

FOREWORD

It gives us great pleasure to share the 2021 Institute of Sport, Exercise and Health (ISEH) annual report with our team, our partners and our friends.

Although the repercussions of the Covid-19 pandemic have continued over the past year, the ISEH has responded admirably with clinical and academic contributions to the Covid battle and continued growth across clinical, academic and educational workstreams. 2021 has been an extremely busy year, with our team continuing to grow and with new initiatives on the way to expand our reach.

This year we have seen the addition of Dr Madi Davies to our team as a Lecturer in Sport and Exercise Medicine. We have also seen the promotion of Dr Flaminia Ronca to Associate Professor. Dr Ronca has led some outstanding work to develop a new programme to help Professor Mark Hamer, Professor Vivek Mudera and myself with the UCL Sports East facility initiative.

Both Professor Mark Hamer and his team, and Professor Mathew Wilson and his team have continued their outstanding work, and have created a strong research and clinical vision at ISEH for the next few years.

We have also seen changes at board level with the departure of Professor Marcel Levi and the arrival of David Probert as Chair of the Board. We have continued to see meaningful contributions from all partners.

It has been an unusual year in that many of our teams have worked remotely. This made it even more wonderful to see so many people on-site and our students back within the Institute of Sport, Exercise & Health as autumn arrived. Our plans to expand the educational offering in 2021 have borne fruit and we have seen an increased number of students.

Over the past year we have continued to find new innovative ways of delivering outstanding education and we have made great progress in developing potential new courses, including some unique sports science offerings for the future.

In November we hosted the IOC research centres in an excellent meeting which further cemented the strength of ISEH as a major contributor in sport and exercise medicine on the global stage.

We are grateful to the entire team for their versatility, resilience and strong support, and we are grateful to all of 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











University College London Hospitals NHS



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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 an International Olympic Committee (IOC) Accredited Research Centre for Prevention of Injury and Protection of Athlete Health and is one of only eleven facilities worldwide to achieve this IOC recognition.

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





KEY ACHIEVEMENTS IN 2021
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This Annual Report details the good work that the ISEH has undertaken over the course of 2021. Below are some of the highlights of the Institute's key achievements this year.

CLINICAL ACTIVITY

During the Covid-19 pandemic, the ISEH with the kind support of HCA Healthcare UK (HCA UK), increased the capacity for NHS clinical appointments and imaging, helping to reduce the NHS patient backlog. The ISEH has also introduced a number of new specialist clinics and recruited world-leading clinicians to lead the delivery of these new and improved sports exercise medicine services.

- Over 5,000 NHS patient appointments have been held at the ISEH in 2021.
- The ISEH has developed a range of new sports exercise medicine services to meet the needs of elite athletes, including an Elite Sports Concierge Service, a Long-Covid Syndrome Pathway and a Mobile Cardiac & Respiratory Screening Service.
- The ISEH has played an important role in providing world-class sports exercise
 medicine support to a range of elite sports organisations during 2021, including
 the Premier League, the Wimbledon Championships, the RFU, The FA, the NFL
 London Series, and of course a large number of Olympians and Paralympians, to
 name just a few.



OUR NEW MOBILE CARDIAC LABORATORY HAS HAD A RAPID UPTAKE WITH PREMIERSHIP, CHAMPIONSHIP AND LEAGUE ONE FOOTBALL CLUBS



OVER 90 PEER-REVIEWED PAPERS PRODUCED

RESEARCH

Academic research forms a large part of the work that ISEH undertakes, and despite the challenges over the past year of collecting data during the pandemic, ISEH has continued to progress its research themes.

This year ISEH colleagues have:

- Produced over 90 peer-reviewed papers
- Submitted a number of new research applications
- Led a large number of research projects investigating outcomes in both elite sport and population health.

