

PERFORMANCE PERFECTED PERIODICAL

SPORTS AND EXERCISE SCIENCE



This is the quarterly newsletter from the Sports and Exercise Science team within Lancaster Medical School.

We will share information to provide an insight into the wide range of activities going on in Sports and Exercise Science.

We hope this newsletter is enjoyed by students, colleagues, health care professionals, sports teams, athletes, communities and many more.

Please get in touch if you have any queries HPL@lancaster.ac.uk

STAFF NEWS

NEW ARRIVAL!

Michelle has welcomed a beautiful baby girl to the family – Amaana Grace was born on 11th Jan. Michelle will return from maternity leave in Dec but hopes to pop along to see our final year students graduate in the Summer.

STUDENT NEWS

SUCCESSFUL MASTERS VIVA

Our first MSc by Research students Lizzie Wrench & Kate Rattley, supervised by Dr Chris Gaffney, Dr Bob Lauder & Dr Theo Bampouras passed their viva in October and December respectively. Well done.

COURSE NEWS

FIELD TRIPS FOR YEAR 3

Final year students have enjoyed two excellent field trips this quarter – physiology students went to Manchester Institute of Health and Performance, and psychology students went to Capernwray dive site.

RESEARCH IN THE SPOTLIGHT

Dr Chris Gaffney and Dr Karen Wright (Biomedical and Life Sciences) are currently undertaking a study to determine whether CBD can reduce muscle soreness after damaging exercise. This work forms part of undergraduate dissertations for five BLS students.

Volunteers undertake a bout of downhill running after consuming CBD or a placebo then have a series of measures for muscle damage, strength, and inflammation. CBD is proving an incredibly popular supplement amongst athletes and regular gym goers, and this research could provide some of the first solid evidence of whether it works as anticipated (or not!)...

ALSO... a big welcome to our two new NIHR-funded PhD Students supervised by Dr Chris Gaffney, Dr Theo Bampouras, Dr Daren Subar (ELHT) and Dr Cliff Shelton. Lizzie Wrench and Donna Shrestha are researching prehabilitation for pancreatic cancer and abdominal wall reconstruction surgery, respectively.

STUDENT HIGHLIGHTS >>>>>

Our names are Erin and Jamie and we are currently 5 months into a **12 month placement with Burnley Football Club's U18 and U23 Academy.**

This role involves providing support to the sports science team in their day-to-day roles; these vary from hydration testing, gym support, checking for fatigue markers, monitoring training load and aiding 'top-up' exercises. We are now confident importing and exporting STATSports data and completing analysis for match days and training.

We are hugely grateful for this opportunity, being able to bring to life and implement theories learnt in Sports Medicine and Physiology modules into the field alongside such knowledgeable practitioners has been an invaluable experience. We are excited to see what more there is to learn the rest of the season and how it will impact our future careers.

We also couldn't thank the staff in the sports and exercise science department at Lancaster enough, it was through Dr Tim Barry's links with Burnley FC that we were able to have the opportunity to interview and get this role; all of the staff have been extremely accommodating allowing us to partake in this placement alongside our studies.



FINAL YEAR PSYCHOLOGY STUDENTS ENJOY LEARNING AT CAPERNWRAY

This local field trip organized by Dr Jenny Meggs was to demonstrate the value of sustainable, outdoor interventions for mental and physical health, they specifically focused on pro-inflammatory and anti-inflammatory markers in response to acute cold-water exposure. See the [Instagram post](#).

FINAL YEAR ADVANCED PHYSIOLOGY STUDENTS VISITED WORLD-RENOWNED MANCHESTER INSTITUTE FOR HEALTH & PERFORMANCE (MIHP)

Exercising in hot and humid conditions presents a variety of concerns, from increasing the difficulty of endurance performance to making you vulnerable to illnesses such as heat cramp, heat exhaustion and heat stroke. Our students are currently learning about the physiological effects of different environments. Our students found out how Team GB athletes prepared for the hot and humid conditions at the Tokyo Olympics, and Paralympics Games last Summer. They undertook experiments to measure the physiological challenges of exercising in the heat and humidity in the MIHP environmental chamber. The day provided an outstanding learning experience for the students, allowing them to collect and analyse data and develop their knowledge in an applied sport science setting.

Thanks to Dr Tim Barry for organising a day to be remembered. Check out related [tweets](#) and [photo album](#).



