

Dr Karen Hind
PhD Leeds, Cert Clin Densitom ISCD.



Research specialisation: Exercise and bone health; Athlete health; Sport injury; Musculoskeletal health; Body composition; Relative energy deficiency in sports (RED-S); Dual energy X-ray absorptiometry imaging.

Experience: 15 years' as an academic. Leads research in bone and body composition at Durham University, UK. Fellow of the Wolfson Research Institute for Health and Wellbeing. Chair of the Department of Sport and Exercise Sciences Research Ethics Committee. Chair of the UK-Ireland Panel, and board member of the International Society for Clinical Densitometry (ISCD). Visiting Fellow at Newcastle University (UK) and Adjunct Associate Professor at Trinity College Dublin. Editorial board for two journals and provides regular journal and funding body peer review. Former GB athlete.

Research overview: Global Rugby Health Research Programme and the UK Rugby Health Project Lead. Researches bone strength in athletes, strategies for improving bone strength and for improving the identification and management of risk of injury in athletes and wider, across the lifespan. Appointed to Durham University in September 2018, previously a Senior Research Fellow at Leeds Beckett University. Her ongoing athlete-focused research programmes include current and former rugby player health (neurocognitive, musculoskeletal, concussion, post concussion syndrome, and general health and wellbeing), strategies for the prevention, assessment and treatment of RED-S, and DXA protocols for bone and body composition assessment in athletes. Instrumental in the development of an online RED-S educational resource www.health4performance.co.uk

Postgraduate supervision: Currently supervising 6 PhD students and 2 Masters by Research students. 1 PhD student and 7 Masters theses students to completion and young investigator awards. Topics have ranged from musculoskeletal and neuromuscular health in former rugby players, neurovascular assessment by near infra red spectroscopy in former rugby players, skeletal and maturational associations with gymnastics training, and injury risk identification in rowing, football and rugby. PhD and MRes examiner.

Research publications: 110 publications in journals (64), chapters (4) and conference paper/abstract proceedings (42). Example publications:

- Hillier M, Sutton L, James L, Hind K. (2019) Prevalence, magnitude and influencers of rapid weight loss in mixed martial arts. *International Journal of Sports Nutrition and Exercise Metabolism* 1-25 doi: 10.1123/ijsnem.2018-0393
- Keay N, Francis G, Entwistle I, Hind K. (2019) Clinical evaluation of the effectiveness and practical management of competitive male road cyclists at risk of relative energy deficiency in sports. *British Medical Journal, Open Sport and Exercise Medicine*
- Zemski A, Hind K, Oldroyd B, Keating S, Beard E, Marsh D, Slater G. (2018) Same-day versus consecutive-day precision error of dual-energy X-ray absorptiometry for interpreting body composition change in resistance trained athletes. *Journal of Clinical Densitometry*, 22 (1)104-114.
- Keay N, Francis G, Hind K. (2018) Low energy availability assessed by a sport-specific questionnaire and clinical interview is indicative of bone health, endocrine profile and performance in competitive male cyclists. *BMJ Open Sport and Exercise Medicine* <http://dx.doi.org/10.1136/bmjsem-2018-000424>
- Zemski A, Beard E, Keating S, Hind K, Slater G. (2018) Pre-season body composition adaptations in elite Caucasian and Polynesian rugby union athletes. *International Journal of Sport Nutrition and Exercise Metabolism* <https://doi.org/10.1123/ijsnem.2018-0059>
- Hind K, Slater G, Lees M, Thurlow S, Barlow M, Oldroyd B, Shepherd J. (2018) Interpretation of DXA-derived body composition change in athletes : a review and recommendations for best practice. *Journal of Clinical Densitometry* doi: [10.1016/j.jocd.2018.01.002](https://doi.org/10.1016/j.jocd.2018.01.002)
- Hind K, Barlow M, O'Hara J, Schilders E. (2017) Groin pain in professional footballers is associated with lower sub-regional bone density of the symphysis pubis. *FIFA Future of Football Medicine Conference*. Barcelona. May.
- Hind K, Pearce M, Birrell F. (2017) Total and visceral adiposity is associated with prevalent vertebral fracture in women, but not in men aged 62 years. *J Bone Miner Res*.
- Jones, A, Entwistle I, Barlow M, Thurlow S, Varley I, Sale C, O'Hara J, Schilders E, Francis P, Hind K. (2017) DXA body composition reference ranges for male professional football players. *FIFA Future of Football Medicine Conference*. Barcelona 12-15th
- Jones A, Hind K, Wilson H, Johnson M, Francis P. (2017) A standardised protocol for the assessment of lower limb muscle contractile properties in football players using tensiomyography. *Advances in Skeletal Muscle Function Assessment*

- Hind K, Bansil K, Barlow M, Rutherford Z, Lees M. (2016) Novel bilateral analysis of AP lumbar spine bone density in elite cricket fast bowlers. ISCD 22nd Annual Meeting. June. J Clin Densitom.
- Lees M, Bansil K, Barlow M, Rutherford Z, Hind K. (2016) Bone density and cross-sectional geometry of the proximal femur in elite cricket fast bowlers and non-athletic controls. J Clin Densitom
- Lees M, Jones B, Till K, O'Hara J, Barlow M, Brightmore A, Oldroyd B, Hind K. (2016) Seasonal changes in 3-C body composition of professional rugby union players: an team and individualised approach. J Clin Densitom
- Jones B, Till K, Barlow M, Lees M, O'Hara J, Hind K (2015) Anthropometric and three-compartment body composition differences between Super League and Championship rugby league players: Considerations for the 2015 season and beyond. PLOS One. July doi: 10.1371/journal.pone.0133188.
- Till K, Jones B, O'Hara J, Lees M, Brightmore A, Barlow M, Hind K. (2015) Comparison of three-compartment body composition in academy and senior professional rugby league players. International Journal of Sports Physiology and Performance
- Barlow M, Oldroyd B, Till K, Jones B, O'Hara J, Lees M, Hind K. (2015) Precision of the GE Lunar iDXA for the assessment of 3-C total body composition in professional male rugby players. J Clin Densitom
- Jones B, Emmonds S, Hind K, Nicholson G, Rutherford Z, Till K. (2015) Physical Qualities of International Female Rugby League Players by Playing Position and Injury History. J Strength Cond Res 30:5.
- Lees M, Bansil K, Hind K. (2015) Total, regional and unilateral body composition of professional English first-class cricket fast bowlers. J Sports Sci
- Hind K, Gannon L, Brightmore A, Beck B (2015) Insights into relationships between body mass and bone: findings in elite rugby players. J Clin Densitom Feb 5th dx.doi.org/10.15/j.jocd.2014.11.002.

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