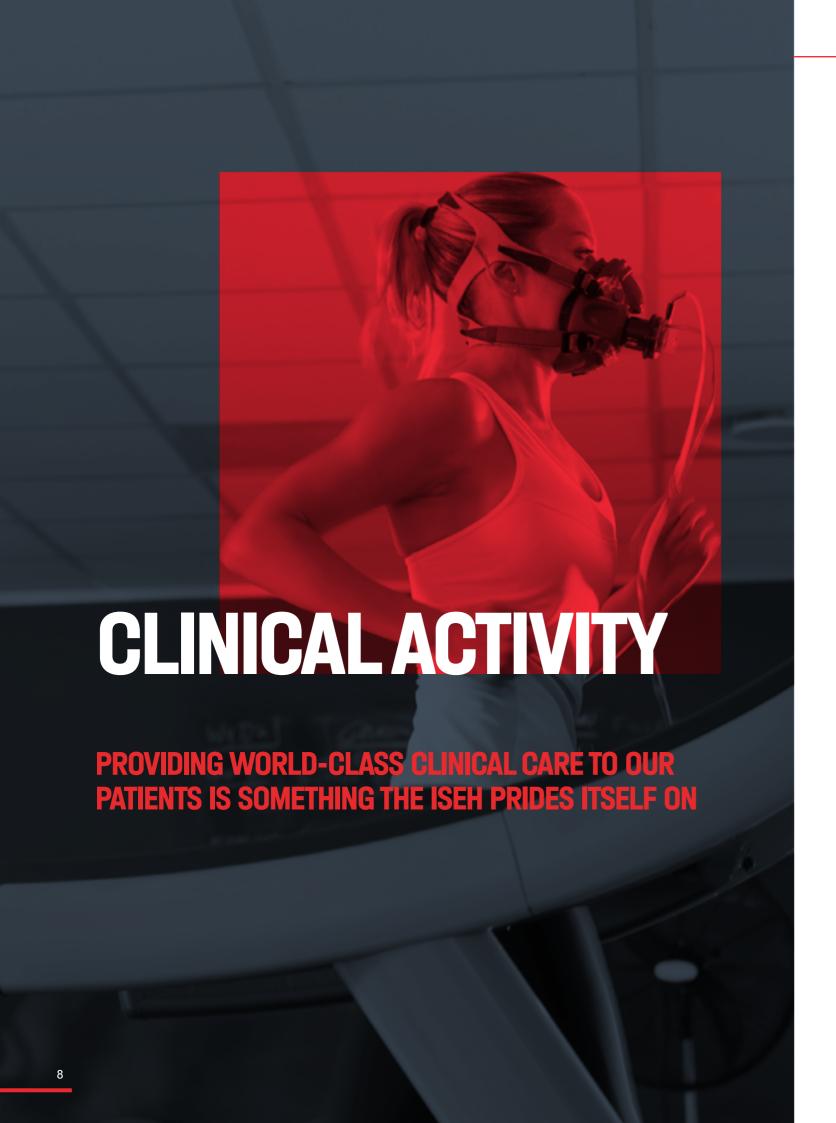
EDUCATION

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

Encouragingly, student satisfaction scores have also significantly increased. This reflects positively on the hard work that the ISEH and UCL teaching staff have invested in ensuring that the quality of teaching and student experience remains the core priority, despite the challenges of the pandemic.

EVENTS

With the pandemic limiting the ISEH's ability to hold face-to-face conferences and events, we staged our events programme online. The ISEH held three online conferences which saw in excess of 1,000 people signing up to attend each event. We also ran a popular educational webinar series with subject-area experts leading learning on a range of different topics across the year. These webinars have regularly attracted more than 400 attendees on each occasion.

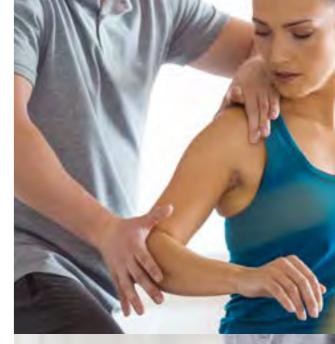


We provide excellence in the diagnosis, prognosis and treatment of sports injuries and illnesses to both elite athletes and exercise enthusiasts.

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.

Similar to the previous year, Covid-19 has had a significant impact on the clinical activity at ISEH throughout 2021. Whilst the pandemic has continued to present challenges in delivering safe and high-quality patient care, ISEH has responded quickly and effectively to these challenges to ensure that clinical activity has remained open throughout the year, even with the national lockdown. We are pleased that we have been able to continue caring and treating our patients in a safe environment, despite the ongoing issues caused by Covid-19.

THE ISEH IS PROUD
TO PROVIDE THE SAME
QUALITY OF MEDICAL
CARE & CLINICAL
SUPPORT FOR AMATEUR
AND RECREATIONAL
ATHLETES AS WE DO
FOR OLYMPIANS











NHS CLINICAL ACTIVITY

UCLH clinics take place at the ISEH on two mornings a week to treat NHS patients, but additional NHS clinics have been taking place this year in order to help reduce the UCLH backlog of patient appointments caused by the pandemic.

At the height of the national lockdown in the first few months of 2021, ISEH adapted its clinical activity to deliver a larger number of its NHS appointments through virtual patient consultations. As the year has progressed, the majority of patient appointments have returned to face-to-face consultations.

4,484

UCLH (NHS) patient appointments held at the ISEH in 2021

This data is accurate as of 18 October 2021

1,361

virtual UCLH patient appointments at the ISFH in 2021

3,123

face-to-face UCLH patient appointments at the ISEH in 2021 **523**

(MRI/Ultrasound)
UCLH appointments
at the ISEH in 2021

We need more centres like @TheISEH across the country. Too often 'physical activity' and non-elite sport are not taken seriously by a very stretched @NHSEngland.

(Patient comment via Twitter)

PRIVATE CLINICAL ACTIVITY

The ISEH's private clinics are managed by HCA UK and over the past year we have continued to further expand and develop the sports and exercise medicine services at the ISEH, with our expert clinicians offering a world-leading service within their respective fields.

The ISEH's multidisciplinary teams include orthopaedic surgeons, sport and exercise medicine physicians, radiologists, physiotherapists and other allied health professionals to ensure each patient's individual needs are met. Our approach is based on research and innovation, evidence-based treatment, experience and teamwork. We have established multimodal pathways that lead to an individualised management plan with a clear focus on enhancing patient outcomes.

In 2021, we have consolidated and refined our existing service provision, but have also added greater depth with new clinical pathways to provide a unique, 'one-stop shop' for both elite and recreational athletes. Our portfolio of services includes the following:

- Advanced Brain Health Clinic
- Concussion Clinic
- Sports Cardiology Clinic
- Sports Nutrition & Recovery Clinic
- Sports Respiratory Clinic
- Sports Podiatry
- Sports Psychology

- Tendon Clinic
- Sports Physiotherapy
- Upper and lower limb performance reconditioning assessment pathways
- Sports Performance Conditioning
- Corporate health and fitness
- Hand, wrist and shoulder specialist clinics

In 2021, we have also seen large scale growth in our wider performance support services. The Long-Covid clinic was designed to support athletes as they return to full fitness following Covid-19 infection. In particular, the clinic supported numerous Olympic athletes prepare for the Tokyo Olympic Games. Research is underway to more clearly understand the physiological effects of Covid-19 infection, with a specific focus on respiratory and cardiac function.

