



ANNUAL REPORT 2023

WITH YOU 100%

INTRODUCTION

Over the past twelve months, the Institute of Sport, Exercise & Health (ISEH) has seen much positive and exciting progress in advancing our clinical, academic and educational plans and work streams. It therefore gives us great pleasure to share the 2023 annual report with our team, our partners and our friends in order to showcase some of the excellent work that has taken place.

Over the course of 2023, the ISEH family has continued to grow with valuable new additions across our clinical, academic, and educational teams providing us with further expertise, knowledge and capability to drive forward our work programmes. This year's intake of new Undergraduate and Masters students at ISEH has significantly increased, illustrating the growing esteem and reputation of ISEH courses. Working with UCL, we have expanded our educational faculty with Professors Courtney Kipps and Eleanor Tillet fronting the Sports Medicine MSc programme, Associate Professor Hara Troulli leading the Performing Arts programme, and Associate Professor Flaminia Ronca leading our Undergraduate programmes.

Our academic and research programme has continued to blossom over the past year, with Professor Mark Hamer growing his research team, and increasing the ISEH's academic contribution in the fields of population health and sport and exercise medicine. Colleagues from across the organisation have led on a range of exciting new research projects investigating different aspects of elite sport. In particular, Professor Mathew Wilson and Dr Paul Read have collaborated with the governing bodies of football and rugby to establish a ground-breaking study investigating the effects of concussion on professional players in these sports.

The ISEH clinical services have also expanded and improved with new specialist clinics established to better manage the needs of our patients. Along with these new clinics, we have appointed a number of new world-class clinicians to provide the highest quality of care, and to grow the clinical reputation of the ISEH.

The ISEH is based on a collaboration with our key partners, and it is pleasing to see that these relationships have only been enhanced over the past year, with partners working more meaningfully together across a range of ISEH-led projects. The UK Sports Institute has worked closely with HCA to improve the clinical services at ISEH for UKSI funded athletes, UCLH are treating more NHS patients at ISEH than ever-before, UCL's courses at ISEH are going from strength-to-strength, and all ISEH partners have been collaborating across a range of research themes.

We are grateful to the entire team for their versatility, their resilience and their strong support, and we are grateful to all our partners for their vision and collaboration. Our vision remains to be the world-leading institute of sport, exercise and health by 2030.

We hope that the brief snapshots that follow give you an insight into the outstanding clinical work, research, teaching, training and education that take place at ISEH.



Professor Fares Haddad
Director, ISEH

CONTENTS PAGE

Introduction	02
About the ISEH	04
Key Achievements in 2023	06
Clinical Activity	08
• NHS Clinical Activity	10
• Private Clinical Activity	11
• UK Sports Institute	13
Education	14
Research	18
Events	28
Marketing and Communications	30
Looking Ahead to 2024	32
Appendix	34

ABOUT THE ISEH

The Institute of Sport, Exercise & Health (ISEH) was established in 2013 with a £10m grant from the Department of Health as a major legacy project from the 2012 London Olympic Games.

The ISEH's vision is to be the world-leading institute for sport and exercise medicine, providing excellence in the diagnosis, prognosis and treatment of sports injuries and illnesses, whilst bridging the gap between elite sport and recreational physical activity to support the improvement in the health of the nation.

The ISEH achieves this through:

- Providing world-class clinical delivery for elite athletes and sports enthusiasts of all abilities, both privately and through the NHS.
- Conducting world-leading research in supporting elite athlete health and performance, as well as focusing on how exercise and physical activity can play an important role in broader population health.
- Delivering world-class education and training in sports exercise medicine, both academically and through continuing professional development (CPD).

The ISEH is a partnership between UCLH (University College London Hospitals, NHS Foundation Trust), HCA Healthcare UK, University College London, the UK Sports Institute, and the British Olympic Association. It is also a founding member of the National Centre for Sport and Exercise Medicine (NCSEM).



KEY ACHIEVEMENTS IN 2023

This Annual Report details the good work that the ISEH has undertaken over the course of 2023. Below are some of the highlights of the Institute's key achievements this year.

CLINICAL ACTIVITY

The ISEH continues to offer high-quality multi-disciplinary sport and exercise medicine clinics for both private and NHS patients, and continue to look at ways of improving our clinical service. This has resulted in more patients being seen at the ISEH across both the private and NHS pathways than in any previous year.

- Nearly 8,500 NHS patient appointments have been held at The ISEH in 2023.
- The ISEH Mobile Cardiac & Respiratory Screening service continues to grow, providing a unique specialised service to elite sports clubs across the UK and Europe.
- A range of new sports exercise medicine services have been launched to meet the needs of elite athletes, including the Advanced BRAIN Health Clinic in partnership with the RFU, Premiership Rugby, The FA and Imperial College.



RESEARCH

Academic research forms a large part of the work that the ISEH undertakes, and this year has been highly productive with significant amount of research outputs from our ISEH colleagues, with new novel projects being initiated, research funding being secured and a wide diversity of findings being published.

This year ISEH colleagues have:

- Produced over 85 peer-reviewed papers.
- Submitted a number of new research applications across a range of topics that align to the ISEH research themes in sport and exercise medicine and population health.
- ISEH colleagues have successfully secured a number of research grant approvals enabling ISEH to undertake some novel research studies over the coming years.
- Led a large number of research projects investigating outcomes in both elite sport and population health.

EDUCATION

Student numbers at the five UCL degree courses that are held at the ISEH have continued to increase over the past year, demonstrating the increasing popularity and reputation of these courses.

Encouragingly, student satisfaction scores have also significantly increased, reflecting positively on the hard-work that the ISEH and UCL teaching staff have invested in ensuring that the quality of both teaching and student experience remains the core priority.

A large number of graduates from the ISEH courses have successfully been appointed to roles in elite sport or in other sport and exercise medicine fields, demonstrating the vocational relevance of our courses and the esteem and credibility that employers attach to them.



CLINICAL ACTIVITY

THE ISEH PRIDES ITSELF ON PROVIDING WORLD-CLASS CLINICAL CARE TO OUR PATIENTS

We provide excellence in the diagnosis, prognosis and treatment of sports injuries and illnesses to both elite athletes and exercise enthusiasts.

The ISEH offers private clinical care through our partner HCA Healthcare UK, but also provides public healthcare through NHS patient appointments from UCLH. We are proud that we provide and offer the same quality of medical care and clinical support for amateur and recreational athletes as we do for Olympians and world-leading sports stars.

The ISEH regularly reviews our clinical services to ensure that we continue to provide the highest quality care to our patients, and that we also offer new clinical services to meet the needs of both elite and recreational athletes. Over the past year we have optimised our clinical delivery to enable us to see more patients across both the private and NHS sectors at the ISEH than any previous year.

THE ISEH TAKES PRIDE IN DELIVERING CONSISTENT HIGH-QUALITY CARE & CLINICAL SUPPORT TO BOTH ELITE & RECREATIONAL ATHLETES, MIRRORING THE LEVEL OF CARE & DEDICATION WE OFFER TO OLYMPIANS.





NHS CLINICAL ACTIVITY

The ISEH takes pride in providing NHS patients with the same exceptional standard of clinical care, attention, and service throughout their journey from diagnosis to treatment and recovery, mirroring the level of care that elite professional athletes receive through our private care pathway at ISEH.

UCLH clinics take place at the ISEH on two mornings a week to treat NHS patients. Over the past year 8,338 UCLH (NHS) patient appointments were held at the ISEH, with over 2,500 of these appointments using the ISEH's excellent imaging facilities (MRI / Ultrasound / X-ray). This is a 29% increase in NHS patients seen over the past year at ISEH compared to 2022.

8,338

UCLH (NHS) patient appointments held at the ISEH*

2,500

imaging (MRI / Ultrasound / X-ray) UCLH appointments at the ISEH.*

*This data is accurate as of 27 September 2023

// I was feeling very anxious but the Doctor I saw quickly put me at ease.... I was impressed & relieved. Reception staff were also helpful & polite. Great job! //

5* NHS patient review, via Google.

PRIVATE CLINICAL ACTIVITY

The ISEH's private clinics are managed by HCA International, and throughout 2023 we have continued to work with our expert consultants in sport and exercise medicine and the multidisciplinary teams to provide a world-leading service. In 2023, we have refined our service provision and work closely with the HCA hospital teams to provide a connected pathway for both elite and recreational athletes. Our portfolio of services includes:

- Musculoskeletal and Sports Injury Clinic
- Advanced Brain Health Clinic
- Concussion Clinic
- Sports Cardiology Clinic
- Sports Respiratory Clinic
- Sports Physiotherapy
- Upper and lower limb performance reconditioning assessment pathways
- Hand, wrist and shoulder specialist clinics
- Sports Podiatry Clinic
- Sports Psychology
- Sports Nutrition & Recovery Clinic
- Corporate Health and Fitness

Our work in delivering the Advanced Brain Health Pathway has resulted in over 240 former professional athletes from The Rugby Football Union, Premiership Rugby and The Football Association being seen at the ISEH over the past year. We have also continued our partnership with the International Head Injury and Concussion Research Foundation (ICHIRF) providing diagnostic imaging support service to this important research project.