CURRENT AND UPCOMING RESEARCH PROJECTS

ARE YOU HEALTHY, MALE & 18-30?

Be part of the MiniEx Study that investigates the minimum amount of exercise needed to improve glycemic control. Contact c.gaffney@lancaster.ac.uk

Dr Chris Gaffney (in collaboration with Dr Helen Nuttall in Psychology, who led the bid) has received an ESRC PhD Studentship to investigate how sub-concussive head impacts in academy footballers affect brain function and mental health. This will provide full funding for an MSc in Psychology and then a PhD, including a living allowance. This will be advertised soon so keep an eye out!

ARE YOU INTERESTED IN PERFORMANCE TESTING?

We will soon be offering bespoke performance testing in our purpose-built Human Performance Laboratory so members of the public have access to sport science tests that could help to inform their training. In the first instance tests are likely to include:

- VO₂ max testing – watch this [video](#)
- Lactate threshold determination – watch this [video](#)

The web space is currently under development but once it's ready this is where bookings will be possible and we will be very excited to provide this service to you.

RECENT ACTIVITIES & NEWS

APPLIED SPORT SCIENCE SUPPORT

DR TIM BARRY

Tim has helped to secure professional development opportunities for two final year students at Morecambe FC. Robert Stockdale is supporting the sport science team, Tom Wide is working alongside the Performance Analyst; both align to the future career direction of these two students.

DR JENNY MEGGS

Continued work with Swim England has provided opportunities for second year students Shahad Abuawf and Abi Turner to apply their knowledge and build engagement experience by producing their first sport psychology infographic that will be shared with the region's 12-15 years swimmers

Jenny and Abby Morris have further developed their partnership with Cambridgeshire Police and Mind Over Mountains exploring the benefits of sustainable, green interventions and mindfulness strategies for mental health in front line police personnel. The first in the series of events is to take place 6th-8th May.

EXTERNAL QUALIFICATIONS

Thanks to Dr Michelle Swainson, Dr Sarah Powell & Eddy Pike for facilitating the prompt qualification of 10 second year students who are now Level 2 Gym Instructors through our partnership with Active IQ. Well done to those students 😊

STAFF DEVELOPMENT

Thanks to Dr Sarah Powell for submitting a successful application to the Staff Development Fund so up to six members of the team can apply for BASES Accreditation, allowing us to be recognised by the national governing body for sport and exercise sciences.

RECENT PUBLICATIONS & OUTPUTS

RESEARCH PUBLICATIONS

Ferentinos P, Tsakirides C, **Swainson M**, Davison A, Martyn-St James M & Ispoglou T. (2022) The impact of different forms of exercise on circulating endothelial progenitor cells in cardiovascular and metabolic disease. *European Journal of Applied Physiology* [In Press]. *Accepted Dec 2021*

Lambert J, Keegan T, **Gaffney C**, Subar D, Hayes L. (2021) Response to the Comment on “Prehabilitation in Major Abdominal Surgery”. *Annals of Surgery*. 274 (6), <http://dx.doi.org/10.1097/SLA.0000000000005224>

Lambert J, Hayes L, Keegan T, Subar D, **Gaffney C**. (2021) Response to the Comment on “The Impact of Prehabilitation on Patient Outcomes in Hepatobiliary, Colorectal, and Upper Gastro-intestinal Cancer Surgery: A PRISMA-Accordant Meta-analysis”, *Annals of Surgery*: 274 (6) <http://dx.doi.org/10.1097/SLA.0000000000005223>

Davison NB, **Gaffney CJ**, Kerns JG, Zhuang QD. (2022). Recent Progress and Perspectives on Non-Invasive Glucose Sensors. *Diabetology*. 3 56-71. <https://doi.org/10.3390/diabetology3010005>

EDUCATIONAL PUBLICATIONS

Powell SM (2021) the Neuromuscular System Explained: A Story of Success. PE Review, January, Vol 17, 2021/22, Hodder Education.

Book Chapter

Swainson MG, Rutherford ZH & Buckley JP (2022) Health-Fitness Consultation & Assessment Skills. In: Scott A & Broom D. (Eds) Exercise Management for Referred Medical Conditions. Abingdon, UK: Routledge. [In Press] *Accepted Dec 2021*

Media Article

Meggs J, [Six ways to get over 'gymtimidation' – your anxiety of heading to the gym \(theconversation.com\)](https://www.theconversation.com/health/2021/12/six-ways-to-get-over-gym-timidation)