Following its launch in 2020, the Elite Sports Concierge Service has provided dedicated rapid injury support for elite athletes and sports organisations to ensure that they receive access to world-class medical support when they need it the most. A number of elite sports organisations regularly access the service, with further growth expected in 2022 following a return to full sports participation after the various lockdowns enforced during the Covid-19 pandemic.

The ISEH Mobile Cardiac & Respiratory Screening service also continues to grow. This unique service provides a bespoke laboratory within a large dedicated vehicle enabling the ISEH to provide expert care for elite athletes anywhere in Europe. In 2021, 10 professional sports teams across the UK undertook cardiac and respiratory screenings.

Another exciting development in 2021 is the launch of the Advanced BRAIN Health Clinic at ISEH in partnership with Imperial College London, The Rugby Football Union and Premiership Rugby. This specialist pathway includes advanced imaging, biomarker analysis and neurocognitive assessment for retired elite rugby players. The clinic is operated by independent experts Professor David Sharp and Dr Richard Sylvester. All players undergo a comprehensive set of baseline assessments followed by a neurological consultation. Treatment needs or brain health actions are shared with the player and their General Practitioner. The process is then repeated again two and four years later to assess any time-related changes in brain health and the outcomes will be disseminated through the publication of academic research.

Over the past year we have continued to expand our relationships with elite sports organisations and have provided support at a range of events. Standout activities have included the provision of medical coverage at the NFL London Series, supporting The FA and RFU with imaging services for events at Wembley and Twickenham stadiums, and athlete clinical pathway management at the Wimbledon Tennis Championships. We were also proud to support a large number of Olympians and Paralympians with travel preparation for the Tokyo Games during the summer and the Winter Olympics in Beijing in 2022.

CLINICAL ACTIVITY



At @TheISEH this morning for a check up on my knee following the meniscus surgery in November. Our @NHSUK is incredible. Let's do all we can to protect it and the amazing people who work in it.

(Patient comment via Twitter)

Went in to get the ticker checked out yesterday, and ended up with a full CPET test along with an ECG.... but I think heart health is something that often goes unspoken by athletes and gets taken for granted so thanks to @TheISEH for the check over!

(Elite athlete on Twitter)

ENGLISH INSTITUTE OF SPORT (EIS)

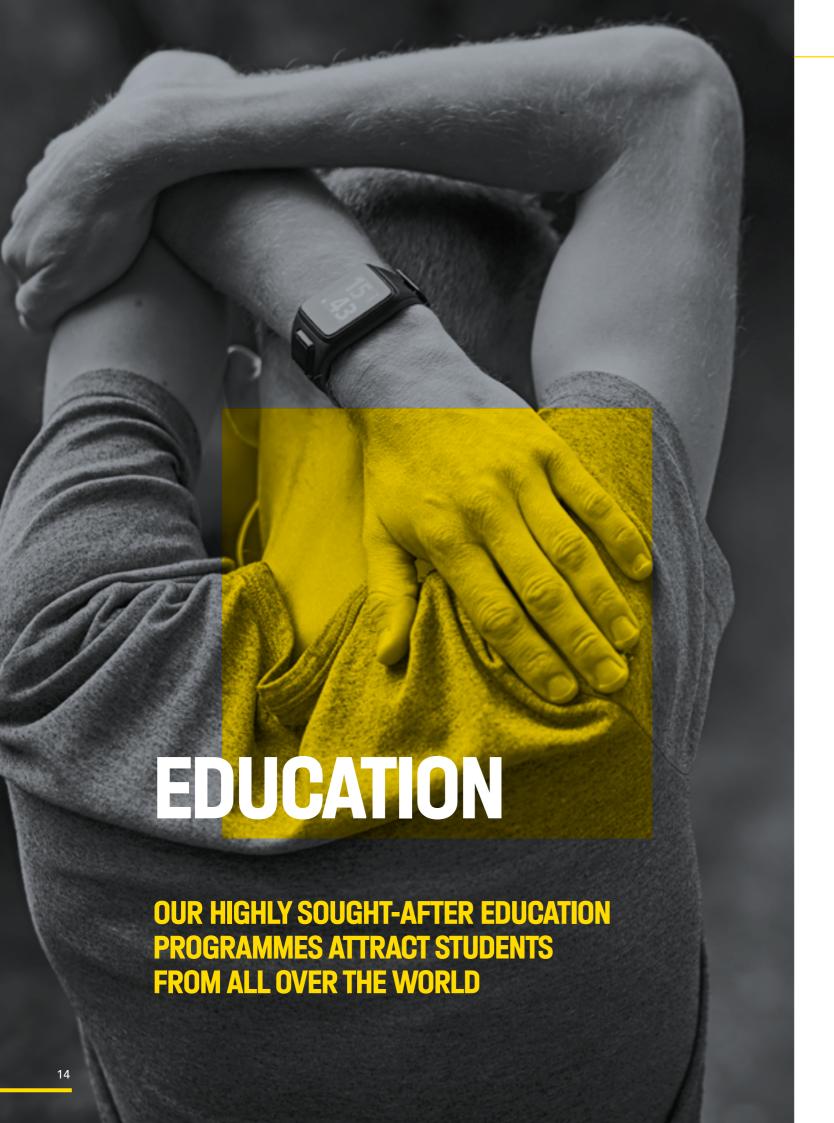
As a key partner of the ISEH, the EIS use the ISEH and its facilities as an important part of its services in supporting the health and performance of Olympic, Paralympic and other elite athletes.