The ISEH mobile cardiac and respiratory service continues to thrive. Our clinicians have travelled to numerous elite men's and women's professional clubs to provide screening for first team and academy team players. Our respiratory team also supported a significant number of athletes prior to the 2023 Rugby World Cup. Our respiratory service continues to grow, and we now offer resting laryngoscopy and continuous laryngoscopy during exercise (CLE). These services allow our clinicians to detect laryngeal obstruction and support athletes in providing solutions to breathing difficulties during competition.

The new ISEH Mobile Cardiac Laboratory vehicle will allow the ISEH to travel the country and provide our elite sports medicine services to organisations and clubs anywhere across the UK. We can now perform medical assessments, ECG and echocardiography screening, respiratory assessment including eucapnic voluntary hyperpnea. We can also perform strength and power testing via our unique research partnership with VALD, supporting clubs and sports organisations without the necessary equipment or knowledge infrastructure.

The ISEH elite concierge service supports both athletes and their families to access healthcare services quickly and efficiently. This year, the ISEH elite concierge service has helped hundreds of individuals and their families with a range of requests from booking urgent hospital appointments to providing medical screening during transfer windows. The following patient testimonials highlight the importance of the work the ISEH concierge service does in helping to arrange healthcare and support patients and their families during their time of need.

// My wife had been suffering for several weeks going back and forth to our local GP with no resolution. I called the elite concierge service desperate on a Saturday night and within the hour my wife had an appointment with a doctor. My wife was extremely happy and reassured. Thank you for providing such a great service. //

ISEH Elite Concierge Service Patient.



// Easy to communicate with, I was seen in a timely manner, dealt with in a professionally friendly manner and am totally satisfied with the consult and treatment given. Commend to all. //

5* Patient review, via Doctify.



// Welcoming, professional; explanations and next steps clearly communicated. //

5* Patient review, via Doctify.

CASE STUDY: THE ADVANCED BRAIN HEALTH CLINIC AT ISEH

The Advanced BRAIN Health Clinic at ISEH has been running in full swing since its high-profile launch in 2022. Led by Professor David Sharp and Dr Richard Sylvester, this specialist pathway offers a unique provision of clinical care combined with elite sport research. It includes advanced imaging, biomarker analysis and neurocognitive assessment for retired elite rugby and football players, who are assessed on three occasions over a four-year period for any time-related changes in brain health.

The clinic has assessed 58 footballers and 199 rugby players, with users of the clinic invited to share their experiences of the clinic, providing constructive feedback on how the visits were structured and providing advice on the research study components. The first planned academic research outputs are pencilled in for 2024.

The clinic is delivered at the ISEH in partnership with Imperial College London, jointly funded by The Rugby Football Union and Premiership Rugby, and The Football Association.



UK SPORTS INSTITUTE

As a key partner of the ISEH, the UK Sports Institute (formerly known as the English Institute of Sport) uses the ISEH and its facilities as an important part of its services in supporting the health and performance of Olympic, Paralympic and other elite athletes.

The UK Sports Institute and ISEH continue to work closely together in providing world-leading clinical and performance support services to aid elite athletes in their training and preparations for major competitions. Athletes from ten different Olympic and Paralympic sports accessed physiotherapy and sports medicine support at the ISEH during the past year. This support is crucial with the Paris 2024 Olympic and Paralympic Games fast approaching.

The close working relationships between the UK Sports Institute, ISEH and HCA UK continues to grow and improve; with HCA consultants working closely with the UK Sports Institute's Senior Physiotherapist Emma Levy, who oversees the care and rehabilitation of a range of athletes, in conjunction with the sports' Chief Medical Officers. Recent successes at Trampoline, Squash, Para Cycling and Diving World Cups and Championships, are attributable to the care that elite athletes have received at ISEH.

Practitioners from across the organisation have participated in courses and seminars provided by ISEH on a range of interesting topics, and Professor Mike Loosemore continues to collaborate with ISEH colleagues to publish articles in the British Medical Journal.

EDUCATION

THE ISEH COURSES GO FROM STRENGTH-TO-STRENGTH WITH AN OUTSTANDING REPUTATION THAT ATTRACTS AND APPEALS TO STUDENTS FROM ALL OVER THE WORLD.



THE ISEH HOSTED FIVE UCL DEGREE COURSES IN 2023:

- 1. MSc in Sports Medicine, Exercise & Health**
 Now in its 15th year and with student enrolments for the course at capacity. This programme attracts candidates from all around the world and is one of the few Master's programmes in this field to train doctors and physiotherapists alongside other physical therapists and sports scientists thereby replicating the highly multi-disciplinary nature of the specialty.
- 2. Intercalated BSc (iBSc) in Sport & Exercise Medical Science**
 Highly sought-after degree for medical students which attracts applications from candidates throughout the UK. The programme continues to be very popular and attracts applications from both UCL students and students from other universities.
- 3. BSc in Sport & Exercise Medical Science**
 Now in its fifth year this degree grounds students with the knowledge and skills to help athletes achieve their performance potential and patients to optimise their health. The programme continues to be very popular, attracting students from all over the world.
- 4. MSc in Performing Arts Medicine**
 This unique and highly specialised course, in its eighth year at the ISEH, provides targeted education to meet the health and well-being needs of performing artists (e.g. musicians, actors, dancers etc).
- 5. MSc Orthopaedics**
 This novel teaching programme in its fourth year, enrolls professional students who aspire to excel in orthopaedics and its allied sub-specialities such as surgeons, physiotherapists, sports practitioners, clinical researchers etc. Students receive both high quality learning, but also through this course have the potential for gaining high-end publications, international presentations and links to the top clinicians in the field.





“ What a wonderful year at The Institute of Sport Exercise & Health, a world-leading initiative collaboratively between UCL, UCL Hospitals, HCA Healthcare UK, UK Sports Institute, and the British Olympic Association. I would highly recommend this course to anyone who wants to pursue an exceptional career in Sports Medicine. The journey has just begun... ”

MSc Sports Medicine, Exercise & Health Student via LinkedIn



KEY SUCCESSES IN 2023

Student enrolments on the undergraduate and postgraduate courses at ISEH are once again at capacity this year, demonstrating the excellent credibility and reputation of the ISEH for delivering high quality courses that are vocationally relevant. The ISEH are proud of the outstanding student satisfaction levels, with student feedback highlighting how much they enjoy their learning experience and how clinically and vocationally relevant their courses are.

This is further illustrated by a number of ISEH graduates being offered roles working for elite sports teams and sports organisations both within the UK and abroad. Other graduates have demonstrated their initiative by setting up their own sports medicine clinics, whilst several have been accepted onto the NHS Higher Specialist Training programmes in Sport and Exercise Medicine.

We're also proud to see our students presenting their research this year at a range of national and internationally important Sport and Exercise Medicine conferences, including at the BASEM and ACSM conferences.



“ The BSc program opened doors to various research and teaching opportunities...it strengthened my interest for Sports and Exercise Medicine and medical education. ”

BSc Sport and Exercise Medical Science Student via LinkedIn.



Academic research forms a large part of the work that the ISEH undertakes, helping to progress our understanding across a range of research themes in sport and exercise medicine and population health. 2023 has been a highly productive year that has seen a significant amount of research outputs from our ISEH colleagues, with new novel projects being initiated, research funding being secured and a wide diversity of findings being published.

The full extent of the ISEH's research outputs over the course of 2023 can be seen at the end of this document in the appendix; but in this section we provide a brief snapshot of some of the research activities that our ISEH colleagues have been leading on this year.

ELITE SPORT

A number of research projects undertaken at the ISEH focus on understanding and improving sporting performance in elite athletes. Below are just some of the elite sports research conducted through the ISEH during 2023:

- Respiratory Infection in Athletes**
 Prof. James Hull led a study that assessed whether the impact of environmental pollution of athletes engaging in endurance-based sporting activity could be associated with any harm. He was also part of a subgroup of the International Olympic Committee consensus on 'Acute Respiratory Illness in the Athlete' that produced guidance on diagnostic approach to lower airway dysfunction in athletes.
- Effects of Heat & Altitude Training on Rugby Players**
 Prof. Mat Wilson was part of a study that investigated the effects of training camps with heat and/or hypoxia sessions on hematological and thermoregulatory adaptations in elite rugby players.
- Rehabilitation Strategies for Injured Athletes**
 Dr Paul Read is running several projects on assessment strategies of lower limb neuromuscular control in both injured and non-injured athletes and enhancing the efficacy of return to sport assessment strategies following ACL reconstruction. Specific projects he is currently working on include: 1) enhancing decision making in the return to run process following ACL reconstruction; 2) The application of blood flow restriction training and preoperative rehabilitation to augment clinical outcomes following ACL reconstruction; 3) effects of ACL reconstruction on physical performance and kinetic movement strategies; 4) effects of early sport specialization on injury risk and movement competency; 5) quantification and trainability of deceleration to enhance performance and reduce injury risk.

