



Nutrition in acute concussion recovery – how is this currently being managed by performance dietitians and nutritionists?

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The incidence of sport-related concussion (SRC) has increased in many team-based sports^(1,2,3), such as rugby, Gaelic (camogie, hurling and football), and hockey in Ireland^(3,4). Following SRC, the brain becomes injured, its function disrupted, and an “energy crisis”⁽⁵⁾ occurs. In response, the brain requires energy and nutrient support to restore cognitive function, reduce symptoms and support healing⁽²⁾. Performance dietitians (PN) and nutritionists (PN) play a critical role in supporting athletes’ acute injury nutritional demands via fuelling and supplementation. Specific supplementation protocols with nutrients such as omega-3 fatty acids (Docosahexaenoic (DHA), a combination of DHA and Eicosapentaenoic (EPA) acid), magnesium, and N-acetyl cysteine (NAC) may help with SRC recovery. However, their application is unclear and requires further investigation⁽²⁾.

Therefore, this study aimed to investigate Irish PD and PN knowledge and implementation of nutritional strategies to manage and support their athletes following an acute SRC diagnosis.

In-depth, semi-structured, audio-recorded interviews were conducted with 17 PDs and PNs recruited from professional registrations (SENR), sporting bodies (IRFU, GAA, Sports Ireland) and networks. Participants practiced/had practiced with amateur and/or professional athletes within the last ten years. A reflexive thematic analysis approach was implemented whereby the data were transcribed, coded, and emerging themes were identified and discussed by all authors.

This research developed insight on PD/PN’s⁽¹⁾ awareness, knowledge and⁽²⁾ implementation of nutritional supports in concussion recovery with athletes. There was a clear contrast between participants who had an awareness and knowledge of the importance of nutrition in supporting brain recovery after a concussion and those who did not. Participants presenting a practical understanding mentioned reemphasising certain foods and supplements already prescribed to their athletes to increase specific nutrient intake in the event of concussion for brain healing. PD/PNs were keeping up to date with nutrition research on concussion, but limited evidence has prevented them from utilising protocols in practice. Meanwhile, participants mentioned trialling or recommending nutritional protocols from personal or athlete experience, such as carb-reloading by increasing carbohydrate-rich foods, reducing omega-6 intake, and acutely supplementing creatine, omega 3’s high in DHA, and probiotics; to support the brain healing post-concussion.

PD/PN’s use of nutrition protocols with athletes following acute SRC was linked to their knowledge and the scientific evidence available. Nutrition implementation, as a result, may be overlooked or implemented with uncertainty due to limited evidence, which could negatively affect the potential for optimal SRC recovery outcomes. From PD/PN’s practices, it is evident that there is a need for research to uncover safe and practical nutritional protocols that they can use to mitigate the effects of SRC and support athletes’ recovery and return to play.

References

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