Over the past year EIS and ISEH have worked closely together in providing world-leading clinical and performance support services to aid elite athletes in their preparations for the Tokyo Olympics and Paralympics in the summer of 2021, and in the build-up to the Beijing Winter Olympics in 2022.

Below are a few other highlights from EIS working together with ISEH during 2021:

- In the run-up to the Olympics and Paralympics, athletes from 10 different Olympic, Paralympic and Commonwealth Games sports accessed EIS sports medicine, physiotherapy and soft tissue therapy support at the ISEH.
- The EIS and ISEH collaborated to administer 115 Covid-19 tests prior to the Olympics and Paralympics. Athletes, coaches and support staff, along with the British Olympic Association (BOA), British Paralympic Association (BPA) and International Paralympic Committee (IPC) delegates, were tested across both Olympic and Paralympic sports.
- The Systematic Assessment of Respiratory Athlete Health (SARAH) project, which was a collaboration between the EIS, ISEH, Imperial College and The Royal Brompton Hospital, is now complete. Dr Anna Jackson, Professor Mike Loosemore and Dr James Hull were amongst those involved from the EIS and ISEH. A total of 122 athletes from 12 Olympic Sports took part in this research project. Results highlighted the benefits of a systematic assessment of respiratory health in athletes and suboptimal vaccination protection in illness-susceptible elite athletes. The further in-depth analyses of immune function and respiratory microbiome have now been published.











THE ISEH HOSTED FIVE UCL DEGREE COURSES IN 2021:

1. MSc in Sports Medicine, Exercise & Health

Now in its 13th year with over 100 students, this programme attracts students from all around the world. It 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 multidisciplinary nature of the specialty.

2. Intercalated BSc (iBSc) in Sport & Exercise Medical Science

This highly sought-after degree for medical students at UCL attracts applications from students throughout the UK. The student intake has grown by over 30% this year.

3. BSc in Sport & Exercise Medical Science

Now in its third year, this degree grounds students with the knowledge and skills to help athletes achieve their performance potential and patients to optimise their health. The student intake for this course has grown by over 60% this year, demonstrating its popularity and growing reputation.

4. MSc in Performing Arts Medicine

This unique and highly specialised course, in its sixth year at the ISEH, provides targeted education to meet the health and well-being needs of performing artists (e.g. musicians, actors, dancers, etc). This year there are 21 students enrolled on this course.

5. MSc Orthopaedics

In its second year, this novel teaching programme enrols professional students who aspire to excel in orthopaedics and its allied sub-specialities, such as surgeons, physiotherapists, sports practitioners, clinical researchers, etc. Students receive high-quality learning, and through this course have the potential for gaining high-end publications, international presentations and links to the top clinicians in the field.



EDUCATION

We're very thankful for the great efforts you made to support us as much as possible! And I'm very proud to be one of your students!

(ISEH & UCL student Twitter post)



KEY SUCCESSES IN 2021

MSc students gave overwhelmingly positive feedback on their experiences at ISEH and UCL in 2020-21, particularly considering the challenges of teaching during the pandemic:

- 83% overall student satisfaction with the course
- **81%** of students reported an improvement in their confidence and innovation skills
- 100% rating for staff enthusiasm
- 91% feeling supported through the Covid-19 pandemic

The UCL undergraduate programmes at ISEH have similarly scored incredibly well in student satisfaction surveys:

- 95% student satisfaction rating over the last year
- 100% of students would recommend the programme to peers
- 93% of students claim they would pursue research again in the future



Without a doubt the best year of my medical training thus far. Leaving @TheISEH @ UCLDivofSurgery with a first class for my intercalation in sports medicine. Proud!

(iBSc student Twitter post)

UCL SPORT EAST

UCL is looking to expand its London footprint by establishing a brand-new campus at the London 2012 Olympic Park. The ISEH has been working closely with UCL colleagues to ensure that this new campus includes state-of-the-art sports teaching, research and participation facilities to reflect the momentous backdrop of the Olympic Park.

This new campus will provide outstanding student facilities across a range of subjects and disciplines, and it will provide an incredible opportunity to expand UCL's sports courses in collaboration with the ISEH.

ISEH colleagues have been engaged closely in developing the plans for this far-reaching project that will provide not only high-quality student educational experiences, but also provide new research opportunities and beneficial outcomes across a wide range of multidisciplinary partners and the local community. This project is hugely exciting for both UCL and ISEH.



2021 has continued to be an extraordinary time for education and we have taken the opportunity to expand and enhance our virtual learning resources. We provide a learning environment that is flexible to the needs of our students, delivering high-quality online learning supported and enhanced with face-to-face teaching at ISEH for the added value of practical and interactive sessions with our expert faculty.

Prof. Courtney Kipps, Dr Eleanor Tillet & Dr Flaminia Ronca (ISEH Education Programme Leads)









Academic research forms a large part of the work that the ISEH undertakes, and despite the challenges over the past year of collecting data during the pandemic, the ISEH has continued to progress its research themes.