RESEARCH

“ Our research over the last year continues to demonstrate impact across a range of key themes in sport and exercise medicine and population health as we influence and drive these fields forward. ”

Prof. Mark Hamer,
ISEH Chair of Sport & Exercise Medicine Research



- Concussion in Sport Consensus**
 Prof. Mike Loosemore was part of an international team to develop The Sport Concussion Office Assessment Tool 6 (SCOAT6), for use in athletes 13 years and older, that was the product of the 6th International Consensus Conference on Concussion in Sport aimed at assisting Health Care Professionals in an office-based, multimodal assessment of sports related concussions.
- Athlete Nutrition**
 Dr Flaminia Ronca and Tom Gurney have led a study to investigate the effects of guarana supplementation on cognitive performance before and after a bout of maximal intensity cycling and to compare this to an equivalent caffeine dose.



POPULATION HEALTH

The ISEH's research programme does not just focus on elite sport, it also importantly covers research themes that look to understand and implement learning to improve the broader population health. Below are just some of the research projects that ISEH colleagues have been leading on over the past year:

- Physical Activity's Impact on Heart Disease**
 Dr Jo Blodgett and Prof Hamer have published several high impact papers from the international Prospective Physical Activity, Sitting and Sleep consortium looking at 24hr wearables data and cardiometabolic risk profiles.
- Exercise & the Brain**
 Dr Flaminia Ronca has been collaborating with the UCL Faculty of Brain Sciences and has identified significant links between exercise, mood, brain haemodynamics and cognitive function. Dr Ronca is currently building on this work to identify the mechanisms that underpin these processes in adults and in children.
 Drs Tom Norris and Snehal Pinto Pereira have conducted a range of impactful studies on cognitive function across the life course with particular interest around strength and fitness.
- Future Developments in Orthopaedic Surgery**
 Prof. Fares Haddad has examined Artificial Intelligence in orthopedic surgery and its future direction, as well as leading a project on the topic of Vancomycin powder in total joint replacement.
- Police Health & Fitness**
 Dr Flaminia Ronca has also been continuing her collaborative work with the Metropolitan Police Force, informing their decision making to safeguard and promote officer health and fitness through empirical research. Her research has identified the prevalence of muscular-skeletal complaints and perceived causes in law enforcement officers.
- The Role of Physical Activity in HIV and Diabetes**
 Prof. Mark Hamer was involved in several international research collaborations, firstly looking at correlates of physical activity among people living with and without HIV in rural Uganda, and also a trial testing Yoga for prevention type 2 diabetes mellitus in India.
- Women's Health**
 Dr Jo Blodgett, Prof. Charlie Pedlar and Georgie Bruinvels collected data using a novel App to explore associations between self-reported exercise training habits and amenorrhea/ oligomenorrhea among physically active women.
 Prof. Fares Haddad has led research that explored the relationship between the menstrual cycle and orthopedic sports injuries in pre-menopausal females, and proposed recommendations to mitigate the risk of sustaining these injuries.
- Exercise & Covid-19**
 Prof. Charlie Pedlar led a study that sought to determine if the COVID-19 vaccination would elicit exercise-responsive SARS-CoV-2 T-cells.





RESEARCH GRANT FUNDING

Much of the ISEH's research programmes are dependent on successful grant applications and financial support through key partners and stakeholders. We continue to be immensely thankful for the ongoing support and the trust that our partners invest in ISEH.

ISEH colleagues have applied for over £10m in grant funding this year, reflecting over 10 applications, to a range of funders including NIHR, MRC, CRUK, Wellcome Trust, Nuffield Foundation, BHF, UEFA, FIFA, BMA.

Below is a summary of just some of the financial support for research projects that ISEH colleagues have received from the following organisations in 2023:

- Dr Ronca and Prof Loosemore were awarded a FIFA grant on "Physiological and neurocognitive mediators of injury risk in female footballers."
- Dr Snehal Pinto Pereira was part of a successful application for £3m NIHR Patient Safety Research Collaborations grant.
- Prof. Hamer was a co-investigator on a successful £3m Wellcome Trust award "The mechanisms underlying the antidepressant effects of physical activity."
- Dr Tom Norris was shortlisted for MRC Career Development Fellowship "Is cardiorespiratory fitness causally related to cognitive outcomes? Triangulating findings from distinct causal inference methods."
- Dr Snehal Pinto Pereira was shortlisted for MRC Senior non-clinical fellowship (pending outcome) "Understanding causes and consequences of variation in body composition, cardiorespiratory and muscular fitness."

CASE STUDY: KNEE & HIP BIOMECHANICAL ANALYSIS PRE & POST OPERATIONS

The ISEH prides itself in bringing together clinicians, researchers and the health and sports sector to collaborate in producing cutting-edge research that has positive real-life implications. A good example of this is the work being undertaken by Prof. Fares Haddad and Dr Dia Giebaly in undertaking the first study of its kind to examine the gait biomechanical analysis of patients that have undergone robotic assisted knee and hip surgery.

There is growing evidence that robotic assisted knee and hip surgery has improved the accuracy of implant positioning resulting in better functional outcomes of these joints post-operation in comparison to more conventional surgical procedures on these joints. This study is looking to increase the understanding of the actual functional outcomes on the joints, patient satisfaction and gait analysis following this type of surgery and comparing it with more conventional methods.

Using the state-of-the-art equipment in the ISEH laboratory, this study will use 3D motion capture systems and force plates in instrumented treadmills to provide an accurate, objective, non-invasive measurement of the gait biomechanics of patients pre and post operation.

Over the past year, this study has successfully completed recruitment for the robotic hip trial comparing Computerised Tomography based planning of conventional total hip arthroplasty versus robotic arm assisted total hip arthroplasty, and the research team are currently analysing the data with the aim of publishing the results over the next year.



CASE STUDY: EXERCISE NEUROSCIENCE RESEARCH

ISEH colleagues who specialise in exercise physiology have been collaborating with UCL colleagues that specialise in neuroscience to undertake cutting-edge research investigating the impact of exercise and physical activity on brain activity and cognitive development.

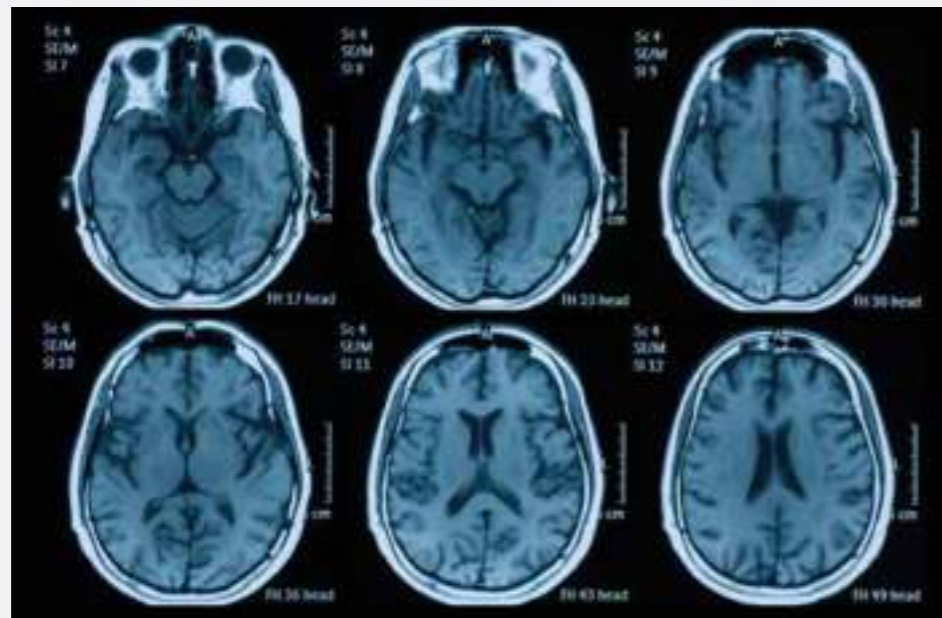
Over the past 12 months UCL have invested heavily into this research area, particularly to enhance the equipment within the ISEH laboratory:

- A Dexa scanner for full body composition analysis
- A lab-based functional near-infrared spectroscopy (fNIRS) with full brain coverage, the only one of its kind in Europe
- Two portable wireless brain fNIRS systems
- 24-hour portable physiological monitoring with actigraphy, full ECG and continuous blood pressure
- 3D motion capture cameras
- Electromyography
- Force plates

This new integrated equipment enables real time synchronised data collection and will allow the ISEH to deliver cutting edge research in Exercise Neuroscience, Biomechanics and Physiology.

The lab based fNIRS equipment will enable the ISEH to study brain connectivity and changes in cortical activity following exercise. The portable fNIRS systems will enable us to go into schools to study child cognitive development after physical activity interventions, and to collect pitch-side brain imaging changes before and after sport sessions. By integrating the biomechanical system (3D cameras, EMG, force plates) with the wireless brain fNIRS, we will also be able to examine the relationship between brain activity and movement.

A team of two PhD students and three research interns led by Dr Flaminia Ronca, are initially focussing on the impact of cognitive fatigue on motor control and injury risk, and on the impact of exercise on relieving cognitive fatigue.



CASE STUDY: THE VALD APPLIED RESEARCH INITIATIVE

The VALD applied research initiative, initiated in May 2023, has commenced data collection at the ISEH and is poised to begin at a second site shortly. The study encompasses participants who have experienced ACL ruptures, as well as those diagnosed with knee or hip osteoarthritis.

This project's primary objectives are twofold: firstly, to establish comprehensive normative data pertaining to movement, strength, and power characteristics at various stages of patients' recovery trajectories. Secondly, it seeks to determine whether pre-operative or pre-treatment assessments can effectively identify patients with either favourable or unfavourable prognostic outcomes.

