



Sam Rowland

University Teacher and Research Student

The Tokyo Olympics in 2021 will be the first games where there is an equal number of medals for male and female athletes. Additionally, there is currently increasing investment in female sports participation and media coverage for women's sport. However, despite the significant differences between male and female anatomy and physiology, there is a surprising lack of research conducted. This means we don't really understand how hormonal changes impact exercise performance and cardiovascular health, and there is a need for high quality female-focused research within sports science.



My research looks at how a nutritional supplement (beetroot juice) can influence health and exercise performance. Beetroot juice contains high levels of nitrate, which is a molecule that can be converted to nitrite and then nitric oxide. Nitric oxide can have positive effects on a wide array of biological processes. For example, it can cause blood vessels to dilate, causing reductions in blood pressure. At the moment we don't know very much about how women respond to this supplement and consequently whether it should be recommended to improve health and or exercise performance. My next research study will be looking at how women respond to beetroot juice and seeing whether this response differs across the menstrual cycle and between men and women.

Post 16 Education:

AS Level Dance and General Studies

A Level PE, Biology and Geography

Higher Education:

BSc Sport and Exercise Science

MSc Exercise Physiology

Sam's advice: I honestly think the best advice I was given was from my parents and it was very simple – do what you enjoy.

Don't feel pressured to take subjects you dislike because they will 'look good' or because others want you to take them. Take subjects you are truly passionate about and are willing to work for, it is much more likely to lead you down a future path that you will be happy with (even if you don't know what that is just yet!).





WHY IT MATTERS... SPORT, EXERCISE & HEALTH



Loughborough
University

Sam's experience as a student

I absolutely loved my undergraduate university experience.

Some of my favourite memories include dressing up as an alien for a social, climbing Machu Picchu in Peru and competing at the largest inter-university dance competition in the UK.

I even tried badminton (I was awful at this), trampolining and the university fitness classes.

I met some amazing life-long friends along the way that I was able to share a house with in my second and final year – we're still super close and meet up regularly.

Sam's Career

I am currently working as a University Teacher and PhD researcher within the School of Sport, Exercise and Health Sciences at Loughborough. I lead Exercise Physiology laboratory classes for undergraduate students and conduct research which involves looking at the influence of a nutritional supplement on both exercise and cardiovascular physiology.

My undergraduate and postgraduate degrees have been vital to getting me where I am today. I specialised in physiology within my first degree, choosing to take modules and a research project in this area. My masters then developed my knowledge further and gave me the opportunity to do a large field-based physiology project in collaboration with the English Institute of Sport.

It was during my masters that I decided I wanted to do a PhD.

Why did you want to do research on Physiology?

My drive to study for a PhD in Physiology was fuelled by my love of learning and aspiration to contribute to knowledge within the field. Ultimately, my ambition is to contribute to science and share my research findings in academic papers, at conferences and with university students in the hope of inspiring some of the next generation of applied practitioners and academics.

Loughborough University offers undergraduate degrees in

Sport Science, Coaching and Physical Education / Sport and Exercise Science / Sport Management / Sport and Exercise Psychology / Psychology / Sport Technology

Please note: Degrees and their titles change over time. Some graduates may have studied degrees that have evolved and changed in response to changes in demand from employers.