**Dr Scott Brown**

PhD, BSc SDSU, MSc (Hons) BSU, PhD AUT



**Research specialisation:** Sports biomechanics, strength and conditioning, coaching,

injury prevention, and technology design.

**Experience:** > 40 peer-reviewed journal publications (including primary and co-authored works); academic journal reviewer for 8 peer-reviewed journals; Head Strength and Conditioning and Assistant Coach Aquinas College Rugby (Men and Women), Head Coach (Women), East Coast Bays Rugby Football Club (union) and Conditioning Coach (Women), North Harbour Rugby Union and sevens; implementer of the SPRINZ return-to-sport clinical service; product design and testing with the AUT School of Engineering and School of Sport and Recreation; international collaborations with Professor Jean-Benoît Morin from Université Côte d’Azur in Nice, FRA, Dr. Pedro Jiménez-Reyes from Universidad Católica San Antonio de Murcia, Murcia, ESP and Professor Aaron Coutts from University of Technology Sydney, Sydney, AUS.

**Research overview:** Strength and conditioning practice and team sport application; three-dimensional biomechanics and motion capture techniques; electromyography and dynamic muscle function; software design and sport implementation.

**Postgraduate supervision:** Three masters theses students to completion; unpaid work and official capacity. The effects of 8-weeks training programme of plyometric and ballistic training on female golfers’ physical characteristics and drive performance by Anita Ya Ting Chau. [MSc completed]. An Analysis of High-bar and Low-bar Back-squat Techniques in Olympic Weightlifters and Powerlifters by Daniel Glassbrook. [MSc completed]. The Effects of Handheld Load on Horizontal Jump Performance in Female Athletes by Chloe R McKenzie. [MSc completed].

**Research publications:**

1. **Brown SR**, Washabaugh EP, Dutt-Mazumder A, Wojtys EM, Palmieri-Smith RM, Krishnan C. Functional resistance training as a viable method to improve lower-extremity strength and gait mechanics in an individual with acute anterior cruciate ligament-reconstruction. Sports Health. 2019.
2. **Brown SR**, Feldman ER, Cross MR, Helms ER, Marrier B, Samozino P, Morin J-B. The potential for a targeted strength training programme to decrease asymmetry and increase performance: A proof-of-concept in sprinting. Int J Sports Physiol Perform. 2017.

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1. **Brown SR**, Brughelli M, Cross MR. Profiling sprint mechanics by leg preference and position in rugby union athletes. Int J Sports Med. 2016;37:890-897.
2. **Brown SR**, Brughelli M, Bridgeman LA. Profiling isokinetic strength by leg preference and position in rugby union athletes. Int J Sports Physiol Perform. 2016;11:500-507.
3. Cross MR, Brughelli M, Samozino P, **Brown SR**, Morin J-B. Optimal loading for maximizing power during over-ground sled resisted sprinting. Int J Sports Physiol Perform. 2017.
4. Glassbrook DJ, **Brown SR**, Helms ER, Duncan S, Storey AG. The high-bar and low-bar back-squats: A biomechanical analysis. J Strength Cond Res. 2017.
5. Morin J-B, Petrakos, G, Jiménez-Reyes P, **Brown SR**, Samozino P, Cross MR. Very-heavy sled training for improving horizontal force output in soccer players. Int J Sports Physiol Perform. 2016.
6. Lewis GN, Hume PA, Stavric V, **Brown SR**, Taylor D. NZ Rugby Health study: Motor cortex excitability in retired elite and community level rugby players. NZ Med J. 2016.
7. Hume PA, Theadom A, Lewis GN, Quarrie KL, **Brown SR**, Hill R, Marshall SW. A comparison of cognitive function in former rugby union players compared with former non-contact-sport players and the impact of concussion history. Sports Med. 2016.