Seminar 3. Mechanisms underlying improvements in exercise tolerance following inspiratory muscle training

Wednesday, 24th April 2013; Heinz Wolff Building, Rm 224

09:00 – 09:45  Prof. Alison McConnell  
Brunel University  
Inspiratory muscle training: history and putative mechanisms

09:45 -10:30  Dr. Lee Romer  
Brunel University  
The role of respiratory muscle fatigue and metaboreflex influences upon exercising limb blood flow and performance

10:30 -10:45  Coffee break

10:45 - 11:30  Dr. Emma Ross  
University of Brighton  
The role of feedback from exercising muscles in central fatigue

11:30 - 12:15  Dr. Caroline Jolley  
King’s College, University of London  
The role of the respiratory muscles in dyspnoea and exercise tolerance

12:15 – 13:00  Discussion  
Next steps for inspiratory muscle training research
Alison McConnell is Professor of Applied Physiology and Deputy Director of the CSMHP
Alison McConnell graduated from the University of Birmingham with a B.Sc. in Biological Sciences (Physiology). Her transition into exercise physiology came after completing a M.Sc. in Human and Applied Physiology, and a Ph.D. at Kings College London. Alison joined Brunel University in 2000 where she has pursued her interest in respiratory limitations to exercise. In particular, she has pioneered research on the ergogenic influence of inspiratory muscle training. Her guide to breathing training for sport, “Breathe Strong, Perform Better”, was published by Human Kinetics Inc. in 2011, and a guide for clinicians will be published by Reed Elsevier in May 2013.

Lee Romer is a Reader in Human and Applied Physiology at the CSMHP.
He completed his undergraduate and masters programme in Sport Sciences at Brunel University and worked for several years at the British Olympic Medical Centre. He completed his PhD at The University of Birmingham and received post-doctoral training at the John Rankin Laboratory of Pulmonary Medicine, University of Wisconsin-Madison, USA. He has published extensively in the area of exercise physiology, with particular emphasis on the cardiorespiratory responses, interactions and limitations to exercise in health, disease and disability.
Emma Ross is Senior Lecturer in Sport & Exercise Physiology at the University of Brighton
Dr Emma Ross obtained a first class honours degree in Sport and Exercise Sciences from Exeter University, and a Masters in Coaching Science from University of Wales Institute, Cardiff, before obtaining her Ph.D. from Brunel University in 2005. Emma is currently a Senior Lecturer in Sport and Exercise Physiology at The University of Brighton. Her research explores the role of the central nervous system in fatigue, particularly during exercise performed in environmental extremes such as heat and hypoxia. Emma is also interested in how the central nervous system adapts to exercise training, and how exercise can be used therapeutically in patients with neurodegenerative disease.

Caroline Jolley is Clinical Lecturer at King’s College London
Completed her clinical training at the University of Cambridge and King's College School of Medicine and Dentistry, and currently holds a Clinical Lectureship in Respiratory Medicine in the Division of Asthma, Allergy and Lung Biology, King's College London. Caroline recently completed a PhD at King’s College London School of Medicine under the supervision of Professor John Moxham and Professor Michael Polkey. This research focused on the use of the diaphragm electromyogram (EMG) to quantify neural respiratory drive in COPD, and the relationship between neural respiratory drive and breathlessness. Current research interests include the use of respiratory muscle EMG recordings to monitor respiratory disease progression and further our understanding of physiological mechanisms driving breathlessness in health and disease.