20-25 grams of carbohydrate. Therefore, consuming about 2 per hour is an average appropriate fuel intake. For more information on sports drinks, gels and blocks, see the ICyF “Sports Drinks, Gels and Blocks” guide.

• Stay hydrated

Hydration before, during and after training and game time should be well planned. Drinking large amounts of water in the minutes beforehand is not an optimal way to hydrate and can leave you with water sloshing in your stomach in the opening minutes of play. Dehydration defined as a 2-3% loss in body weight (2) or a little over 3 pounds for a 165-pound player, can slow pace and decrease reaction time. Players should sip small amounts of fluid during training and regularly throughout the day.

Hydration Tips:

- Start hydrating about 4 hours before practice or competitions so that you are able to excrete any excess fluid as urine before you compete.
- If you are training for 60+ minutes, sip 4-6 ounces fluid every 15 minutes.
- On days where you are training intensely, for every pound lost, replace with 24 ounces of fluid.
- Carry a water bottle with you during the day to help achieve your fluid goals. One sip of water is equal to about 1 ounce.

To ensure proper nutrition for sport performance while also maintaining optimal growth and development, an individualized plan may be needed. Speak with a sports dietitian/nutritionist in your area.

References

1. Dunford, Marie. *Sports Nutrition. A Practical Manual for Professionals. 4th Edition.* American Dietetic Association, 2006.
2. Position of the American Dietetic Association, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance. *Journal of the American Dietetic Association, March 2009, Volume 109 Number 3 p. 509-522.*