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'Sport-Specific Conditioning is our Focus, Performance is our Goal'

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Hydration Strategies for Soccer

SPORT & EXERCISE SCIENCE, Vol.2, No.6

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When players work hard, they lose sweat – in a game on a hot day, sweat losses may reach 3 litres (L). On a cold day, though, some players will lose very little sweat. Every player's hydration needs are different and will vary with the weather over the season. Just as general training and competition strategies should be tailored for the individual athletes in accordance with their unique needs and preferences, so should their drinking and eating choices during exercise. Players, coaches, and trainers should 'fine tune' these recommendations to identify their own winning formula.

How much and when to drink?

Players should limit dehydration during training and matches by drinking water or a sports drink. Obvious opportunities to drink during a match include warm-up and at half time. During training, the coach or manager should organize drink breaks according to the weather and intensity of the season.

Training allows opportunities for the players to get a feel for sweat rates and fluid needs so that drink practices can be adjusted accordingly. It is not necessary to drink enough to match sweat loss, but the amount of dehydration should normally be limited to loss of less than about 2% of body weight (ie, 1.0kg for a 50kg person)¹.

The negative effects of dehydration on high-intensity performance are greater in warm environments, so drinking practices in these conditions should be upgraded to reduce the overall fluid deficit. This may include drinking at the side-line when match-play is interrupted, or having an extra drink during training sessions.

There should never be a need to drink more than the sweat loss so that weight is gained during exercise. This will not help performance and is likely to cause gut discomfort.

When do you need more than water?

Depletion of fuel stores can be an issue for soccer matches, especially for players in mobile positions or with a running game style. High carbohydrate strategies – fuelling up for the game and consuming extra carbohydrate during the match – have been shown to enhance performance in such players.

Better intake of fluid and fuel during a game may not only keep players running further and faster in the 2nd half of a match, but it can also help to maintain skills and judgement when players would otherwise become fatigued. Games are often won and lost in the last minutes of the match, and fatigued players are at increased risk of injury.

The use of commercial sports drinks with a carbohydrate content of about 4-8% (4-8g/100ml) allows carbohydrate and fluid needs to be met simultaneously in most events. The intake of carbohydrate that is generally associated with performance benefits is ~20-60g per hour. Sodium should be included in fluids consumed during exercise lasting longer than 1-2 hours by individuals during any event that stimulates high salt losses. You can recognize 'salty sweaters' by the salt rings on their clothes at the end of a hard training



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session on a hot day. Players who lose a lot of salt may be more prone to muscle cramps. Adding a little extra salt to food and drinks and using a higher sodium version of sports drinks may reduce the risk of cramping for these players, but probably does not benefit other players¹.

Rehydration after Exercise

Recovery after exercise is part of the preparation for the next exercise session, and replacement of sweat losses is an essential part of this process. Both water and salts lost in sweat must be replaced. Aim to drink about 1.2-1.5L of fluid for each kg of weight lost in training or matches. Drinks should contain sodium (the main salt lost in sweat) if no food is eaten at this time, but most meals will contain adequate amounts of salt. Sports drinks that contain electrolytes can be helpful, but many foods can also supply that salt that is needed. A little extra salt may be added to meals when sweat losses are high, but salt tablets should be used with caution.

Resources

¹FIFA Nutrition for Football Guide: A practical guide to eating and drinking for health and performance

More Soccer, and Soccer specific exercises can be found at the home of PTS Soccer at www.performancetrainingsystems.net/PTS_Soccer.php

Performance Training Systems is an athletic conditioning consulting firm based out of Brampton, ON, Canada. We provide athlete development, exercise nutrition, performance psychology, athletic training, and management and consulting services to clients within the greater Toronto area and around the world. We are committed to ethical sport values based training, and promote sport as a vehicle for developing healthy bodies, healthy minds, and healthy communities.

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