

***Presenter name:** Dr. Christopher Martyn Beaven

***Institution/Organisation:** University of Waikato

***E-mail:** Charlie.roberts@northampton.ac.uk

***Phone:** +447428225967

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***Abstract title:**

Full-time nutrition practitioner support may positively influence meal distribution of dietary protein in provincial academy rugby union athletes

***Authors and co-authors:**

^{1,2}Roberts, C; ^{2,3,4}Gill, N; ²Beaven, C; ^{2,3,5}Posthumus, L; ^{2,4}Sims, S.

***Institution(s):**

¹ Faculty of Arts, Science and Technology, University of Northampton, Northampton, United Kingdom

² Te Huataki Waiora School of Health, University of Waikato, Hamilton, New Zealand

³ New Zealand Rugby Union, Wellington, New Zealand

⁴ Sports Performance Research Institute New Zealand (SPRINZ), Auckland University of Technology, Auckland, New Zealand

⁵ Faculty of Health, Education and Environment, Toi Ohomai Institute of Technology, Tauranga, New Zealand

***Abstract**

Introduction: Nutrition is an important consideration for optimising health, well-being, performance, recovery, and injury risk in rugby union athletes. Emerging evidence suggests the timing of meals and thus nutrient intake may be particularly important for modulating these factors. An even distribution of 0.4g·kg⁻¹·meal dietary protein across 4-6 meals is suggested to optimise skeletal muscle hypertrophy and re-modelling and facilitate the meeting of broad daily requirements. Despite this, developmental provincial rugby athletes often receive minimal support from qualified practitioners which may negatively influence dietary habits and food choices.

Methods: Ten provincial academy rugby players (age: 20.7 ± 1.7 years, body mass: 103.3 ± 18.8kg, height: 186.8 ± 9.1cm) engaged in support protocol whereby they received full-time

practitioner support. The support protocol was informed by behaviour change techniques and involved group and individual-level engagement, accounting for individual lifestyles, position demands and body composition goals. Dietary intake was estimated on a training and non-training day weekly across a 4-week pre-intervention and 4-week post-intervention period at six daily eating occasions. The remote food-photography method (MealLogger, Wellness Foundry, Ashburn, VA) was used to collect dietary intake information that was subsequently analysed (FoodWorks, Version 10.0.4266, Xyris Software, Australia) for protein intake.

Results: Protein intake were greater at 'Breakfast' (pre: 0.28 ± 0.22 g.kg; post: 0.40 ± 0.20 g.kg), 'AM Snack' (pre: 0.06 ± 0.13 g.kg; post: 0.10 ± 0.15 g.kg), 'Lunch' (pre: 0.34 ± 0.22 g.kg; post: 0.38 ± 0.24 g.kg) and 'Evening Snack' (pre: 0.03 ± 0.09 g.kg; post: 0.08 ± 0.16 g.kg) in response to the intervention.

Discussion: Consumption of dietary protein increased at multiple eating occasions following intervention towards the proposed 0.4g.kg.meal, suggesting short-term practitioner presence may assist athletes optimise eating patterns. As significant eating habit changes are unlikely to occur in a short-time frame, future research should explore the impact of practitioner support in athletes over a prolonged period.

Take home message: Clubs and governing bodies are encouraged to provide full-time practitioner support to developmental athletes to ensure eating habits are conducive to supporting health, performance, and recovery.

***References:** *Please list up to a maximum of 5 references relating to the study and abstract.*

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