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Introduction to Nutrition & Soccer Performance

WHY NUTRITION?

Most people know and understand the importance of eating correctly. Nutrition lacking in the essential elements to cover your Basal Metabolic Rate - the energy required to keep your body functioning, for growth and for exercise may lead to physiological and psychological consequences such as: shortness of breath, little energy, general tiredness, muscle cramps, lack of concentration and even blackouts.

Adequate nutrition is a also key component of sports performance. The greater the demands for increased performance both in training and competition, the higher the nutritional value must be. For soccer players this means good nutritional habits before, during and after performance. This is highlighted by the following key points based on muscle glycogen which provides a large proportion of the energy demands required in soccer training and competition:

Before: There is a direct association between performance and amount of glycogen in muscles. Football is an endurance sport interspersed with high intensity exercise and relies heavily on muscle glycogen. Players who begin matches with low glycogen levels cover significantly less distance and sprint less. Also, work rate particularly towards the end of a game is affected by pre-game muscle glycogen levels, hence the importance of an adequate diet before a game.

During: Evidence shows the benefits of taking carbohydrate drinks on board during a game. Muscle glycogen stores are spared enabling players to run for longer distances. Players consuming a carbohydrate solution just before and at half-time have greater muscle glycogen stores at the end of the game and may cover more ground in the second half compared to players who drink only water.

After: After a match, glycogen levels are quite severely depleted (as high as 84%) and players can lose 1-5% of body weight through sweating which can result in impaired endurance performance. If insufficient post-exercise carbohydrate consumption takes place then the glycogen levels may not be restored. This means that performance may be affected for the next match or training session.

In elite football the importance of glycogen is even greater. For example, studies show that professional players with high pre-game muscle glycogen levels cover 13% more distance than ones with low levels. It is clear that a professional player who trains and competes at regular intervals must have large glycogen stores in order to maintain optimal physical performance - thus the importance of good nutritional habits.

However, analysis in the past of world class soccer players has shown that only 47% of the total calories consumed were carbohydrates whereas 55-60% is advised for players at this level. It seems that players often have limited knowledge on what they should eat/drink and when.

Thus, particular attention must be paid to players eating habits. In professional soccer, clubs often employ a sports nutritionist for expert advice. However, players at any level can ensure they play to their best abilities through a varied and healthy diet and plenty of drinks. This means adequate quantities of carbohydrate, protein, fat, vitamins, minerals and water or sports carbohydrate drinks (for competition and training).

CONCLUSION

Soccer is a sport requiring high levels of endurance and the ability to sprint frequently often with little recovery. This demonstrates the necessity to provide the fuel required to undertake this form of exercise. Particular attention needs to be paid to the specific nutritional needs of players and the strategies to fulfill these requirements. The monitoring of food and fluid intake as well as body weight is necessary for players at all levels to ensure they are at the top of their game in both

training and competition.
