Individualising Nutrition Strategies in Team Sports: Energy

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The team sports schedule is typically categorised into three distinct phases: preseason, in-season and off-season and energy demands will fluctuate accordingly over the year. Activity patterns also fluctuate over the course of the week, depending on the match schedule. There is therefore no fixed value that can be said to represent the energy expenditure – and hence energy needs – of any individual player. Modern technology allows detailed analysis of movement patterns of individual players, and these data are routinely published for elite football (soccer) in competition, though rarely for players in other sports. In elite football, estimates of activity are also routinely made during training, but such data, though often collected, are seldom published. It must be recognised that attempts to estimate energy expenditure from the data collected are subject to large and variable errors, whether this is based on total distance covered, average heart rate, or session duration and rating of perceived exertion. Using this information as the basis for prescribing a diet that will meet the energy needs of an individual player, is of limited utility: the target energy intake is likely to be erroneous and the translation of that energy intake into an eating pattern that is acceptable to the player, while also meeting the need for other nutrients, is unlikely to be successful. An alternative strategy is to assess the player's body mass and body composition: this represents a lifetime history of energy balance. Energy imbalances will result in changes in these variables, and routine monitoring at appropriate intervals can provide both feedback and motivation. There is, though, no specific range of body mass or body composition values that can be applied to all players, nor is this method sufficiently sensitive to address the periodisation of intake over the course of a week. The team nutritionist must therefore use their knowledge and skills as well as the limited data available as a guide to direct players to an appropriate eating strategy.