This research endeavours to improve the precision of patient care, ultimately contributing to more informed and tailored treatment strategies. The next phase of the project is to begin data collection with NHS patients in partnership with UCLH. It is anticipated that this will commence towards the end of 2023.



// Amazing care from these [ISEH] folks today! Thanks so much for looking after me. //
Private patient, via Instagram.



UTILISING A MULTIDISCIPLINARY APPROACH, ADDRESSING INJURIES AND PRE-OPERATIVE CARE, LEADING TO A SEAMLESS TRANSITION BACK TO SPORTS PARTICIPATION.

CASE STUDY: BONE MINERAL DENSITY RESEARCH WITH THE GB HOCKEY WOMEN'S TEAM

To support the GB Hockey women's team prepare for the 2024 Olympics in Paris, the ISEH is conducting research into the Bone Mineral Density (BMD) and Resting Metabolic Rate (RMR) of these elite female athletes. Measuring and understanding an athlete's RMR and BMD is an important approach in accurately and precisely quantifying body composition, bone health and energy expenditure, and enabling the optimisation of training and nutritional strategies to mitigate against the risk of injury.

Dr Flaminia Ronca and Tom Gurney are leading this project with GB Hockey, making use of the ISEH's new state-of-the-art DEXA equipment. This study will not only be beneficial in aiding the GB Hockey team's preparations, but it will also provide a valuable opportunity for the ISEH to collect and analyse BMD data on a cohort of elite female athletes to improve our understanding as to what might be considered a 'normal' BMD score between different elite sports, and to that of the general population.



CASE STUDY: THE ROLE OF PHYSICAL ACTIVITY IN THE COGNITIVE DEVELOPMENT OF CHILDREN

The ISEH have developed highly valued partnerships with the charities Greenhouse Sports, Active Movement and Volunteers Foundation, as well as with the UCL Institute of Cognitive Neuroscience. These partnerships have enabled the ISEH to develop some interesting research opportunities, particularly investigating the role of physical activity in supporting the cognitive development of children.

There is increasing evidence supporting the value of physical activity throughout childhood. However, with schools and families under a range of different time and financial pressures, physical activity is often not prioritised. The goal of this research at the ISEH is to provide further evidence calling for a change in government policy to ensure all children have the opportunity for physical activity.

Within this theme the research team are exploring the times of day when physical activity would be most beneficial, the most advantageous type of activity, intensity and duration, and how the benefits of physical activity relate to other lifestyle factors such as body composition or socioeconomic status. Research is carried out within schools that work alongside the charities Greenhouse Sports, Active Movement and Volunteers Foundation, with ISEH researchers administering cognitive tasks, anthropometric measures, strength tests and psychometric questionnaires.

CASE STUDY: PHYSICAL PERFORMANCE OF ELITE LAW ENFORCEMENT OFFICERS

ISEH colleagues completed a unique project that looked into the physical characteristics of 'fast roping' for elite law enforcement officers. Fast-roping is a tactical form of rapid entry into a field of operation used by elite law enforcement officers, military and special forces operators globally. It is considered an integral part of these operators' roles, however, there is currently very little understanding of the physical demands of completing this task. Dr Flaminia Ronca and Joe Warwick, led a research team, in a first-of-its-kind study, measuring the forces imposed on officers upon landing from a 20ft fast-roping descent. They also measured the impact the additional weight of operational kit had on their landing forces and the upper limb activation to control their descents.

This project offered some unique challenges but gave some insightful data, observing that controlled landings put approximately 2x the participants' body weight through their legs in a bilateral landing pattern. It was also observed that the additional weight of the operational kit did not significantly increase landing forces upon impact. However, the upper-limb activation measured by EMG, showed how integral the extensor carpi radialis and biceps brachii are in controlling the descent.

This very niche research project will look to improve the global understanding of the physical demands of fast-roping in elite law enforcement and military operators, building a foundation for future research to expand and give organisations around the world insight into how to prepare their operators to safely and efficiently complete this task in training and in the field.



EVENTS

OUR EVENTS ATTRACT LARGE AUDIENCES FROM ACROSS THE MEDICAL AND SPORT AND EXERCISE COMMUNITY.

// Great CPD course taught by Dr. @paulread1010 at @TheISEH. Looking forward to integrating the principles we learned about today into clinical practice. //

Sports Medicine practitioner via Twitter.

The ISEH prides itself on delivering world-class, thought-leading educational events that provide sport and exercise medicine practitioners with high quality support and learning, and this year the ISEH has launched **ISEH Learning** to deliver regular sport and exercise medicine courses and CPD opportunities.

Our ISEH Learning courses, led by leaders in their field of sport and exercise medicine, blend theoretical academic knowledge with practical application in a sport and exercise setting. By providing hands-on and relevant learning, we empower our learners to continue their professional development with confidence in applying their new skills in their professions.

This year ISEH Learning has delivered the following CPD courses:

June	Breathing to Win: optimising breathing performance in athletes	Prof James Hull Julie Moore Gwynn Wallace Juliette Lloyd
July	Strength, Power & Movement Assessments in Injured Athletes to monitor & enhance return to sport readiness	Dr Paul Read
October	Athlete Shoulder Testing: exploring testing protocols & their role in rehab	Ben Ashworth
November	Sports Nutrition for Performance and Recovery from Injury	Dr Richard Allison

OTHER ISEH EVENTS IN 2023

In addition to ISEH Learning, the ISEH has also continued to deliver free online educational conferences and webinars to support the sport and exercise medicine community:

- Sports Injuries and Sports Orthopaedics Conference, January 2023:
 - Adolescent Sports Medicine
 - Tendinopathy & Tears in Sport
- Sports Cardiorespiratory Medicine Conference, May 2023

As well as providing educational events, the ISEH also organises an annual run in London's beautiful Regents Park, encouraging hundreds of people to come and be active regardless of their age or fitness levels. This year saw over 250 people attend the ISEH Run in June, making it the most popular run the ISEH has ever put on!

// At Regent's Park all ready for the @ISEH 10k. I'm raising money for @UCLHCharity. //

UCLH staff member via Twitter

// It has been a very early start 5am from Sussex. But so worth it for the: "Breathing to win" course @TheISEH with @BackleyJulie and @BreathingMech. //

Sports Medicine practitioner via Twitter.

MARKETING & COMMUNICATIONS

ISEH WEBSITE

The ISEH website plays a pivotal role as a primary platform for introducing people to our esteemed sport and exercise medicine facility, drawing attention not just from the UK but also internationally, including the USA, China and Australia. In the last year, we have witnessed a 23% increase in website engagement, with a consistent monthly influx of over 8,000 online visitors on average.

During 2023, we have focussed on elevating our website's prominence on major search engines like Google. Moreover, our commitment to generating regular and valuable digital content has allowed us to effectively showcase the full spectrum of services and activities undertaken at the ISEH – this also includes regular communication to a growing list of email subscribers to help reaffirm our position as a premier destination in the field of sports and exercise medicine.



ISEH SOCIAL MEDIA CHANNELS

Throughout 2023, the ISEH has focused on creating relevant, informative, and high value content in a range of formats to connect authentically with current followers and reach new audiences across the ISEH's Instagram, Twitter, LinkedIn and Facebook platforms.

The involvement and expertise of colleagues across the ISEH has enabled us to craft educational and informative content that resonates with our audience, highlights our accomplishments, and bolsters our credibility within the field. Our interactive video content on Instagram, featuring ISEH colleagues and students, has been particularly well-received, indicating a strong appetite for the insights and information that we provide.

Content on our social media platforms serve as an important gateway for individuals to explore the Institute's offerings and deepen their understanding of our services.



The ISEH twitter account now has over 9,100 followers

MEDIA

The ISEH has continued to attract a great deal of interest from a wide range of media outlets and has become a key point of contact for current media stories around sport, exercise and health. Below are some highlights from 2023. For all media stories please see our [press coverage page](#) on the ISEH website.

- Runners World:** Consultant Physiotherapist, Dr Bruce Paton, was interviewed on the topic of hip pain in runners, sharing expertise as he talked about five of the most common hip injuries and how to treat and prevent them.
- Stylist:** Clinical Specialist Physiotherapist, Julie Moore, spoke to Stylist magazine to talk about exercise-induced rhinitis and its symptoms to help people to be better informed and more aware of the condition, sharing practical advice and tips to manage symptoms.
- The Times:** Professor Courtney Kipps, Consultant Physician in Sport and Exercise Medicine, spoke to The Times to share advice and tips surrounding water consumption to help increase awareness of this when exercising during warm weather.



LOOKING AHEAD TO 2024

2024 promises to be an exciting year as the ISEH progresses forward in delivering across a broad range of workstreams and new projects that contribute towards ISEH's vision of being a world-leading institute for sport, exercise and health.

The ISEH's clinical activity is going from strength-to-strength both in supporting elite athletes and sports organisations, but also in caring for recreational sports patients through both our private and NHS work. In 2024, we will continue to review and adapt our clinics to ensure that we are able to provide the highest quality of care for the optimal number of patients. We will also continue to explore and introduce new specialist clinical services, staffed by world-class clinicians, that best meet the needs and demands of our patients.

