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Nutrition beliefs, and practices of ultra-endurance runners in Ireland for gastrointestinal symptom management

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Ultra-endurance running (UER) events are defined based upon duration, exceeding 4-6 hours, or distance, surpassing the 26.3-mile marathon⁽¹⁾. Oftentimes event courses comprise of extreme environmental conditions, altitudes, temperatures, terrains, or a combination. UER poses significant short- and long-term health implications. UER athletes' risk chronic maladaptation of various systems, namely the cardiovascular, immune, and digestive⁽²⁾. Research suggests that exercise-associated gastrointestinal symptoms (Ex-GIS) are among the leading cause of underperformance in distance running. Altered mesenteric blood flow, gastric emptying, and peristaltic activity from exercise are exacerbated by the conditions accompanying many ultraevents, impairing performance and recovery. Though Ex-GIS are generally temporary, there remains the potential for long-term medical conditions to arise, such as ischemic bowel disease and haemorrhagic gastritis. Ample nutritional planning and intake throughout training and racing is critical to enhance performance and recovery while minimizing Ex-GIS and its associated chronic conditions⁽³⁾.

The aim of this research was to investigate the nutrition beliefs, and practices of ultra-endurance runners in Ireland.

An adapted electronic version of a validated questionnaire by Scrivin *et al.*⁽⁴⁾ was used. A recruitment infographic of eligibility criteria (≥ 18 years old, healthy, no diagnosed health conditions except for irritable bowel syndrome, and training for/ competing in running events exceeding 4 hours) was distributed online and at events (Connemarathon, Kerry 50K ultra). Individuals that contacted the researchers and were deemed eligible for inclusion were directed to a Microsoft Forms page, where they gave consent and completed the questionnaire. Data were analysed using IBM SPSS Statistics version 28 (IBM Corporation New Orchard Road Armonk, NY 10504-1722, United States).

Sixty-eight ($n = 68$) individuals completed the questionnaire with one excluded due to medical diagnosis. Remaining participants ($n = 46$ males, $n = 21$ females) ranged from 25-66 with one over 66 years old. Previous experience was the main factor influencing nutrition practices ($N = 30$, 45.5%). $N = 3$ (4.5%) sourced information from qualified professionals. $N = 42$ (59.4%) experienced Ex-GIS, usually evenly throughout training and competition. Many had not implemented dietary or nondietary strategies to manage Ex-GIS. Supplementing with nitrates ($N = 9$) and probiotics ($N = 4$) were the most common dietary practices to alleviate Ex-GIS, while other ($N = 14$) and portion control ($N = 13$) were the most reported non-dietary practice.

This research cohort reflects the broader UER community, with 81% being >35 years old "masters" athletes, and male. This study suggests that Ex-GIS are commonplace throughout. Similarly, this research highlights the range of symptoms experienced. The absence in dietary and non-dietary practices employed for Ex-GIS management suggests a shortfall in the availability of nutrition information specific to this problem. Further research is required to understand the mechanisms behind UER Ex-GIS, its management, and best practices for communicating these to the target audience.

References

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