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Alex Wadley

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About

PhD Title: The interactions and associations between oxidative stress and inflammation in exercise and disease

Supervisors: Dr Sarah Aldred

Alex thoroughly enjoys his area of research as it links the benefits of exercise with a clinical population.

Qualifications

Degree in Sport & Exercise Science (Class I, Honours)

Biography

Alex Wadley completed his degree in Sport & Exercise at the University of Birmingham in 2009, before returning in 2010 to undertake his Ph.D.

Research

Research group: Exercise Metabolism

Oxidative stress is a state whereby the production of reactive oxygen species exceeds their removal by endogenous and exogenous antioxidants systems, resulting in the progressive oxidation to molecules (proteins, lipids and DNA) within the body. Inflammation is a bodily defence mechanism that is initiated in response to tissue damage or infection, is mediated by signaling cytokine molecules and characterised by the influx of migrating leukocytes. These two processes are commonly associated with one another in human disease and in response to acute stresses such as exercise, although the precise mechanisms are not fully understood. The aims of my research have been to characterise the associations and interactions between oxidative stress and inflammation in different populations (i.e. healthy and diseased subjects) and in response to different exercise protocols.

Publications

Wadley, A. ., Zanten, V. van, J.J.C.S, & Aldred, S. (2012). The interactions of oxidative stress and inflammation with vascular dysfunction in ageing : the vascular health triad. doi:10.1007/s11357-012-9402-1

Paine, N.J., Ring, C., Aldred, A., Bosch, J.A., **Wadley, A.J**, & Veldhuijzen van Zanten, J.C.C.S. (2013). Eccentric-exercise induced inflammation attenuates the vascular responses to mental stress. Brain, Behavior and Immunity. , http://dx.doi.org/10.1016/j.bbi.2013.01.082

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