

POST-COMPETITION RECOVERY STRATEGIES: NUTRITION

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Until recently, the focus of nutritional strategies for the recovery period after both training and competition was relatively straightforward. Two key areas were identified: firstly, the restoration of the muscle and liver glycogen stores that were assumed to have been depleted during the match. Secondly, restoration of water balance by ingestion of water accompanied by electrolytes lost in sweat. It is now recognised, though, that the picture is rather more complicated, in part because of the great diversity in competition schedules at different levels of the game and at different times of the season. Traditionally players were involved in one game per week, played in the afternoon, and would expect to play for 90 minutes. Now, with pressures of domestic and regional competitions, players may face three games in seven days, often at very different times of day, but may play for only a part of each game. The best players are still likely to play most often, though, and when games are close together, recovery from one game merges into preparation for the next.

Replacement of carbohydrate (CHO) stores remains a priority, but players generally have an easy day after a game, so there is less pressure on eating a large amount of CHO immediately after the game. Nevertheless, beginning a match with high muscle glycogen levels is likely to be an advantage, so a high CHO meal relatively soon after the game is still advisable. Prompt restoration of water and salt (sodium) balance also remains a priority, and there is a need for a club strategy and also an individual player strategy. Some players sweat a lot but some do not and needs will also vary with the climatic conditions. Some players may also need to stress salt replacement, some players may lose 10 g of salt or even more in 90 minutes training session or game, but losses may be low in other players. Cell volume is increasingly recognised as an important regulator of anabolic and catabolic processes, and restoration of hydration status, and hence of muscle cell volume, may be important in promoting recovery.

Additional concerns, when games are often to most intense session of the week, include maintaining and improving fitness levels muscle function. There is some evidence that the ingestion of about 20 g of high quality protein soon after exercise may promote muscle protein synthesis and hence adaptive changes in the muscle. It seems sensible to ensure some protein intake in the first meal after a match and this may be achieved effectively by a milk-based drink. A hard exercise session, combined with the psychological stress of intense competition, is also known to suppress immune function because of elevated cortisol levels, increasing the risk of minor opportunistic infections. Attention to carbohydrate intake during and after the game may be helpful in reducing the rise in circulating cortisol that would otherwise occur.

Many dietary supplements are promoted for use during recovery, but evidence for their efficacy is generally lacking. Supplements also carry a risk of an adverse doping outcome and in the absence of good evidence of efficacy, their use is discouraged. An exception may be creatine, which has been shown to increase muscle glycogen storage when consumed with a high CHO diet. Creatine may also stimulate strength gains and increases in muscle mass.

Nutrition strategies must consider food choices and quantities as well as nutrient content. It seems appropriate for clubs to provide a post-match meal and to encourage players to consume this meal. This ensures that the primary nutrition recovery objectives are met before players go their separate ways. The recovery strategy will, of course depend on the time available before the next game or training session. After winning the last game of the season, players can be rather more relaxed in their recovery.