The full extent of the ISEH's research outputs over the course of 2021 can be seen at the end of this document in the appendix. In this section we provide a brief snapshot of some of the research activities that ISEH colleagues have been leading on this year.

ELITE SPORT

A number of the ISEH colleagues' research programmes focus on understanding and improving sporting performance in elite athletes. Below is just some of the elite sports research conducted through the ISEH during 2021:

Respiratory Infection in Athletes

Dr James Hull and Prof. Mike Loosemore have focused on understanding the factors underpinning respiratory tract infection susceptibility in elite athletes. They have led work co-funded between the English Institute of Sport, Royal Brompton Hospital, Imperial College and the ISEH, that has enabled detailed characterisation of clinical, immunological and microbiological factors relevant in athletes struggling with recurrent respiratory tract infection. This will provide data to inform management strategies to help athletes over the next Olympic cycle. They have also led an evaluation of how the Covid-19 infection impacts elite athletes and their recovery time in returning to sport.

Sleep & Health in Elite Sport

Dr Charlie Pedlar has several funded PhD projects currently running, including sleep and recovery in football (Southampton FC funded); sleep and cognition in female athletes (Letterkenny Institute of Technology/Orreco funded); health and performance of female football players (FIFA/Orreco/Western Sydney University funded); Workload and health of professional ballet dancers (Royal Ballet Company funded); Cultural aspects of female athlete health in Pacific Islanders (Waikato University/High Performance Sport New Zealand/Orreco). He is also working on deriving research outputs on blood biomarkers in professional sports, including in the English Premier League and the NBA via the Orreco database.

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 specialisation on injury risk and movement competency; 5) quantification and trainability of deceleration to enhance performance and reduce injury risk.

RESEARCH



Covid-19 Contact Tracing at Elite Sports Events

Dr Madi Davies is working with the UK Health Security Agency and NHS Test & Trace on a Contact Tracing Study in Elite Sports and Performing Arts environments. This study seeks to assess Covid-19 cases in individuals contact traced and then risk assessed at major sports events. This study has attracted funding from the England & Wales Cricket Board.

• Musculoskeletal Injury & Concussion Research

Dr Madi Davies has also been conducting musculoskeletal injury work in elite horseracing and in adult sport-related trauma. She is also running an ongoing concussion project in Premiership Rugby players with the Rugby Football Union.

Global Delphi Hamstring Injury Consensus Project

Prof. Fares Haddad and Dr Bruce Paton convened the ISEH hamstring injury consensus group in London in 2020, inviting 40 world-leading multidisciplinary experts on hamstring injuries to conduct a global Delphi consensus project. The group agreed consensus statements on four themes relating to hamstring injuries: 1) Classification; 2) Surgery; 3) Rehabilitation after injury and surgery; 4) Return to running and sport.

Over the past year, these consensus statements have been disseminated through our Olympic and global network of hamstring injury experts for additional input and agreement, resulting in a series of research papers currently in submission for publication. We hope that this project will be significantly impactful and add to solving the ongoing dilemma of hamstring injuries in sport.

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 some of the research projects that ISEH colleagues have been leading on over the past year:

Physical Activity's Impact on Heart Disease Prof. Mark Hamer is leading several British Heart Foundation funded projects that started this year. The first (ProPASS) analyses data from across the world to investigate associations between device measured sleep, sedentary and physical activity with cardiovascular diseases. The second is designed to undertake gold standard cardiorespiratory fitness testing in an established cohort study (ALSPAC) and understand early life determinants and trajectories.

Obesity & Physical Activity

Dr Snehal Pinto Pereira leads a Medical Research Council funded project on obesity, physical activity, strength and ageing. Recent outputs from this project include examining how early-life socio-economic position is linked to the accumulation of health-related deficits by midlife. Dr Pereira is also involved in an on-going National Institute for Health Research and UK Research & Innovation funded study with the primary aim of describing the clinical phenotype and prevalence of post-Covid physical and mental health symptoms among children and young people (The CLoCk Study).

• 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. Prof Hamer is collaborating with colleagues from UCL Institute of Cognitive Neuroscience on a project funded by the Rosetrees Trust to assess effort-based decision-making for reward following an exercise intervention in relation to the treatment of depression.

• 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.





Absolutely outstanding session on Long-Covid in Athletic populations for the @TheISEH webinar. Great insight & knowledge.

(Webinar attendee on Twitter)

With Covid-19 restrictions preventing face-to-face events for much of the year, the ISEH working in collaboration with HCA UK, held a successful programme of online educational webinars in 2021.

These webinars were extremely popular offering free CPD on a range of topics given by the ISEH consultants and specialists, as well as other world-renowned experts. In particular the Sports Cardiorespiratory Medicine Conference and the Sports Injuries and Sports Orthopaedics Conference had over 1,000 people joining live with lots of positive engagement during the webinars and on social media afterwards. The Sports Cardiorespiratory Medicine Conference also led to discussions with England Rugby and other professional sports teams around the respiratory health of their players.

All webinars were recorded and added to the ISEH website and ISEH YouTube channel as a valuable ongoing educational resource for others within the sport exercise medicine community to access.

