University of Birmingham

Dr Mike White BSc PhD

Reader in Exercise Physiology

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About

Mike is an exercise physiologist who has long standing interests in the effects of ageing on human muscle function and performance, the control of the human cardiovascular and respiratory systems in exercise and integrative physiology in general.

Qualifications

BSc (Leeds)

PhD (Nottingham)

Biography

As an undergraduate Mike read Physiology at the University of Leeds and after graduation he joined the MRC Environmental Physiology Unit in London. Two years later he transferred to MRC External Staff and moved to the University of Nottingham and the MRC Muscle Group, where he completed his PhD. In 1986 he moved to Birmingham and the then newly formed School of Sport and Exercise Sciences, where he has remained ever since.

Doctoral research

PhD title Human muscle weakness and fatigue: the effects of disuse, age and exercise.

Research

- Exercise Physiology
- Cardiovascular and respiratory control in exercise
- Human muscle function
- Ageing

Now Reader in Exercise Physiology Mike's work has covered many aspects of human physiology including thermoregulation, muscle fatigue, disuse and the ageing process and latterly cardiovascular and respiratory control mechanisms during exercise in health and disease. He has acted as reviewer for all of the major physiological journals and a number of clinical journals also serving on the Editorial Advisory Panel for Clinical Science until 2011. Mike has been an Editor of Experimental Physiology since 2006 becoming its Deputy Editor-in-Chief in 2012. He is a member of the American Physiological Society, American College of Sports Medicine and the British Society for Heart Failure. He was elected a member of the Physiological Society in 1991 and then elected a member of its Council and a Trustee from 2009-2013, serving as a member of the Society's Meetings Committee for that period. He was a member of the organizing committee of the highly successful meeting held in London 2012; The Biological Basis of Elite Performance. **http://ep.physoc.org/content/vol97/issue3/ (http://ep.physoc.org/content/vol97/issue3/)**

Mike has held or currently holds appointments as External Examiner for a total of five undergraduate and three postgraduate programmes to date, for degrees awarded by both home and overseas Universities. He has supervised or co-supervised 16 PhD and a number of Masters students to completion and has examined upward of 20 PhD theses from laboratories around the world. In 1995 and again in 2001, he was awarded Faculty Visiting Scholarships to the School of Exercise and Sports Science at the University of Sydney. In 2012 he was awarded a British Heart Foundation (BHF) Travel Fellowship to carry out collaborative research with colleagues in the Heart and Vascular Institute of Penn State College of Medicine in the USA. His laboratory has received significant funding from BHF to support post doctoral appointments and research collaborations.

Other activities

Deputy Editor-in-Chief of Experimental Physiology.

Publications

Michael J.White. (2013) Muscle afferents and cardiorespiratory control: the Birmingham connection. Exp. Physiol. *doi:10.1113/expphysiol.2013.072645*

Christos Lykidis, George Balanos and Michael White. (2013) The pulmonary vascular response to the combined activation of the muscle metaboreflex and mechanoreflex. Exp. Physiol *98(3). 758-767.* *See also F1000 Prime Recommended .*

Richard Bruce and Michael White (2012) Muscle afferent activation causes ventilatory and cardiovascular responses during concurrent hypercapnia in humans. Exp. Physiol. 97 (2)208-218.

See also the Viewpoint on this paper by J. H. Coote. (2012) "Muscles bring breathing alive" Exp Physiol 97 (2) 207 and the *F1000 Evaluation* of it which gave a rating of (8) "must read".

Michael White (2012) Cardiac, respiratory and vascular aspects of performance. Exp Physiol 97 (3) 293-294 *See Reports of the Symposium :* The biomedical basis of elite performance. ***http://ep.physoc.org/content/vol97/issue3/*** **(http://ep.physoc.org/content/vol97/issue3/)**

Michael J. White (2011)I'd like it to be true, but do Group III and IV muscle afferents really contribute to the ventilatory response to exercise?**J Appl Physiol March 2011 110:862; doi:10.1152/japplphysiol.01411.2010 (http://jap.physiology.org/content/vol110/issue3)**

Rachel C. Drew, Lawrence I. Sinoway, and Michael J. White (2010) The Two-Hour Marathon: Running Economy and Lower Body Flexibility. ***http://jap.physiology.org/content/110/1/275/reply*** **(http://jap.physiology.org/content/110/1/275/reply)**

Christos K Lykidis, Prem Kumar, Lauro C Vianna, Michael J. White and George M Balanos (2010). A respiratory response to the activation of the muscle metaboreflex during concurrent hypercapnia in man. Exp.Physiol. 95(1):194–201.

Rachel Drew, David McIntyre, Christopher Ring and Michael White (2008). Local metabolite accumulation augments passive muscle stretch-induced modulation of carotid-cardiac but not carotid-vasomotor baroreflex sensitivity in man. Exp.Physiol. 93(9):1044-1057.

Eves, F.F., Masters, R.S.W., McManus, A., Leung, M., Wong, P. and White, M.J. (2008). Contextual barriers to lifestyle physical activity interventions in Hong Kong. Med. Sci. Sports Exerc. 40(5):965-71.

Rachel C. Drew, Martin P.D. Bell and Michael J.White. (2008). Modulation of spontaneous baroreflex control of heart rate and indexes of vagal tone by passive calf muscle stretch during graded metaboreflex activation in humans. J. Appl. Physiol. 104:716 – 723.

Christos K. Lykidis, Michael J. White, and George M. Balanos (2008). The pulmonary vascular response to the sustained activation of the muscle metaboreflex in man. Exp Physiol. 93(2):247-53.

Citation Classics (over 100 citations)

Davies, C.T.M., Thomas,D.O. and White, M.J. (1986). Mechanical properties of young and elderly human muscle. Acta Med Scand Suppl. 711: 219-226.

Davies, C.T.M. and White, M.J. (1981). Muscle weakness following eccentric work in man Pflugers Archiv-European Journal of Physiology 392(2):168-171

Davies ,C.T.M., Mecrow I.K. and White,M.J. (1982) Contractile properties of the human triceps surae with some observations on the effects of temperature and exercise. Eur. J. Appl. Physiol. 49: 255-269.

McDonagh MJN, White MJ, Davies CTM (1984) Different Effects of Ageing on the Mechanical Properties of Human Arm and Leg Muscles. **Gerontology 30(1):49-54 (http://content.karger.com/ProduktеDB/produkte.asp?Aktion=showproducts&searchWhat=books&ProduktNr=244947)** .

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