The ISEH's educational courses continue to grow in popularity, and in 2024 we will work closely with UCL and the ISEH teaching team to look at how we can continue to meet the increasing student demand for enrolling on our undergraduate and postgraduate courses, whilst also maintaining the quality of teaching and student experience that ISEH is famed for. The ISEH will also continue to work collaboratively with UCL in exploring new opportunities and partnerships in developing and improving our education provision, including expanding the ISEH Learning CPD course programme to provide excellent short courses to support sport and exercise medicine practitioners.

A strong commitment to research will continue to underpin all of the ISEH's excellent clinical and educational work in 2024. Over the past year, we have seen exciting momentum across our research activities and we want to maintain and accelerate this momentum with more academic outputs and the delivery of a number of cutting-edge research studies that will grow understanding and knowledge in novel areas of sport injury and performance, exercise medicine and population health.

We are very excited about the opportunities to grow and develop the work of ISEH in 2024, and will continue to work in collaboration with a broad range of colleagues, partners and stakeholders on the journey to deliver the ISEH's vision of becoming a world leading institute for sport and exercise and health.



APPENDIX

ISEH RESEARCH OUTPUTS IN 2023

The list below outlines the academic research outputs of the ISEH in 2023. The list primarily covers published peer reviewed papers.

NAME OF ISEH CONTRIBUTOR	CONTRIBUTOR TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Charles Pedlar	Day Type and Start Time May Influence Sleep in Adolescent Professional Football Players	2023	International Journal of Sports Medicine, 2023	doi: 10.1055/a-1974-5441	Edinburgh L, Bruce-Low S, Hill J, Woodhouse J, Jarvis M, Pedlar C
Charles Pedlar	Collagen Gene Polymorphisms Previously Associated with Resistance to Soft-Tissue Injury Are More Common in Competitive Runners Than Nonathletes	Apr-23	The Journal of Strength & Conditioning Research	doi: 10.1519/JSC.00000000000004291	Dines HR, Nixon J, Lockey SJ, Herbert AJ, Kipps C, Pedlar CR, Day SH, Heffernan SM, Antrobus MR, Brazier J, Erskine RM, Stebbings GK, Hall ECR, Williams AG
Charles Pedlar	Objective Measures of Strain and Subjective Muscle Soreness Differ Between Positional Groups and Season Phases in American College Football	Apr-23	International Journal of Sports Physiology and Performance	doi: 10.1123/ijsp.2022-0347	McKay BA, Delaney JA, Simpkin A, Larkin T, Murray A, Daniels D, Pedlar CR, Sampson JA
Charles Pedlar	A bespoke sleep monitoring and sleep hygiene intervention improves sleep in an U18 professional football player: A case study	May-23	Journal of Sports Sciences	doi: 10.1080/02640414.2023.2213032	Edinburgh L, Hill J, Jarvis M, Bruce-Low S, Pedlar CR
Charles Pedlar	COVID-19 vaccination produces exercise-responsive SARS-CoV-2-specific T-cells regardless of infection history	Jul-23	Journal of Sport and Health Science	doi: 10.1016/j.jshs.2023.06.006	Smith KA, Zúñiga TM, Baker FL, Batatinha H, Pedlar CR, Burgess SC, Gustafson MP, Katsanis E, Simpson RJ
Charles Pedlar	Rehearsal and Performance Volume in Professional Ballet: A Five-Season Cohort Study	Mar-23	Journal of Dance Medicine & Science	doi: 10.1177/1089313X231174684	Shaw JW, Mattiussi AM, Brown DD, Williams S, Springham M, Pedlar CR, Tallent J
Charles Pedlar	The development and validation of an open-source accelerometry algorithm for measuring jump height and frequency in ballet	Mar-23	Journal of sports sciences	doi: 10.1080/02640414.2023.2223048	Shaw JW, Maloney B, Mattiussi AM, Brown DD, Springham M, Pedlar CR, Tallent J
Eleanor Tillet & Mike Loosemore	Survey of emergency medicine doctors in London physical activity characteristics, awareness of guidelines and prescribing behaviours	May-23	BMJ Open Sport & Exercise Medicine	doi: 10.1136/bmjsem-2022-001495	Koch K, Tillet E, Loosemore M

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Fares Haddad	Artificial intelligence applications and scholarly publication in orthopedic surgery	Apr-23	Journal of Orthopaedic Research	doi: 10.1002/jor.25566	Leopold SS, Haddad FS, Sandell LJ, Swionkowski M
Fares Haddad	Patient-Reported Outcome Measures in Conventional Total Hip Arthroplasty Versus Robotic-Arm Assisted Arthroplasty: A Prospective Cohort Study With Minimum 3 Years' Follow-Up	Apr-23	The Journal of Arthroplasty	doi: 10.1016/j.arth.2023.04.045	Fontalis A, Kayani B, Haddad IC, Donovan C, Tahmassebi J, Haddad FS
Fares Haddad	2-Year Radiostereometric Analysis Evaluation of a Short, Proximally Coated, Triple-Taper Blade Femoral Stem Versus a Quadrangular-Taper Stem With Reinforced Proximal Body: A Randomized Controlled Trial	Mar-23	The Journal of Arthroplasty	doi: 10.1016/j.arth.2023.03.030	Fontalis A, Kayani B, Vanhegan I, Tahmassebi J, Haddad IC, Giebaly DE, Rajput V, Hansjee S, Haddad FS
Fares Haddad	Early clinical and radiological outcomes of the new porous titanium shell in combination with locking screw in revision total hip arthroplasty	May-23	Arthroplasty	doi: 10.1186/s42836-023-00177-4	Shaarani SR, Jaibaji M, Yagmour KM, Vles G, Haddad FS, Konan S
Fares Haddad	A comparison of preoperative scores prior to anterior cruciate ligament reconstruction with optimal preinjury scores and final scores at two-year follow up	Jan-23	Bone & Joint Journal	doi: 10.1302/2633-1462.41.BJO-2022-0090	Gabr A, Haddad FS
Fares Haddad	Hot Topics and Current Controversies in Total Knee Arthroplasty	Jan-23	Instructional Course Lectures,	2023;72:287-306	Maloney WJ, Barrack RL, Berend KR, Berry DJ, Della Valle CJ, Chen AF, Dalury DF, Haddad FS, Lieberman JR, Mayman DJ, Nelson CL, Pagnano MW
Fares Haddad	The Use of Biologics in NFL Athletes: An Expert Consensus of NFL Team Physicians	Feb-23	Orthopaedic Journal of Sports Medicine	doi: 10.1177/23259671221143778	Murray IR, McAdams TR, Hammond KE, Haddad FS, Rodeo SA, Abrams GD, Bankston L, Bedi A, Boublik M, Bowen M, Bradley JP, Cooper DE, Craythorne C, Curl LA, ElAttrache N, Gazzaniga DS, Kaplan K, Khalfayan EE, Larson C, Pepe M, Price MD, Schroepfel JP, Voos J, Waslewski G, West R
Fares Haddad	Functional implant positioning in total hip arthroplasty and the role of robotic-arm assistance	Feb-23	International Orthopaedics	doi: 10.1007/s00264-022-05646-0	Fontalis A, Raj RD, Kim WJ, Gabr A, Glod F, Foissey C, Kayani B, Putzeys P, Haddad FS
Fares Haddad	One- or two-stage reimplantation for infected total knee prosthesis?	Feb-23	Orthopaedics & Traumatology: Surgery & Research	doi: 10.1016/j.otsr.2022.103453	Wignadasan W, Ibrahim M, Haddad FS
Fares Haddad	Vancomycin powder in total joint replacement	Aug-23	The Bone & Joint Journal	doi: 10.1302/0301-620X.105B8.BJJ-2023-0675	Mancino F, Gant V, Meek DRM, Haddad FS
Fares Haddad	Artificial intelligence in orthopaedic surgery	2023	Bone & Joint Research	doi: 10.1302/2046-3758.127.BJR-2023-0111.R1	Lisacek-Kiosoglous AB, Powling AS, Fontalis A, Gabr A, Mazomenos E, Haddad FS

