

Football players can stay healthy, avoid injury and achieve their performance goals by adopting good dietary habits. Players should choose foods that support consistent, intensive training and optimise match performance. What a player eats and drinks in the days and hours before a game, as well as during the game itself, can influence the result by reducing the effects of fatigue and allowing players to make the most of their physical and tactical skills. Food and fluid taken soon after a game and training can optimise recovery. All players should have a nutrition plan that takes account of individual needs.

The energetic and metabolic demands of football training and match play vary across the season, with the level of competition and with individual characteristics. Typical energy costs of training or match play in elite players are about 6 MJ (1500 kcal) per day for men and about 4 MJ (1000 kcal) for women. The football player should eat a wide variety of foods that provide sufficient carbohydrate to fuel the training and competition program, meet all nutrient requirements, and allow manipulation of energy or nutrient balance to achieve changes in lean body mass, body fat or growth. Low energy availability causes disturbances to hormonal, metabolic and immune function and to bone health. An adequate carbohydrate intake is the primary strategy to maintain optimum function. Players may need 5-7 grams of carbohydrate per kg body mass during periods of moderate training and up to about 10 g/kg during intense training or match play.

Nutritional interventions that modify the acute responses to endurance, sprint and resistance training have the potential to influence chronic training adaptations. The everyday diet should promote strategic intake of carbohydrate and protein before and after key training sessions to optimise adaptation and enhance recovery. Solid or liquid carbohydrate consumption should begin during the first hour after training or match play to speed recovery of glycogen. Taking food or drinks that contain protein at this time may promote recovery processes.

Match day nutrition needs are influenced by the time since the last training session or game. Players should try to ensure good hydration status prior to kick off and use opportunities to consume carbohydrate and fluids before and during the game according to their nutrition plan. Fatigue impairs both physical and mental performance, but intake of carbohydrate and other nutrients can reduce the negative effects of fatigue.

Training for and playing football lead to sweat loss even in cool environments. Failure to replace water and electrolyte losses can lead to fatigue and impaired performance of skilled tasks. Breaks in play currently provide limited opportunities for carbohydrate and fluid intake, and may not be adequate in some conditions. Football is a team sport, but the variability in players' sweating responses dictates that monitoring to determine individual requirements should be an essential part of a player's hydration and nutrition strategy.

There is no evidence to support the current widespread use of dietary supplements in football, and so the indiscriminate use of dietary supplements is strongly discouraged. Therefore, supplements should be used only on the advice of a qualified sports nutrition professional.

Female players should ensure that they eat foods rich in calcium and iron within their energy budget. Young players have specific energy and nutrient requirements to promote growth and development, as well as fuelling the energy needs of their sport. Many female and youth players need to increase carbohydrate intake and develop dietary habits that will sustain the demands of training and competition.

Players may be at increased risk of illness during periods of heavy training and stress. For several hours after heavy exertion, components of both the innate and adaptive immune system exhibit suppressed function. Carbohydrate supplementation during heavy exercise has emerged as a partial countermeasure.

Heat, cold, high altitude and travel across time zones act as stressors that alter normal physiological function, homeostasis, metabolism, and whole-body nutrient balance. Rather than accepting performance decrements as inevitable, well-informed coaches and athletes should plan strategies for training and competition that offset environmental challenges.

Alcohol is not an essential part of the human diet. Recovery and all aspects of performance may be impaired for some time after alcohol use. Binge drinking should be avoided at all times.

The needs of the referee are often overlooked, but high standards of fitness and decision-making are expected of all referees. At every level of competition, training regimens and nutritional strategies, including fluid intake during the game, should be similar to those followed by players.

Talent and dedication to training are no longer enough to achieve success in football. Good nutrition has much to offer players and match officials, including improved performance, better health, and enjoyment of a wide range of foods.