

The logo for SESNZ, featuring the letters 'SESNZ' in a bold, sans-serif font. The 'S' and 'N' are stylized with a circular element inside them. The logo is set against a white rectangular background.

SESNZ

SPORT & EXERCISE SCIENCE
— NEW ZEALAND —

ABSTRACTS FROM THE 2018 ANNUAL CONFERENCE

26th-27th October 2018

University of Otago,
Dunedin, New Zealand



Day One: Friday 26 th October (Hutton Theatre)			
16:15	Perceptual and physiological responses to differing ergogenic mouth swilling solutions. <i>Russ Best</i>	The role of informal, unstructured practice in developing football expertise: the case of Brazilian 'Pelada'. <i>Luiz Uehara</i>	
16:30	Hepcidin and iron status in elite female rugby players. <i>Simone Smith</i>		
16:45-18:00	POSTER PRESENTATIONS		
18:00-18:30	Updates from our international counterparts ESSA, ACSM, BASES.		
18:30-onwards	MOU Signing and Celebration + Social function at University of Otago Staff Club		

Day Two: Saturday 27 th October (Hutton Theatre)			
08:00-08:30	Refreshments		
08.30-09:30	Keynote Speaker: <i>Dr Shona Halson</i> , Australian Catholic University		
Parallel Sessions	Hutton (Heat stress)	Tekapo (Sport Med/Biomech)	Barclay (Sport psychology)
9:35	Does the mode of heat acclimation affect the kinetics of adaptation? <i>Lorenz Kissling</i>	History of concussion is associated with higher head acceleration during simulated rugby tackle. <i>Melanie Bussey</i>	Effects of sleep deprivation on perceptual-motor performance under low and high threat. <i>Arne Nieuwenhuys</i>
9:50	The impact of solar radiation exposure on professional team-sport training and recovery. <i>Fergus O'Conner</i>	New Zealand Rugby Community Concussion Strategy: 2018 Pilot Study. <i>Janelle Romanchuk</i>	Life skills acquisition and psychological development in elite cricketers: evaluating the effectiveness of a life development intervention. <i>Adam Miles</i>
10:05	Heat response testing in elite rugby sevens athletes: an eye to Tokyo 2020. <i>Stephen Fenemor</i>	The effects of fatigue on the spine motion of cricket fast bowlers. <i>Corey Perrett</i>	Working memory training in a modified Loughborough soccer passing test impacts skill performance in youth football players. <i>Joseph Hall</i>

13. Social Media as a Nutrition Resource for Athletes: A Cross Sectional Survey

¹Bourke, B, ²Baker, D, ³Braakhuis, A

¹University of Auckland, ²High Performance Sport NZ

Social media contains a wealth of nutrition information and proposes a cost-effective, highly engaging platform to deliver nutrition information to athletes. This study used an online questionnaire to determine whether New Zealand athletes are using social media as a source of nutrition information, and to understand perceptions of social media as a nutrition resource. Both Recreational and Elite athletes were surveyed. From the 306 athletes who completed the questionnaire, 65% reported social media use for nutrition purposes in the last 12 months. Social media use was predicted by both athlete status and gender. Athletes commonly used social media for practical nutrition purposes, including recipes and information about restaurants/cafes. Perceived advantages of social media as a nutrition resource included: ease of access, well presented information, personal connectedness and information richness. Athletes' primary concern for obtaining nutrition information from social media was information unreliability. This study has identified strategies to deliver nutrition support to athletes through social media. For nutrition and dietetic practitioners, it is about balancing the delivery of formal credible nutrition information, but also exploiting the informal and appealing nature of social media.

14. Reducing Upper Respiratory Illness in New Zealand Team Athletes

¹Somerville, V; ²Moore, R; ³Ross, A; ⁴Gill, N; ⁵Braakhuis, A.

¹Department of Nutrition and Dietetics, University of Auckland, Auckland, New Zealand;

²Department of Nutrition and Dietetics, University of Auckland, Auckland, New Zealand; ³Unión Argentina de Rugby, Buenos Aires, Argentina; ⁴Faculty of Health, Sport and Human Performance, University of Waikato, Hamilton, New Zealand; ⁵Department of Nutrition and Dietetics, University of Auckland, Auckland, New Zealand.