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Fares Haddad	Current Concepts in Alignment in Total Knee Arthroplasty	Jul-23	The Journal of Arthroplasty	doi: 10.1016/j.arth.2023.01.060	Karasavvidis T, Pagan Moldenhauer CA, Haddad FS, Hirschmann MT, Pagnano MW, Vigdorichik JM
Fares Haddad	The impact of the menstrual cycle on orthopaedic sports injuries in female athletes	Jul-23	The Bone & Joint Journal	doi: 10.1302/0301-620X.105B7.BJJ-2022-1262.R2	Raj RD, Fontalis A, Grandhi TSP, Kim WJ, Gabr A, Haddad FS
Fares Haddad	A simple technical tip to reduce complications associated with separate pin-site incisions in robotic-assisted total knee arthroplasty	Jul-23	The Annals of The Royal College of Surgeons of England	doi: 10.1308/rcsann.2022.0088.	Ibrahim M, Wignadasan W, Haddad FS
Fares Haddad	Robotic Arthroplasty Clinical and cost Effectiveness Randomised controlled trial (RACER-knee): a study protocol	Jul-23	BMJ open	doi: 10.1136/bmjopen-2022-068255.	Griffin J, Davis ET, Parsons H, Gemperle Mannion E, Khatri C, Ellard DR, Blyth MJ, Clement ND, Deehan D, Flynn N, Fox J, Grant NJ, Haddad FS, Hutchinson CE, Mason J, Mohindru B, Scott CEH, Smith TO, Skinner JA, Toms AD, Rees S, Underwood M, Metcalfe A
Fares Haddad	The language of knee alignment : updated definitions and considerations for reporting outcomes in total knee arthroplasty.	Feb-23	Bone & Joint Journal	doi: 10.1302/0301-620X.105B2.BJJ-2022-1345	MacDessi SJ, Oussedik S, Abdel MP, Victor J, Pagnano MW, Haddad FS
Fares Haddad	Telehealth for a better service delivery in orthopaedic surgery	Aug-23	The Bone & Joint Journal	doi: 10.1302/0301-620X.105B8.BJJ-2023-0089.R1	Grandhi TSP, Fontalis A, Raj RD, Kim WJ, Giebaly DE, Haddad FS
Fares Haddad, Bruce Paton, Mat Wilson	Basics must improve to reduce the burden of hamstring muscle injuries	2023	British Journal of Sports Medicine	doi.org/10.1136/bjsports-2021-105387	Haddad, F. S., Paton, B. M., Plastow, R., & Wilson, M. G
Fares Haddad, Bruce Paton, Mat Wilson, Noel Pollock, Paul Read & Ricci Plastow	London International Consensus and Delphi study on hamstring injuries part 1: classification	2023	British Journal of Sports Medicine	doi.org/10.1136/bjsports-2021-105371	Paton, B. M., Court, N., Giakoumis, M., Head, P., Kayani, B., Kelly, S., Kerkhoffs, G., Moore, J., Moriarty, P., Murphy, S., Plastow, R., Pollock, N., Read, P., Stirling, B., Tulloch, L., van Dyk, N., Wilson, M. G., Wood, D., & Haddad, F
Fares Haddad, Bruce Paton, Mat Wilson, Noel Pollock, Paul Read & Ricci Plastow	London International Consensus and Delphi study on hamstring injuries part 3: rehabilitation, running and return to sport	2023	British Journal of Sports Medicine	doi.org/10.1136/bjsports-2021-105384	Paton, B. M., Read, P., van Dyk, N., Wilson, M. G., Pollock, N., Court, N., Giakoumis, M., Head, P., Kayani, B., Kelly, S., Kerkhoffs, G., Moore, J., Moriarty, P., Murphy, S., Plastow, R., Stirling, B., Tulloch, L., Wood, D., & Haddad, F
Fares Haddad, Bruce Paton, Mat Wilson, Noel Pollock, Paul Read & Ricci Plastow	London International Consensus and Delphi study on hamstring injuries part 2: operative management.	2023	British Journal of Sports Medicine	doi.org/10.1136/bjsports-2021-105383	Plastow, R., Kerkhoffs, G., Wood, D., Paton, B. M., Kayani, B., Pollock, N., Court, N., Giakoumis, M., Head, P., Kelly, S., Moore, J., Moriarty, P., Murphy, S., Read, P., Stirling, B., Tulloch, L., van Dyk, N., Wilson, M., & Haddad, F
Flaminia Ronca	Musculoskeletal complaints in English law enforcement officers: a cross-sectional study	Aug-23	International Journal of Occupational Safety and Ergonomics	doi: 10.1080/10803548.2023.2235844.	Kasem J, Davies MAM, Chainey S, Ronca F

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Flaminia Ronca & Charles Pedlar	Acute and long-term sleep measurements produce opposing results on sleep quality in 8hr and 12hr shift patterns in law enforcement officers	2023	Journal of Sleep Research	doi: 10.1111/jsr.13862	Sharma, I., Pedlar, C., Burgess, P., Kanagasabai, S., Ronca, F
James Hull	Diagnostic approach to lower airway dysfunction in athletes: a systematic review and meta-analysis by a subgroup of the IOC consensus on 'acute respiratory illness in the athlete'	Jan-23	British Journal of Sports Medicine	doi: 10.1136/bjsports-2022-106059	Reier-Nilsen T, Sewry N, Chenuel B, Backer V, Larsson K, Price OJ, Pedersen L, Bougault V, Schwelnlus M, Hull JH
James Hull	Year-round longitudinal health surveillance in UK Olympic Summer Sport Athletes 2016-2019.	2023	British Journal of Sports Medicine	doi: 10.1136/bjsports-2022-105992	Ranson C, Wootten M, Biswas A, Herrington L, Gallimore D, Jackson PD, Taylor A, Spencer S, Hull JH, McCaig S
James Hull	Hosting international sporting events during the COVID-19 pandemic: lessons learnt and looking forward	Jan-23	British Journal of Sports Medicine	doi: 10.1136/bjsports-2022-106096	Mountjoy M, McCloskey B, Bahr R, Hull JH, Kemp J, Thornton JS, Patricios J
James Hull	Chaotic breathing in post-COVID-19 breathlessness: a key feature of dysfunctional breathing can be characterised objectively by approximate entropy	Jul-23	ERJ Open Research	doi: 10.1183/23120541.00117-2023.	Samaranayake CB, Warren C, Rhamie S, Haji G, Wort SJ, Price LC, McCabe C, Hull JH
James Hull	The effects of acute respiratory illness on exercise and sports performance outcomes in athletes - A systematic review by a subgroup of the IOC consensus group on "Acute respiratory illness in the athlete"	Jul-23	European Journal of Sport Science	doi: 10.1080/17461391.2022.2089914	Kaulback K, Pyne DB, Hull JH, Snyders C, Sewry N, Schwelnlus M
James Hull	Fractional exhaled nitric oxide in the assessment of exercise-induced bronchoconstriction: A multicenter retrospective analysis of UK-based athletes	Apr-23	Scandinavian journal of medicine & science in sports	doi: 10.1111/sms.14367	Dickinson J, Gowers W, Sturridge S, Williams N, Kippelen P, Simpson A, Jackson A, Hull JH, Price OJ
James Hull	Air athletes breathe: weighing benefits against harm	2023	Thorax	doi: 10.1136/thorax-2023-220210.	Hull JH, Koehle MS
Mathew Wilson	Hematological Adaptations Following a Training Camp in Hot and/or Hypoxic Conditions in Elite Rugby Union Players	Aug-23	International Journal of Sports Physiology and Performance	doi: 10.1123/ijsp.2023-0166	Périard JD, Girard O, Townsend N, Bourdon P, Cocking S, Ihsan M, Lacombe M, Nichols D, Travers G, Wilson MG, Piscione J, Racinais S
Joanna Blodgett	Blood glucose variance measured by continuous glucose monitors across the menstrual cycle	Aug-23	Digital Medicine	https://doi.org/10.1038/s41746-023-00884-x https://rdcu.be/dpCag	Lin G, Siddiqui R, Lin Z, Blodgett JM, Patel SN, Truong KN, Mariakakis A
Joanna Blodgett & Mark Hamer	Prognostic accuracy of the one-legged balance test in predicting falls: 15-years of midlife follow-up in a British birth cohort study	Jan-23	Frontiers in Sports and Active Living	doi: 10.3389/fspor.2022.1066913	Blodgett JM, Hardy R, Davis DHJ, Peeters G, Hamer M, Kuh D, Cooper R