WEBINARS HELD IN 2021

Below is a list of the online educational webinars that ISEH has held this year:

- Covid-19 and the Athlete: The Road to Recovery, 6 September 2021
- Current Concepts in Shoulder Instability, 21 July 2021
- Hand and Wrist Injuries in Athletes, 14 June 2021
- Sports Cardiorespiratory Medicine Conference, 6 May 2021
- Physical Activity and Maternal Health, 8 April 2021
- Optimising Return to Play following ACL Injury, 18 March 2021
- Shoulder Assessment and Monitoring Strategies to Enhance Performance, 23 February 2021
- Sports Injuries and Sports Orthopaedics: Acute Winter Sports Injuries, 14 January 2021
- Sports Injuries and Sports Orthopaedics: Adolescent Sports Medicine, 13 January 2021

Very good @TheISEH webinar tonight with 7 speakers educating us on different aspects of sports injuries in adolescents. Lots of new things learnt and to do further research on!

(Webinar attendee on Twitter)

COMMUNICATIONS

COMMUNICATIONS

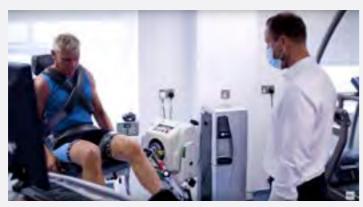
At the start of 2021 the ISEH launched a new rebranded website iseh.co.uk, bringing it in line with the new ISEH logo and brand identity developed in 2020 and our vision to become the leading institute for sport and exercise medicine. Along with a new look and feel, it also features new pages and content, in particular highlighting the growth in our clinical services on offer. The new website alongside a range of other rebranded marketing assets helps to create a powerful and consistent look across all ISEH communication platforms.

To help our customers and patients better understand some of the services that the ISEH provides, we have developed new videos about our Long-Covid Syndrome Pathway and Corporate Health and Fitness Assessment.

CLICK BELOW TO VIEW THE VIDEOS:



ISEH Long-COVID Syndrome Pathway



ISEH Corporate Health and Fitness Assessment

SOCIAL MEDIA

There continues to be positive growth and engagement with the ISEH's social media channels, Twitter, Instagram, Facebook and LinkedIn. These are an increasingly important way to promote the ISEH, its services and activities and engage with our stakeholders. The ISEH Twitter account now has over 8,400 followers.

- "Went in to get the heart checked out yesterday, and ended up with a full CPET test along with an ECG hence the borrowed shorts... but I think heart health is something that often goes unspoken as athletes and gets taken for granted so thanks to @TheISEH for the check over!"
- "Without a doubt the best year of my medical training thus far. Leaving @TheISEH @UCLDivofSurgery with a first class for my intercalation in sports medicine. Proud #SEM #MedTwitter"
- "A 4-year study of hamstring injury outcomes in elite track and field using the British Athletics rehabilitation approach @BJSM_BMJ. Great work Dr Noel Pollock et al"
- "Fascinating to hear about the important work of our @TheISEH this morning; building positive relationships with sporting partners across GB and playing a critically important role in @TeamGB successes."



The ISEH twitter account now has over 8,400, followers

MFDIA

During 2020 the ISEH has had a great deal of interest from a variety of media and has become a key point of contact for current media stories around sport, exercise and health.

Below are some highlights of 2020. For all media stories please see our **press coverage page** on the ISEH website.

Men's Health: The fragile mind

ISEH's Consultant Neurologist Dr Richard Sylvester and Consultant in Sport and Exercise Medicine Professor Mike Loosemore provided expert commentary to Men's Health on the topic of sport and concussion.

iNews: Professor Guido Pieles calls for mandator CPR training in the workplace

ISEH's Consultant Adult and Paediatric Sports and Congenital Cardiologist Professor Guido Pieles spoke to iNews about the ISEH's new mobile cardiac laboratory launched in a drive to protect the cardiovascular health of the nation's elite athletes, and called for mandatory CPR training in the workplace.

Women's Fitness: Tips for training when injured

ISEH Consultants in Sport and Exercise Medicine, Dr Amal Hassan and Dr Bevin McCartan spoke to Women's Fitness on how to continue training through an injury.



LOOKING AHEAD TO 2022

LOOKING AHEAD TO 2022

Over the last few months of 2021 it has been great to see that life has slowly returned to some semblance of normality, but we remain conscious that Covid-19 continues to present a real threat to the UK and global community. With this in mind, at the ISEH we are optimistically positive that as an organisation, and, more broadly, the nation as a whole, we can continue to take steps forward in 2022 to overcome the pandemic and to safely return to 'business as usual'.

At the ISEH we of course will continue to adapt our services to meet the ongoing challenges of living with Covid-19 and will continue to provide high-quality clinical support, research and education to help the wider community better understand and cope with the impact of the virus. Our work in supporting UCLH is vital in achieving this.

KEY EVENTS AND SUPPORT FOR ATHLETES

Excitingly, 2022 has a packed schedule of major sporting events, and the ISEH will continue to provide world-leading clinical and performance support services to a large number of elite athletes and sports organisations involved in these events. With the Winter Olympics 2022 taking place in China and the Commonwealth Games on home-soil in Birmingham, the ISEH will be supporting elite athletes to achieve their potential and working closely with our partners the English Institute of Sport (EIS) and the British Olympic Association (BOA).

Amongst the wide range of sporting events taking place in 2022, next year will see England hosting the UEFA Women's Euros and there will also be the men's FIFA World Cup in Qatar to look forward to. The ISEH, working with HCA UK, will continue to further develop the clinical and performance support services to ensure that we continue to provide world-leading support to both elite athletes and recreational sports enthusiasts.

