BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Clare E Milner	Associate Professor
eRA COMMONS USER NAME (credential, e.g., agency login) cmilner	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	MM/YY	FIELD OF STUDY
University of Durham, Durham, UK	BSc (Hons)	05/95	Biological Sciences
University of Leeds, Leeds, UK	MSc	09/96	Anatomy
University of Leeds, Leeds, UK	PhD	09/99	Biomechanics

A. Personal Statement

My research interests are in the biomechanics of lower extremity injury, injury prevention, and rehabilitation. In particular, my work attempts to understand the biomechanical etiology of overuse injuries in runners, such as tibial stress fracture, iliotibial band syndrome, and plantar fasciitis. Applying an understanding of biomechanical factors associated with injury in runners and other recreational athletes via gait and movement retraining protocols takes this work directly into the area of rehabilitation. In addition, I have interests in walking biomechanics in obese adults and older adults with knee osteoarthritis or joint replacement. I have conducted research and published in the area of the biomechanics of lower extremity injuries and approaches to movement retraining during the past 10 years. In summary, I have a record of published research studies in the biomechanics of overuse injuries and in technique modification via instruction and retraining.

B. Positions and Honors

Positions and Employment

1999-2000 Post-doctoral Research Fellow, Center for Locomotion Studies, Pennsylvania State University, University Park, PA
2000-2003 Research Fellow, Centre for Sport & Exercise Science, Sheffield Hallam University, UK
2003-2005 Postdoctoral Research Fellow, Department of Physical Therapy, University of Delaware, Newark, DE
2005-2011 Assistant Professor, Department of Exercise, Sport & Leisure Studies, University of Tennessee, Knoxville, TN
2011 – 2013 Associate Professor, Department of Exercise, Sport & Leisure Studies, University of Tennessee, Knoxville, TN
2013 - Associate Professor, Department of Physical Therapy and Rehabilitation Science, Drexel University, Philadelphia, PA

Other Experience and Professional Memberships

2000- Member, International Society of Biomechanics
2003- Member, American Society of Biomechanics
2004- Member, American College of Sports Medicine
2009-2012 Co-chair, American College of Sports Medicine Biomechanics Interest Group

2012-2013 Chair, American College of Sports Medicine Biomechanics Interest Group
2012- Editorial Board Member for *Journal of Applied Biomechanics*

Honors

2008 Helen B. Watson Outstanding Faculty Research Award, College of Education, Health, and Human Sciences, University of Tennessee
2009 Advancement to Fellow of the American College of Sports Medicine

C. Selected Peer-reviewed Publications (Selected from 32 peer-reviewed manuscripts)

Most relevant to the current application

1. Milner, C.E., Ferber, R., Pollard, C.D., Hamill, J. & Davis, I.S. (2006). Biomechanical factors associated with tibial stress fracture in female runners. Medicine and Science in Sports and Exercise, 38, 323-328.
2. Pohl, M.B., Mullineaux, D., Milner, C.E., Hamill, J. & Davis, I.S. (2008). Biomechanics predictors of retrospective tibial stress fractures in runners. Journal of Biomechanics, 41, 1160-1165.
3. Milner C.E., Hamill J. & Davis I.S. (2010). Distinct hip and rearfoot kinematics in female runners with a history of tibial stress fracture. Journal of Orthopaedic and Sports Physical Therapy, 40, 59-66.
4. Crowell, H.P., Milner, C.E., Hamill, J. & Davis, I.S. (2010). Reducing impact loading during running with the use of real-time visual feedback. Journal of Orthopaedic and Sports Physical Therapy, 40, 206-213.
5. Tate, J.J. & Milner, C.E. (2010). Real-time kinematic, temporospatial, and kinetic biofeedback during gait retraining in patients: A systematic review. Physical Therapy, 90, 1123-1134.
6. Milner, C.E., Fairbrother, J.T., Srivatsan, A. & Zhang, S. (2012). Simple verbal instruction improves knee biomechanics during landing in female athletes. The Knee, 19, 399-403.

Additional recent publications of importance to the field (in chronological order)

1. Mullineaux, D.R., Milner, C.E., Davis, I.S. & Hamill, J. (2006). Normalization of ground reaction forces. Journal of Applied Biomechanics, 22, 230-233.
2. Milner, C.E., Davis, I.S. & Hamill, J. (2006). Free moment as a predictor of tibial stress fracture in distance runners. Journal of Biomechanics, 39, 2819-2825.
3. Milner, C.E., Hamill, J. & Davis, I. (2007). Are knee mechanics during early stance related to tibial stress fractures in runners? Clinical Biomechanics, 22, 697-703.
4. Barnes, A., Wheat, J. & Milner, C.E. (2008). Association between foot type and tibial stress injuries: A systematic review. British Journal of Sports Medicine, 42, 93-98.
5. Barnes, A., Wheat, J. & Milner, C.E. (2011). Forefoot-rearfoot kinematics and tibial shock in high and low arched individuals during running. Foot and Ankle International, 32, 710-716.
6. Foch, E. & Milner, C.E. (2012). Lower extremity joint position sense in runners with and without a history of knee overuse injury. Gait & Posture, 36, 557-560.
7. Tate, J. J., Milner, C. E., Fairbrother, J. T., & Zhang, S. (2013). The effects of a home-based instructional program aimed at improving frontal plane knee biomechanics during a jump landing task. Journal of Orthopaedic and Sports Physical Therapy, in press, accepted February 2013.
8. Foch, E., & Milner, C. E. (2013) Trunk kinematics and trunk endurance strength in runners with previous iliotibial band syndrome. *Journal of Applied Biomechanics*, in press, accepted May 2013.

D. Research Support

Completed Research Support

Gensco Inc. Thompson (PI) 2010-2011
Biomechanical evaluation of 2nd generation of a “wellness” shoe
The goal of this study was to compare walking biomechanics in a second generation shoe design to a standard dress shoe in adult men.
Role: co-investigator

Genesco Inc. Thompson (PI) 2010
Energy cost of walking in Dockers Active Balance shoes
The goal of this study was to compare the physiology and biomechanics of walking in a new shoe design to a standard dress shoe in adult men.
Role: co-investigator