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Joanna Blodgett & Mark Hamer	Device-measured physical activity and cardiometabolic health: the ProPASS consortium	In Press 2023 (accepted 19/9/2023)	European Heart Journal	https://doi.org/10.1093/eurheartj/ehad717	Matthew N. Ahmadi, Joanna M Blodgett, Andrew J Atkin, Hsiu-Wen Chan, Cruz Borja del Pozo, Kristin Suorsa, Esmee A Bakker, Richard M Pulsford, Gregore I Mielke, Peter J. Johansson, Pasan Hettiarachchi, Dick H.J. Thijssen, Sari Stenholm, Gita D Mishra, Armando Teixeira-Pinot, Vegar Rangul, Lauren B Sherar, Ulf Ekelund, Alun D. Hughes, I-Min Lee, ProPASS collaboration, Andreas Holtermann, Annemarie Koster, Mark Hamer, Emmanuel Stamatakis
Joanna Blodgett and Mark Hamer	Vigorous intermittent lifestyle physical activity and cancer incidence in non-exercisers: the UK Biobank accelerometry study	Jul-23	Jama Oncology	doi: 10.1001/jamaoncol.2023.1830.	Stamatakis E, Ahmadi MN, Friedenreich CM, Blodgett JM, Koster A, Holtermann A, Atkin A, Rangul V, Sherar LB, Teixeira-Pinto A, Ekelund U, Lee IM, Hamer M
Joanna Blodgett, Charles Pedlar, Georgie Bruinvels	Amenorrhoea and oligomenorrhoea risk related to exercise training volume and intensity: Findings from 3705 participants recruited via the STRAVA™ exercise application	Jul-23	Journal of Science and Medicine in Sport	doi: 10.1016/j.jsams.2023.07.001	Baranauskas MN, Freemas JA, Carter SJ, Blodgett JM, Pedlar CR, Bruinvels G
Joanna Blodgett, John Joseph Mitchell & Mark Hamer	Associations between the composition of daily time spent in physical activity, sedentary behaviour and sleep and risk of depression: Compositional data analyses of the 1970 British cohort Study	Jan-23	Journal of Affective Disorders	https://doi.org/10.1016/j.jad.2022.09.110	Blodgett JM, Mitchell JJ, Stamatakis E, Chastin S, Hamer M.
Joanna Blodgett, Tom Norris, Snehal Pinto-Pereira & Mark Hamer	Does moderate to vigorous physical activity mediate the association between depression and physical function in midlife: Evidence from two British birth cohort studies	Apr-23	Journal of Affective Disorders	doi:10.1016/j.jad.2022.12.084	Blodgett, J. M., Norris, T., Pinto Pereira, S. M., & Hamer, M
John Joseph Mitchell, Joanna Blodgett & Mark Hamer	Exploring the associations of daily movement behaviours and mid-life cognition: a compositional analysis of the 1970 British Cohort Study. J Epidemiol Community Health	Mar-23	Epidemiol Community Health	doi: 10.1136/jech-2022-219829.	Mitchell JJ, Blodgett JM, Chastin SF, Jefferis BJ, Wannamethee SG, Hamer M
John Joseph Mitchell, Joanna Blodgett, Mark Hamer	Associations between sporting physical activity and cognition in mid and later-life: Evidence from two cohorts	Aug-23	Scandinavian Journal of Medicine & Science in Sports	doi: 10.1111/sms.14412.	Mitchell JJ, Hamer M, Blodgett JM, Wannamethee GS, Jefferis BJ
Julie Greeves	Role of sex and stature on the biomechanics of normal and loaded walking: implications for injury risk in the military	2023	BMJ Mil Health	doi: 10.1136/bmjilitary-2020-001645	Gill N, Roberts A, O'Leary TJ, Liu A, Hollands K, Walker D, Greeves JP, Jones R
Julie Greeves	Gender data gap in military research: a review of the participation of men and women in military musculoskeletal injury studies.	Feb-23	BMJ Mil Health	doi: 10.1136/bmjilitary-2021-002015	O'Leary TJ, Young CD, Wardle SL, Greeves JP
Julie Greeves	Cognitive performance of military men and women during prolonged load carriage	Feb-23	BMJ Mil Health	doi: 10.1136/bmjilitary-2021-002000	Armstrong NC, Smith SJR, Risius D, Doyle D, Wardle SL, Greeves JP, House JR, Tipton M, Lomax M

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Mark Hamer	Joint associations of physical activity and sleep duration with cognitive ageing: longitudinal analysis of an English cohort study	Jul-23	The Lancet Healthy Longevity	doi: 10.1016/S2666-7568(23)00083-1.	Bloomberg M, Blocklebank L, Hamer M, Steptoe A.
Mark Hamer	Brief bouts of device-measured intermittent lifestyle physical activity, major adverse cardiovascular events, and mortality in non-exercisers	Sep-23	Lancet Public Health	In Press	Ahmadi MN, Hamer M, Gill JMR, Murphy M, Sanders JP, Doherty A, Stamatakis E
Mark Hamer	Association between device-measured stepping behaviors and cardiometabolic health markers in middle-aged women: The Australian Longitudinal Study on Women's Health	Mar-23	Scandinavian Journal of Medicine & Science in Sports	doi: 10.1111/sms.14363.	Wei L, Ahmadi MN, Chan HW, Chastin S, Hamer M, Mishra GD, Stamatakis E.
Mark Hamer	Do associations of physical activity and sedentary behaviour with cardiovascular disease and mortality differ across socioeconomic groups? A prospective analysis of device-measured and self-reported UK Biobank data	Feb-23	British Journal of Sports Medicine	doi: 10.1136/bjsports-2022-105435	Paudel S, Ahmadi M, Phongsavan P, Hamer M, Stamatakis E
Mark Hamer	Subjective and objective indicators of neighbourhood safety and physical activity among UK adolescents	Jun-23	Health & Place	doi: 10.1016/j.healthplace.2023.103050	Constable Fernandez C, Patalay P, Vaughan L, Church D, Hamer M, Maddock J
Mark Hamer	Characteristics and efficacy of physical activity interventions to improve cardiometabolic and psychosocial outcomes in people living with HIV in sub-Saharan Africa: a protocol for a systematic review	Feb-23	Systematic Reviews	doi: 10.1186/s13643-023-02186-5	Mabweazara SZ, Manne-Goehler J, Hamer M, Cellini J, Siedner MJ
Mark Hamer	Yoga Programme for Type 2 Diabetes Prevention (YOGA-DP): A Qualitative Study Exploring the Trial Team's Facilitators and Challenges in Conducting a Feasibility Trial in India	Aug-23	Diabetes Therapy	doi: 10.1007/s13300-023-01450-0.	Mishra P, Greenfield SM, Harris T, Hamer M, Lewis SA, Singh K, Nair R, Mukherjee S, Tandon N, Kinra S, Manjunath NK, Prabhakaran D, Chattopadhyay K
Mark Hamer	Correlates of physical activity among people living with and without HIV in rural Uganda	Jul-23	Frontiers in Reproductive Health	doi: 10.3389/frph.2023.1093298.	Mabweazara SZ, Manne-Goehler J, Bibangambah P, Kim JH, Ruth S, Hemphill LC, Okello S, Hamer M, Siedner MJ
Mark Hamer	Association of healthy lifestyle factors and obesity-related diseases in adults: findings from the UK Biobank	May-23	Jama Network Open	doi: 10.1001/jamanetworkopen.2023.14741.	Rassy N, Van Straaten A, Carette C, Rives-Lange C, Hamer M, Czernichow S
Mark Hamer	Bidirectional associations of sleep and discretionary screen time in adults: Longitudinal analysis of the UK biobank	2023	Journal of Sleep Research	doi: 10.1111/jsr.13727	Sampasa-Kanyinga H, Chaput JP, Huang BH, Duncan MJ, Hamer M, Stamatakis E

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Mark Hamer	Sedentary behaviour, but not moderate-to-vigorous physical activity, is associated with respiratory responses to acute psychological stress	Jan-23	Biological Psychology	doi: 10.1016/j.biopsycho.2023.108510	Chantry AJ, Bishop NC, Hamer M, Paine NJ.
Mark Hamer	YOGA-DP Study Team. Yoga Programme for Type 2 Diabetes Prevention (YOGA-DP) Among High-Risk People in India: A Multicenter Feasibility Randomized Controlled Trial	Jul-23	Diabetes Therapy	doi: 10.1007/s13300-023-01395-4.	Chattopadhyay K, Mishra P, Singh K, Singh K, Harris T, Hamer M, Greenfield SM, Manjunath NK, Nair R, Mukherjee S, Tandon N, Lewis SA, Kinra S, Prabhakaran D
Mark Hamer	Brief bouts of device-measured intermittent lifestyle physical activity and its association with major adverse cardiovascular events and mortality in people who do not exercise: a prospective cohort study	2023	Lancet Public Health 2023	DOI: S2468-2667(23)00183-4	Matthew N Ahmadi, Mark Hamer, Jason M R Gill, Marie Murphy, James P Sanders, Aiden Doherty, Emmanuel Stamatakis
Mark Hamer & Joanna Blodgett	Associations Between Adolescent Sport and Exercise Participation and Device-Assessed Physical Activity in Adulthood: Evidence From the 1970 British Cohort Study	May-23	Journal of Physical Activity and Health	doi: 10.1123/jpah.2022-0605.	Scicluna N, Hamer M, Blodgett JM
Mark Hamer & Joanna Blodgett	The impact of selected methodological factors on data collection outcomes in observational studies of device-measured physical behaviour in adults: A systematic review	Mar-23	International Journal of Behavioral Nutrition and Physical Activity	doi: 10.1186/s12966-022-01388-9	Pulsford RM, Brocklebank L, Fenton SAM, Bakker E, Mielke GI, Tsai LT, Atkin AJ, Harvey DL, Blodgett JM, Ahmadi M, Wei L, Rowlands A, Doherty A, Rangul V, Koster A, Sherar LB, Holtermann A, Hamer M, Stamatakis E
Mathew Wilson	Influence of the Thermal Environment on Work Rate and Physiological Strain during a UCI World Tour Multistage Cycling Race	Jan-23	Medicine and Science in Sports and Exercise	doi: 10.1249/MSS.0000000000003028	Périard JD, Wilson MG, Tebeck ST, Gilmore JB, Stanley J, Girard O
Mike Loosemore	Introducing the Sport Concussion Office Assessment Tool 6 (SCOAT6)	Jun-23	British Journal of Sports Medicine	doi: 10.1136/bjsports-2023-106860.	Patricios JS, Davis GA, Ahmed OH, Blauwet C, Schneider GM, Purcell LK, Echemendia RJ, Fremont P, Fuller GW, Herring SA, Harmon KG, Loosemore M, Makdissi M, O'Halloran P, Putukian M, Turner M, Webborn N, Yeates KO, van Ierssel J, Schneider KJ.
Mike Loosemore & Michael Turner	Child SCOAT6	Jun-23	British Journal of Sports Medicine	doi: 10.1136/bjsports-2023-106984.	Davis GA, Patricios JS, Purcell LK, Anderson V, Gioia G, Giza CC, Yeates KO, Ahmed OH, Blauwet C, Corwin D, Master CL, Schneider G, van Ierssel J, Echemendia RJ, Fremont P, Fuller GW, Harmon KG, Herring SA, Holte K, Loosemore M, Makdissi M, McCrean M, Meehan WP 3rd, O'Halloran P, Premji Z, Putukian M, Shill IJ, Turner M, Vaandering K, Webborn N, Schneider KJ
Mike Loosemore	Sport Concussion Office Assessment Tool - 6	Jun-23	British Journal of Sports Medicine	doi: 10.1136/bjsports-2023-106859.	Patricios J, Schneider GM, van Ierssel J, Purcell LK, Davis GA, Echemendia RJ, Frémont P, Fuller GW, Herring S, Harmon KG, Holte K, Loosemore M, Makdissi M, McCrean M, Meehan WP 3rd, O'Halloran P, Premji Z, Putukian M, Shill IJ, Turner M, Vaandering K, Webborn N, Yeates KO, Schneider KJ
Mike Loosemore	Introducing the Child Sport Concussion Office Assessment Tool 6 (Child SCOAT6)	2023	British Journal of Sports Medicine	doi: 10.1136/bjsports-2023-106858	Davis GA, Patricios JS, Purcell LK, Anderson V, Gioia GA, Giza CC, Yeates KO, Ahmed OH, Blauwet C, Corwin D, Master CL, Schneider GM, van Ierssel J, Echemendia RJ, Fremont P, Fuller GW, Herring S, Harmon KG, Holte K, Loosemore M, Makdissi M, McCrean M, Meehan WP 3rd, O'Halloran P, Premji Z, Putukian M, Shill IJ, Turner M, Vaandering K, Webborn N, Schneider KJ

