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Hydration status and nutritional knowledge of athletes

Pamela Magee, Natalie Logue, Niamh McDaid, Sarah-Jayne Boyce, Chris McGlone, Eanna Walsh, Aisling King, Cheryl Hopper, Victoria Hughes, Warren Edwards, Louise Ferguson, Alison Gallagher and Jacqueline McCormack University of Ulster, N Ireland

D ehydration equivalent to a loss of >2% body weight may significantly impair aerobic exercise performance, an effect that is particularly evident in endurance exercise lasting longer than 90 min. The aim of this study was to assess the hydration status of athletes participating in a range of sports both before and immediately after training and to assess sports nutrition knowledge of athletes.

On a single occasion athletes (n 193) provided a urine sample and were weighed immediately before and immediately after a standard training session. Hydration status was determined using urine specific gravity (USG) and % body weight loss during training was calculated. Sports nutrition knowledge of athletes was determined using a validated questionnaire. Of the total cohort, 36% of athletes commenced exercise in a dehydrated state (USG>1.020) with 46% of athletes being dehydrated postexercise. Hydration status was significantly different across athletic groups both pre- (p=0.001) and post-training (p<0.001), with rugby players and those athletes having little opportunity to ingest fluid during training having higher USG levels in comparison to other athletes. Sports nutrition knowledge among athletes was inadequate overall (median total score 50.6% (IQR: 44.4, 58.6)) with fluid knowledge also limited (median fluid score 55.6% (IQR: 44.4, 66.7)).

This study demonstrates a high prevalence of dehydration among athletes both before and after training and that nutrition and fluid knowledge among athletes is poor. Athletes should be educated in relation to their fluid requirements for optimal performance and advised on how to develop individualised hydration strategies to meet their needs.

Biography

Pamela Magee is a lecturer in human nutrition at the University of Ulster. She obtained a PhD from the University of Ulster in 2000 and an IOC Diploma in Sports Nutrition in 2011. Magee is a registered nutritionist and has published 18 papers in reputable journals. In addition to sports nutrition, Dr Magee has a keen interest in research relating to diet and cancer.

pj.magee@ulster.ac.uk