

Fuel your performance all winter long!

Part 2: Keeping your tank topped up during the next match—and every match!

by André Albrecht, sports nutritionist

Without proper pregame nutrition and hydration, you won't get very far. What players should eat and drink before the game, and how much, was the subject of our last article, published as a supplement to our January 2010 issue. However, it's important to keep your body supplied with plenty of energy during the game as well, and nutrition expert André Albrecht explains how to do it in the second and final installment of our series.



Photo: Axel Heimken

You've laid the foundation—now keep it strong!

As we showed in Part 1, nutrition is an important part of every athlete's pregame preparations. But pregame nutrition is just the foundation for the next 90 minutes, and every one of its building blocks needs to be stabilized to keep it from crumbling before the game even starts. Besides, the end of one match is the beginning of the next, so all nutrition is really pregame nutrition.

Slow but steady

Because the body consumes water and energy throughout a soccer match, it's important to consume plenty of fluids and carbs while playing. Sodium and potassium are also important for speeding the absorption and delivery of these nutrients.

Therefore, any sports drink consumed during play should have the same composition as drinks consumed just before play: 40–80 grams per liter of carbohydrates, 400–1000 milligrams per liter of sodium and 120–225 milligrams per liter of potassium.

What's the right amount to drink? Ideally, soccer players should drink about 200 milliliters at regular intervals every 10 to 20 minutes, although this may not always be feasible under actual match conditions. During halftime, players may drink as much as 500 milliliters. Players can train themselves to drink at the right pace by practicing during training.

Sports drinks: An ideal source of carbs

In addition to sports drinks, other energy sources include bars, bananas and gels. Bars and bananas are best eaten during halftime. The advantage of gels is that they can be consumed during training and match play—and also before and/or during the extra minutes at the end of the game. But since players should always consume fluids along with bars, bananas and gels, the obvious choice is to go straight for a quality sports drink: It provides fluids, carbohydrates and minerals in properly calibrated doses, all in one convenient package.

Furthermore, the combination of short- and medium-chain carbohydrates (see Part 1) ensures optimal absorption, and drinks are less likely than solid food to upset players' stomachs. As far as how much to drink, here's a simple rule of thumb: 30–80 grams of carbohydrates in 500–1000 milliliters of fluids per hour. However, the exact amount of energy required always depends on the intensity of play (higher intensity = more energy) as well as individual characteristics.

Getting a postgame boost

Fluids and carbs are important not just during play, but also immediately afterward, to start preparing for the next match or practice session. After all—and this is often forgotten or underestimated—the immune system is especially susceptible to infection after intense physical exertion (this is known as the “open window effect”). A quick

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hit of nutrients will fortify it and reduce the body's vulnerability. It will also begin the process of refilling the body's carbohydrate supplies. The sooner a player begins consuming carbs after playing, the more effective this process is; ideally it should happen within a few minutes of the end of play. Sports drinks work well, and recovery drinks containing extra protein can be used as well. In principle, postgame nutrition is essentially the same as pre-game nutrition: Players should eat a variety of foods that are low in fat, high in carbohydrates, fresh and minimally processed. Experienced athletes know how to listen to their bodies: Thirst is a sign of dehydration, hunger indicates a lack of carbs, and a craving for strong flavors signals a need for minerals, particularly sodium and potassium.

Carbs for injury prevention

For rapid regeneration as well as injury prevention, it's essential to have an adequate supply of carbohydrates. A lack of carbs can interfere with concentration, which leads in turn to coordination problems and a higher susceptibility to injury. Specialized supplements that promote cartilage regeneration can also help prevent injuries, since soccer, with all its changes of speed and direction, is particularly hard on the joints.

Summer and winter nutrition

An athlete's nutritional needs are dependent not only on the duration and intensity of play, but also on the weather. When it's hot outside, players need more water than in winter, and the amounts of other nutrients they consume should vary accordingly. For instance, in hot weather, sports drinks should be diluted to approximately 40 grams of carbs per liter. Players will most likely get plenty of carbs anyway because they'll be drinking more often. Lightly chilled drinks may be OK, but make sure to test this on yourself at practice first!

In cold weather, you should make your drinks more concentrated, around 80 grams per liter, and you may want to warm them up.

Nutritional supplements: Do you need them?

All soccer players, from casual weekend-leaguers to the highest-level pros, should eat essentially the same diet: low in fat, high in carbs, fresh and minimally processed, with plenty of variety. In most cases, this sort of diet should be more than sufficient. However, the harder and more often you train, the more of a strain you put on your body and the more critical it becomes to consume each of the building blocks. This is especially true for fluids, carbohydrates and minerals, and also for protein intake immediately after a workout.

Specialized nutritional supplements containing specific minerals, vitamins and other compounds can be appropriate in cases where blood tests show an athlete's body lacks those substances, or where training is especially intense. However, my own experience with professional teams has shown that a normal, well-balanced diet as described in these pages is generally sufficient even for athletes training more than 15 hours per week.

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