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Mike Loosemore	NOTE Criterion validity and reliability of an instrumented mouthguard under pendulum impactor conditions	2023	Sports Engineering	https://doi.org/10.1007/s12283-023-00434-4	K Austin, K Nicholas, C Jones, M Loosemore
Mike Loosemore	An Instrumented Mouthguard for Real-Time Measurement of Head Kinematics under a Large Range of Sport Specific Accelerations.	2023	Sensors 2023	doi: 10.3390/s23167068.PMID: 37631606	Jones CM, Austin K, Augustus SN, Nicholas KJ, Yu X, Baker C, Chan EYK, Loosemore M, Ghajari M.Sensors
Mike Loosemore	Beyond acute concussion assessment to office management: a systematic review informing the development of a Sport Concussion Office Assessment Tool (SCOAT6) for adults and children.	2023	British Journal of sports medicine	doi: 10.1136/bjsports-2023-106897. PMID: 37316204	Patricios JS, Schneider GM, van Ierssel J, Purcell LK, Davis GA, Echemendia RJ, Fremont P, Fuller GW, Herring SA, Harmon KG, Holte K, Loosemore M, Makdissi M, McCrean M, Meehan WP 3rd, O'Halloran P, Premji Z, Putukian M, Shill IJ, Turner M, Vaandering K, Webborn N, Yeates KO, Schneider KJ
Nathan Riding & Mathew Wilson	A New Tool to Aid the Differential Diagnosis of Physiological Remodelling from Cardiac Pathology When Assessing Left Ventricle, Left Atrial and Aortic Structure and Function in Male Arab and Black Paediatric Athletes	Jan-23	Journal of cardiovascular development and disease	20;10(2):37	McClellan G, Wilson MG, Riding NR, Pieleas G, Watt V, Adamuz C, Shaw A, Harkness A, Johnson A, George KP, Oxborough D
Nathan Riding & Mathew Wilson	Protecting the stars of tomorrow: do international cardiovascular preparticipation screening policies account for the paediatric athlete? A systematic review and quality appraisal	Mar-23	British Journal of Sports Medicine	57(6):371-380	Riding NR, Dorobantu DM, Williams CA, Stuart G, Fritsch P, Wilson MG, Mossialos E, Pieleas G
Paul Read & Mathew Wilson	Residual Deficits in Reactive Strength After Anterior Cruciate Ligament Reconstruction in Soccer Players	May-23	Journal of Athletic Training	doi: 10.4085/0169-20.	Read PJ, Davies WT, Bishop C, McAuliffe S, Wilson MG, Turner AN
Snehal Pinto Pereira	Post-COVID-19 condition at 6 months and COVID-19 vaccination in non-hospitalised children and young people. Archives of Disease in Childhood	2023	Archives of Disease in Childhood	doi:10.1136/archdischild-2022-324656	Pinto Pereira, S. M., Nugawela, M. D., Rojas, N. K., Shafran, R., McOwat, K., Simmons, R., Stephenson, T.
Snehal Pinto Pereira	A cross-sectional study of the health of emerging young adults in England following a COVID-19 infection	2023	Journal of Adolescent Health	doi: 10.1016/j.jadohealth.2023.01.026	Fiona Newlands, Natalia K. Rojas, Manjula Nugawela, Snehal M. Pinto Pereira, Marta Buszewicz, Trudie Chalder, Emily Y. Cheung, Emma Dalrymple, Tamsin Ford, Isobel Heyman, Shamez N. Ladhani, Kelsey McOwat, Ruth Simmons, Terence Stephenson, Roz Shafran
Snehal Pinto Pereira	Stroke risk in older British men: Comparing performance of stroke-specific and composite-CVD risk prediction tools	Feb-23	Preventive Medicine Reports Volume 31	102098	Ayesha Ahmed, Gareth Ambler, Snehal M. Pinto Pereira, Lucy Lennon, Olia Papacosta, Peter Whincup, Goya Wannamethee
Snehal Pinto Pereira & Natalia K. Rojas	Natural course of health and well-being in non-hospitalised children and young people after testing for SARS-CoV-2: a prospective follow-up study over 12 months	2023	The Lancet Regional Health - Europe	25: 100554	Pinto Pereira SM, Roz Shafran, Manjula D. Nugawela, Laura Panagi, Dougal Hargreaves, Shamez N. Ladhani, Sophie D. Bennett, Trudie Chalder, Emma Dalrymple, Tamsin Ford, Isobel Heyman, Kelsey McOwat, Natalia K. Rojas, Kishan Sharma, Ruth Simmons, Simon R. White, Terence Stephenson

APPENDIX

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (Names of all contributors)
Snehal Pinto Pereira & Tom Norris	Linear and Non-linear associations between vitamin D and grip strength: a Mendelian Randomisation study in UK Biobank.	2023	The Journals of Gerontology	doi.org/10.1093/gerona/glac255	Pinto Pereira, Snehal M; Garfield, Victoria; Norris, Thomas; Burgess, Stephen; Williams, Dylan M; Dodds, Richard; Sayer, Avan A; Robinson, Sian M; Cooper, Rachel
Tom Gurney & Flaminia Ronca	Cognitive effects of guarana supplementation with maximal intensity cycling	Jul-23	British Journal of Nutrition	doi: 10.1017/S0007114522002859	Gurney T, Bradley N, Izquierdo D, Ronca F
Tom Norris	Associations between diabetes status and grip strength trajectory sub-groups in adulthood: findings from over 16 years of follow-up in the MRC National Survey of Health and Development	Apr-23	BMC Geriatrics	https://doi.org/10.1186/s12877-023-03871-9	Norris, T., Johnson, W., Cooper, R
Tom Norris & Snehal Pinto Pereira	The relationship between adiposity and cognitive function: a bidirectional Mendelian randomization study in UK Biobank	Aug-23	International Journal of Epidemiology	doi.org/10.1093/ije/dyad043	Norris T, Salzmann A, Henry A, Garfield V, Pinto Pereira SM
Joanna Blodgett & Mark Hamer	Fractal complexity of daily physical activity and cognitive function in a midlife cohort	Nov-23	Scientific Reports	doi: 10.1038/s41598-023-47200-x	Pinto Pereira SM, Mitchell JJ, Blodgett JM, Hamer M, Norris T
Snehal Pinto-Pereira, John Joseph Mitchell, Joanna Blodgett, Mark Hamer and Tom Norris,	Is cardiorespiratory fitness associated with cognitive outcomes in mid-adulthood? Findings from the 1958 British birth cohort	Oct-23	Scandinavian Journal of Medicine & Science in Sports	doi: 10.1111/sms.14525.	McKay BA, Delaney JA, Simpkin A, Larkin T, Murray A, Daniels D, Pedlar CR, Sampson JA
Mark Hamer	Perceived Social Support and Sustained Physical Activity During the COVID-19 Pandemic. Int J Behav Med	Oct-23	"International Journal of Behavioural Medicine"	doi: 10.1007/s12529-022-10125-2	Hailey V, Fisher A, Hamer M, Fancourt D.
Mark Hamer	Association between neighbourhood cohesion and physical activity trajectories during the COVID-19 pandemic using data from Understanding Society: The UK Household Longitudinal Study & COVID-19 sub-study	Oct-23	Preventive Medicine Reports	doi: 10.1016/j.pmedr.2023.102392.	Hailey V, Bloomberg M, Hamer M, Fisher A



WITH YOU 100%

www.iseh.co.uk

 [@TheISEH](https://twitter.com/TheISEH)