

Dr Elizabeth Bradshaw

BEd Deakin, BApSc(Hons) Deakin, PhD Deakin, ESSAM, ASpSc, FISBS



Research specialisation: Sport biomechanics, motor control, injury epidemiology and prevention.

Experience: Dr Bradshaw is a Senior Lecturer in the School of Exercise Science at Australian Catholic University (ACU) in Melbourne. She has worked extensively in elite sport through consultancy and/or employment at the Victorian Institute of Sport, Australian Institute of Sport, and the New Zealand Academy of Sport. Dr Bradshaw has an ongoing role as a consultant for Gymnastics Australia in sports science, and is a Fellow of the International Society of Biomechanics in Sport.

Research overview: Largely focused upon biomechanics and motor control of human movement with specific interest in sports performance, injury mechanisms, movement variability, and human gait. Present projects include:

- Quantifying the relationship between impact acceleration magnitude and rugby league head gear absorption effectiveness
- Every injury prevented is a stronger police force: A collaborative study with the Victoria Police

Postgraduate supervision: 4 PhD, 5 Masters, and 14 Honours students. Currently supervising 3 doctoral and 1 Honours student. Current topics include:

- Epidemiology and biomechanical influences on low back pain in dance (Chris Swain ACU)
- Injury, lower limb loading and growth in pre-pubescent and adolescent dancers (Cassie Conway ACU)
- Taking the guesswork out of managing training load in gymnastics: Using inertial measurement units to develop a load catalogue for men's and women's artistic gymnastics (Rhiannon Campbell UC)
- Job activity monitoring: A case study comparison on General Duty and Dog Squad officers (Karen Grech ACU)

Research publications: Over 115 scientific publications. Example publications include:

Book Chapters

Bradshaw, E.J. (In Press). Monitoring gymnasts for injury prevention. In: Jemni, M. (Ed). *The Science of Gymnastics* (2nd Ed.). Abingdon, Oxon: Routledge.

Hume, P.A., **Bradshaw, E.J.**, Bruggemann, G.-P. (2013). Biomechanics: Injury Mechanisms and Risk Factors In; Caine, D.J., Russell, K., Lim, L. (Ed's). *Handbook of Sports Medicine and Science Gymnastics*. Oxford; Wiley, 75-84.

Bradshaw, E. (2013). Analysing Technique. In; Pyke, F. S. (Ed). *Coaching Excellence*. Champaign: Human Kinetics, 147-170.

Journal Articles

Swain, C.T.V., **Bradshaw, E.J.**, Whyte, D.G., Ekegren, C.L. (In Press). Life history and point prevalence of low back pain in pre-professional and professional dancers. *Physical Therapy in Sport*.

Simons, C., & **Bradshaw, E.J.** (2016). Do accelerometers mounted on the back provide a good estimate of impact loads in jumping and landing tasks? *Sports Biomechanics*, 15(1), 76-88.

Joseph, C., **Bradshaw, E.J.**, Furness, T.P., Kemp, J., Clark, R.A. (2016). Early changes in Achilles tendon behaviour in-vivo following downhill backwards walking. *Journal of Sport Sciences*, 34(13), 1215-1221.

Bowerman, E., Whatman, C., Harris, N., & **Bradshaw, E.** (2015). A review of the risk factors for overuse lower extremity injuries in young elite ballet dancers. *Journal of Dance Medicine and Science*, 19(2), 51-56.

Nguyen, C., **Bradshaw, E.**, Pease, D., Wilson, C. (2014). Is starting with the feet out of the water faster in backstroke swimming? *Sports Biomechanics*, 13(2), 154-165.

McGough, R., Paterson, K., **Bradshaw, E.J.**, Bryant, A., Clark, R. (2012). Improving Lower Limb Weight Distribution Asymmetry during the Squat Using Nintendo Wii Balance Boards and Real-time Feedback. *Journal of Strength and Conditioning Research*, 26, 47-52.



Dr Elizabeth Bradshaw

School of Exercise Science, Australian Catholic University, Daniel Mannix Building, Level 1, Room 37
Locked Bag 4115, 8-14 Brunswick Street, Fitzroy VIC 3065, Australia.
T: +61 3 9953 3030 W: www.acu.edu.au
Skype: sportsbiomechanics