

Craig Sale BSc (Hons), MSc, PhD, FACSM

Address: Manchester Metropolitan University Institute of Sport, 99 Oxford Road, Manchester, M1 7EL, UK.

E-mail: c.sale@mmu.ac.uk

Date of Birth: 31st August 1973

Nationality: British

ORCID: 0000-0002-5816-4169

Present Position(s)

Since 23rd May 2022 – Professor of Human Physiology and Nutrition; Research Lead Institute of Sport; Research Lead Department of Sport and Exercise Sciences at Manchester Metropolitan University

Since 2012 – Visiting Research Professor, University of Sao Paulo, Brazil.

Since 2015 – Associate Researcher, Division of Medicine, University College London, UK.

Education

1997 to 2002 – PhD at Liverpool John Moores University.

1995 to 1996 – M.Sc. Sports Science (Physiology) at Liverpool John Moores University.

1992 to 1995 – B.Sc. (Hons) Sports Science at Liverpool John Moores University.

Relevant Work Experience

2008 – 2022: Professor of Human Physiology (formerly Reader in Applied Physiology 2011-2015 and Senior Lecturer 2008-2011), and Director of the Sport, Health and Performance Enhancement Research Centre, Nottingham Trent University.

Key roles included:

- Co-Lead of the NTU Health & Wellbeing Strategic Research Theme
- Director of the Sport Health and Performance Enhancement (SHAPE) Research Centre.
- UoA C26/C24 Co-ordinator for REF 2014 and 2021.
- School Research Committee Member.
- Chair of the Human Invasive Research Ethics Committee.
- Member of the University Research Committee.
- Member of the University Research Integrity Committee.
- Member of the Health and Well-Being Steering Group.
- Member of the Mansfield Action Research and Income Workstream Steering Group.
- Member of the Task and Finish Group relating to research ethics.
- Member of the Task and Finish Group relating to Research Centres.
- Department of Sport Science Senior Leadership Team.

2006 – 2008: Deputy Capability Group Leader, Senior Scientific Officer, QinetiQ Ltd.

2006 – 2008: Honorary Research Associate, Liverpool John Moores University.

2001 – 2006: Lecturer/Senior Lecturer in Exercise Physiology, University of Chichester.

2000 – 2001: Laboratory Technician, Liverpool John Moores University.

1996 – 1997: Researcher, Optimal Performance Limited.

Recent relevant publications

1. Civil, R., Dolan, E., Swinton, P.A., Santos, L., Varley, I., Atherton, P.J., Elliott-Sale, K.J., Sale, C. (in press). P1NP and β -CTX-1 Responses to a Prolonged, Continuous Running Bout in Young Healthy Adult Males: A Systematic Review with Individual Participant Data Meta-analysis. *Sports Medicine Open*.
2. Varley I, Sale C, Greeves JP, Morris JG, Sunderland C, Saward C. Relationship between Football-Specific Training Characteristics and Tibial Bone Adaptation in Male Academy Football Players. *Sports*. 2023; 11(4), 86. doi: 10.3390/sports11040086.
3. Varley I, Ward M, Thorpe C, Beardsley N, Greeves J, Sale C, Saward C. External training load is associated with adaptation in bone and body composition over the course of a season in elite male footballers. *Bone Rep*. 2022; 18, 101643. doi: 10.1016/j.bonr.2022.101643.

4. Swinton PA, Elliott-Sale KJ, Sale C. Comparative analysis of bone outcomes between quantitative ultrasound and dual-energy x-ray absorptiometry from the UK Biobank cohort. *Arch Osteoporos.* 2023; 18(1), 77. doi: 10.1007/s11657-023-01287-x.
5. Hutson MJ, O'Donnell E, Brooke-Wavell K, James LJ, Raleigh CJ, Carson BP, Sale C, Blagrove RC. High-impact jumping mitigates the short-term effects of low energy availability on bone resorption but not formation in regularly menstruating females: A randomized control trial. *Scand J Med Sci Sports.* 2023; 33(9), 1690-1702. doi: 10.1111/sms.14437.

Selected recent grants

1. May 2023 (total: £104, 816) – Can a nutraceutical formulation targeted at the autophagy-lysosomal system improve muscle regeneration and exercise adaptations in skeletal muscle. 50/50 funded PhD studentship with Iovate Health Sciences Inc, Canada. (PI: Nathan Hodson).
2. April 2023 (total £94, 018) – The effects of the menstrual cycle on physiological, psychological and sport performance factors. VISF study for ADIDAS (PI: Kirsty Elliott-Sale).
3. September 2020 (total £110, 156) – Uplift to: The efficacy of a postpartum physical development programme. Women in Ground Close Combat Review Team, UK MOD.
4. March 2020 (total £49, 590) – The effects of beta-alanine supplementation on cardiac function and health. 50/50 funded PhD studentship with Natural Alternatives Inc, US.
5. December 2019 (total 96, 000 EUR, £79, 846 at December 2019) – The impact of low carbohydrate diets on bone health and (re)modelling in elite endurance athletes. Irish Research Council, Enterprise Partnership Scheme. Brian Carson (PI).
6. September 2018 (total £830, 521) – The efficacy of a postpartum physical development programme. Women in Ground Close Combat Review Team, UK MOD.

Current PhD Supervisions

1. April 2023 – Investigating whether supraphysiological changes in oestrogen and progesterone affect aspects of physiology and athletic performance in cis-gendered women (Laura McTernan).
2. January 2023 – Musculoskeletal effects of exercise across the menopause transition (Nathan Lynskey).
3. October 2021 – Investigation of the anti-inflammatory actions of carnosine in metabolic Diseases (Joshua Awoke).
4. October 2020 – The effects of beta-alanine supplementation on cardiac function and health. (Jade Creighton).
5. January 2020 – The impact of low carbohydrate diets on bone health and (re)modelling in elite endurance athletes (Conor Raleigh).

Recent Invited / Keynote Lectures

1. Invited talk on “Physical Activity and Bone Health: is it all it’s cracked up to be?” at the PAFH / HRI UL Symposium (University of Limerick, Ireland, April 2023).
2. Invited talk on “Skeletal Health Across the Lifespan” at the International Sport and Exercise Nutrition Conference (Manchester, December 2022).
3. Keynote lecture titled “The role of milk and dairy foods for bone health in athletes” at the Dairy Council for Northern Ireland Milk It Symposium (Belfast, Northern Ireland, November 2022).
4. Invited Highlighted Symposium lecture titled “A Look to the Future (of bone stress injuries): Challenges and Opportunities” at the 69th Annual Meeting of the American College of Sports Medicine (San Diego, US, June 2022).
5. Invited talk ACSM CPD course (Brazil) titled “Sports nutrition and bone health” (online, February 2022).