INVESTING IN EDUCATION AND RESEARCH

Over the course of 2022, the ISEH will continue to work with UCL to further expand our research capacity, to ensure that we can effectively deliver against our research strategy and attract new and novel research projects that provide greater insight into our identified research themes.

The ISEH will continue to support UCL in providing a high-quality learning experience for students, as well as further developing our capabilities in delivering a high-quality blend of both face-to-face teaching combined with online education and learning in sports exercise medicine and physical activity. The ISEH will also provide further support to UCL in developing and refining their plans for expanding their sporting facilities at the new UCL campus situated at the Olympic Park in Stratford through the UCL Sport East project.



ISEH RESEARCH OUTPUTS IN 2021

The list below outlines the academic research outputs of the ISEH in 2021. The list primarily covers published peer-reviewed papers.

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (names of other contributors)
Paul Read	Better reporting standards are needed to enhance the quality of hop testing in the setting of ACL return to sport decisions: a narrative review	Jan 2021	British Journal of Sports Medicine	55(1):23-29. Doi: 10.1136/ bjsports-2019-101245.	Read P, Mc Auliffe S, Wilson MG, Myer GD
Mathew Wilson	Hydration and cooling in elite athletes: relationship with performance, body mass loss and body temperatures during the Doha 2019 IAAF World Athletics Championships.	Feb 2021	British Journal of Sports Medicine	12:bjsports-2020-103613. Doi: 10.1136/ bjsports-2020-103613	Racinais S, Ihsan M, Taylor L, Cardinale M, Adami PE, Alonso JM, Bouscaren N, Buitrago S, Esh CJ, Gomez-Ezeiza J, Garrandes F, Havenith G, Labidi M, Lange G, Lloyd A, Moussay S, Mtibaa K, Townsend N, Wilson MG, Bermon S.
James Hull	COVID-19 vaccination in athletes: ready, set, go	Feb 2021	Lancet Respiratory Med		Hull JH, Schwellnus MP, et al
Mike Loosemore & James Hull	Salivary IgA as a Potential Biomarker in the Evaluation of Respiratory Tract Infection Risk in Athletes	2021	J Allergy Clin Immunol Pract.		Turner SEG, Loosemore M, Shah A, Kelleher P, Hull JH.
Mark Hamer	Childhood Obesity and Device- Measured Sedentary Behavior: An Instrumental Variable Analysis of 3,864 Mother- Offspring Pairs	2021	Obesity	Silver Spring	
Mark Hamer	Untapping the Health Enhancing Potential of Vigorous Intermittent Lifestyle Physical Activity (VILPA): Rationale, Scoping Review, and a 4-Pillar Research Framework	2021	Sports Med.		Stamatakis E, Hamer M, et al.
Fares Haddad	Outcomes of Surgical Repair Versus Primary Tenodesis for Proximal Rectus Femoris Avulsion Injuries in Professional Athletes.	2021	Am J Sports Med.		Kayani B, Singh S, Chang JS, Magan AA, Plastow R, Haddad FS
Mathew Wilson	Effect of speed and gradient on plantar force when running on an AlterG® treadmill.	Mar 2021	BMC Sports Sci Med Rehabil	30;13(1):34. Doi: 10.1186/s13102-021- 00258-4.	Thomson A, Whiteley R, Hansen C, Welzel J, Racinais S, Wilson MG
Mathew Wilson	Intensified Training Supersedes the Impact of Heat and/ or Altitude for Increasing Performance in Elite Rugby Union Players	Mar 2021	Int J Sports Physiol Perform	5:1-8. Doi: 10.1123/ ijspp.2020-0630.	Racinais S, Périard JD, Piscione J, Bourdon PC, Cocking S, Ihsan M, Lacome M, Nichols D, Townsend N, Travers G, Wilson MG, Girard O.

