

Collecting data in the field - the challenges and benefits

**Louise M Burke, Chair of Sports nutrition, Mary MacKillop Institute for Health Research,
Australian Catholic University, Melbourne, Australia**

There are a number of Expert Opinions and Consensus Statements on Nutrition for High Performance Sport, including many to which this presenter has contributed. Although these outputs are well intended, audits of the sports nutrition literature show that athletes who are truly elite (Tier 4 and 5 of the Mackay Tiering system) are poorly represented within the studies on which they are based. Therefore, there is a need to find protocols that can engage elite athletes to be involved in sports nutrition research. Challenges to achieving this include the availability of athletes and their willingness (or ethics) to undertake invasive data measurement, be randomised to undertake interventions that may not be optimal for their performance or belief systems or compete with real-world effort in artificial measures of performance. Taking research to the athlete, including the co-design of field-based projects with sporting organisations (administrators, coaches, athletes, embedded sports scientists) provides an alternative option. This presentation builds on personal experiences of the Research Embedded Training Camp model as well as a recent review of methods for undertaking field-based competition and training studies¹ and an emerging protocol which might be considered “Citizen Sports Science” in which research is undertaken by collating the experiences of athletes in their own environment. Other models in which interventions are integrated into real-world competition are also discussed. The learnings include methods and benefits of building authentic research relationship with athletes and investigating practices representing their insights or real-world implementation. The balance between measuring performance in real world settings which maximise the athlete’s incentivization and competition reliability, but can be disturbed by “non-standardised” conditions will also be explored.

1. Stellingwerff, T., Burke, L. M., Caldwell, H. G., Gathercole, R. J., McNeil, C. J., Napier, C., Purcell, S. A., Boegman, S., Johnson, E., Hoar, S. D., Coates, A. M., Bennett, E. V., McKay, A. K. A., Heikura, I. A., Joyner, M. J., & Burr, J. F. (2025). Integrative Field-Based Health and Performance Research: A Narrative Review on Experimental Methods and Logistics to Conduct Competition and Training Camp Studies in Athletes. *Sports Med.* <https://doi.org/10.1007/s40279-025-02227-0>