Upper respiratory illness (URI) is a common illness complaint by athletes. The aim of this study was two-fold; firstly, identify at what level of New Zealand sport URIs are most prevalent and secondly use a nutritional supplement to determine if URI rates can be reduced in this cohort. The researchers initially recruited players (n = 90) from different levels of rugby (school boy (three tiers), amateur and professional) and asked participants to complete a URI questionnaire twice a week for the duration of their season. The outcome of this study was that 1st XV schoolboy players had the highest URI incidence and duration. Consequently, researchers recruited top-level players (n = 32) across different codes at one school and conducted a two-month parallel double-blind RCT with participants allocated to either olive leaf extract (OLE) or placebo. The main outcome was that there was no significant difference in the URI incidence (0.59 vs. 0.58; Odds Ratio = 1.02 (95% CI 0.21-4.44)) or sick days (0.16 vs. 0.20) between those on OLE and placebo. Overall this project shows that top-level school players have an increased URI incidence and duration, and although OLE supplementation does not attenuate this, further supplements should be investigated.

15. Perceptual and Physiological Responses to Differing Ergogenic Mouth Swilling Solutions

^{1,2}Best, R; ¹Maulder, P. & ^{1,2}Berger, N.

¹Teesside University, ²Waikato Institute of Technology

Carbohydrate and menthol mouth-swilling have been used to enhance exercise performance in the heat. However, these strategies differ in mechanism and subjective experience. Participants (n=12)

sat for 60 min in an environmental chamber (35°C; 15±2%). Following a 15-minute control period participants undertook three 15-minute testing blocks. A different randomised swill (Carbohydrate; Menthol; Water) was administered per testing block (one swill every three minutes per block). Heart rate, tympanic temperature, thermal comfort, thermal sensation and thirst were recorded for each swill. Small elevations in heart rate were observed after carbohydrate (ES: 0.22 ± 90% CI: -0.09 to 0.52) and water (0.26; -0.04 to 0.54). Tympanic temperature was moderately different between control and all testing blocks. Menthol showed small improvements in thermal comfort relative to carbohydrate (-0.33; -0.63 to 0.03) and water (-0.40; -0.70 to -0.10), and induced moderate reductions in thermal sensation (-0.71; -1.01 to -0.40 and -0.66; -0.97 to -0.35, respectively). Menthol also reduced thirst by a small to moderate extent. To conclude, carbohydrate and water may elevate heart rate, whereas menthol elicits small improvements in thermal comfort, moderately improves thermal sensation and may mitigate thirst. This suggests a hedonic response of value in hot conditions for a short-moderate duration.

16. Hecpudin and Iron Status in Elite Female Rugby Players

Smith, S, and Black, K.

University of Otago

Hecpudin was identified as a negative regulator of iron levels in the early 2000s. Since then, the exercise-induced hecpcidin response has been proposed as a mechanism of iron deficiency (ID) in athletes. By assessing and tracking haematological and inflammatory parameters in elite female rugby players, the aim of the current study is to describe the relationship between hecpcidin and iron levels amongst elite female rugby players. Venepuncture blood samples were analysed from 17 elite female rugby players in February and July and analysed for iron, ferritin, soluble transferrin receptor, high sensitivity C-reactive Protein (CRP) and hecpcidin. Dietary intakes, physical activity demands and DXA scans were also measured. Mean iron concentration in February was 21.3 µmol/L and increased to 21.9 µmol/L in July. Mean ferritin and sTfR values in February were 77.1 µg/L and 2.62 mg/L respectively, and 75.1 µg/L and 2.50 mg/L in July. Average CRP concentrations increased from 0.95 mg/L to 1.66 mg/L and mean hecpcidin concentrations decreased from 34.2 ng/mL to 33.1 ng/mL. All mean variables were within the expected reference ranges, however some individual values fell outside this range. The exercise-induced hecpcidin response may contribute to ID in elite female athletes, although more research is needed.

Sport Performance

17. Comparing two Landing Error Scoring System protocols: Same but different!

Hébert-Losier, K; Hanzlíková, I; Beaven, CM

University of Waikato

Introduction: The Landing Error Scoring System (LESS) screens for risk of non-contact lower-extremity injuries. The original LESS requires individuals to jump down from a 30-cm box to 50% of body height. However, clinicians and scientists often do not dictate landing distance during LESS assessment. This study examines whether landing distance influences LESS score and risk categorisation. **Method:** Seventy volunteers (34 males, 36 females) performed 3 x 30-cm drop-jumps under two landing conditions: (1) 50% of body height, (2) no set distance. The average LESS score and proportion of individuals categorised at high (LESS ≥ 5) and low (LESS < 5) risk were