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Mathew Wilson	Ergogenic effect of pre-exercise chicken broth ingestion on a high-intensity cycling time-trial	Feb 2021	J Int Soc Sports Nutr.	15;18(1):15. Doi: 10.1186/s12970-021- 00408	Barbaresi S, Blancquaert L, Nikolovski Z, de Jager S, Wilson M, Everaert I, De Baere S, Croubels S, De Smet S, Cable NT, Derave W.
Paul Read	Seasonal Variation of Physical Performance and Inter-limb Asymmetry in Professional Cricket Athletes	Apr 2021	J Strength Cond Res.	1;35(4):941-948. Doi: 10.1519/ JSC.0000000000003927.	Bishop C, Weldon A, Hughes J, Brazier J, Loturco I, Turner A, Read P.
Paul Read	Relationships between physical capacities and biomechanical variables during movement tasks in athletic populations following anterior cruciate ligament reconstruction.	Mar 2021	Phys Ther Sport	48:209-218. Doi: 10.1016/j. ptsp.2021.01.006. Epub 2021 Jan 22. PMID: 33529930.	Maestroni L, Papadopoulos K, Turner A, Korakakis V, Read P.
Mark Hamer	Device-measured physical activity and sedentary behaviour in relation to mental wellbeing: An analysis of the 1970 British cohort study	Apr 2021	Prev Med	145:106434. Doi: 10.1016/j. ypmed.2021.106434.	Senaratne N, Stubbs B, Werneck AO, Stamatakis E, Hamer M.
Mark Hamer	Effects of Regular Physical Activity on the Immune System, Vaccination and Risk of Community-Acquired Infectious Disease in the General Population: Systematic Review and Meta-Analysis.	Apr 2021	Sports Med	20:1–14. Doi: 10.1007/ s40279-021-01466-1.	Chastin SFM, Abaraogu U, Bourgois JG, Dall PM, Darnborough J, Duncan E, Dumortier J, Pavón DJ, McParland J, Roberts NJ, Hamer M.
Mark Hamer	Lifestyle risk factors and infectious disease mortality, including COVID-19, among middle aged and older adults: Evidence from a community-based cohort study in the United Kingdom.	Apr 2021	Brain Behav Immun.	30:S0889- 1591(21)00180-X. doi: 10.1016/j. bbi.2021.04.022. Epub ahead of print	Ahmadi MN, Huang BH, Inan-Eroglu E, Hamer M, Stamatakis E.
Mark Hamer	Distinct Body Mass Index Trajectories to Young- Adulthood Obesity and Their Different Cardiometabolic Consequences	Apr 2021	Arterioscler Thromb Vasc Biol.	30:S0889- 1591(21)00180-X. doi: 10.1016/j. bbi.2021.04.022. Epub ahead of print	Norris T, Mansukoski L, Gilthorpe MS, Hamer M, Hardy R, Howe LD, Hughes AD, Li L, O'Donnell E, Ong KK, Ploubidis GB, Silverwood RJ, Viner RM, Johnson W.
Mark Hamer	Changes over time in latent patterns of childhood-to- adulthood BMI development in Great Britain: evidence from three cohorts born in 1946, 1958, and 1970	Apr 2021	BMC Med	19(1):96. Doi: 10.1186/ s12916-021-01969-8.	Norris T, Hamer M, Hardy R, Li L, Ong KK, Ploubidis GB, Viner R, Johnson W
Mark Hamer	Can physical activity eliminate the mortality risk associated with poor sleep? A 15-year follow-up of 341,248 MJ Cohort participants	Mar 2021	J Sport Health Sci.	10:S2095- 2546(21)00026-0. Doi: 10.1016/j. jshs.2021.03.001. Epub ahead of print.	Chen LJ, Hamer M, Lai YJ, Huang BH, Ku PW, Stamatakis E.
James Hull	Respiratory impact of a grand tour: insight from professional cycling.	Apr 2021	Eur J Appl Physiol.	121(4):1027-1036. Doi: 10.1007/s00421-020- 04587-z. Epub 2021	Allen H, Price OJ, Greenwell J, Hull JH
James Hull	Symptom cluster is associated with prolonged return-to-play in symptomatic athletes with acute respiratory illness (including COVID-19): a cross-sectional study-AWARE study I	Mar 2021	Br J Sports Med.	22:bjsports-2020-103782. Doi: 10.1136/ bjsports-2020-103782. Epub ahead of print.	Schwellnus M, Sewry N, Snyders C, Kaulback K, Wood PS, Seocharan I, Derman W, Hull JH, Valtonen M, Jordaan E.
James Hull	Asthma medication in athletes: a qualitative investigation of adherence, avoidance and misuse in competitive sport	Mar 2021	J Asthma	8:1-12. Doi: 10.1080/02770903. 2021.1881968. Epub ahead of print.	Allen H, Price OJ, Hull JH, Backhouse SH
Fares Haddad	The introduction of day-case total knee arthroplasty in a national healthcare system: A review of the literature and development of a hospital pathway	Mar 2021	Surgeon	22:S1479-666X(21)00039-1. Doi: 10.1016/j. surge.2021.01.017. Epub ahead of print.	Thompson JW, Wignadasan W, Ibrahim M, Plastow R, Beasley L, Haddad FS.

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Fares Haddad	Hip resurfacing arthroplasty and total hip arthroplasty in the same patient: which do they prefer?	May 2021	Hip Int.	31(3):328-334. Doi: 10.1177/11207000 19882922.	Calkins TE, Suleiman LI, Culvern C, Alazzawi S, Kazarian GS, Barrack RL, Haddad FS, Della Valle CJ
Fares Haddad	The learning curve of robotic- arm assisted acetabular cup positioning during total hip arthroplasty.	May 2021	Hip Int.	31(3):311-319. Doi: 10.1177/11207000 19889334.	Kayani B, Konan S, Huq SS, Ibrahim MS, Ayuob A, Haddad FS.
Paul Read	Bilateral Deficit During Jumping Tasks: Relationship With Speed and Change of Direction Speed Performance	Jul 2021	J Strength Cond Res.	1;35(7):1833-1840.	Bishop C, Berney J, Lake J, Loturco I, Blagrove R, Turner A, Read P.
Paul Read	Jumping Asymmetries Are Associated With Speed, Change of Direction Speed, and Jump Performance in Elite Academy Soccer Players	Jul 2021	J Strength Cond Res.	1;35(7):1841-1847	Bishop C, Brashill C, Abbott W, Read P, Lake J, Turner A.
Paul Read	Effects of a Competitive Soccer Match on Jump Performance and Interlimb Asymmetries in Elite Academy Soccer Players.	Jun 2021	J Strength Cond Res.	1;35(6):1707-1714.	Bromley T, Turner A, Read P, Lake J, Maloney S, Chavda S, Bishop C.
James Hull & Mike Loosemore	The benefits of a systematic assessment of respiratory health in illness-susceptible athletes	Jun 2021	Eur Respir J.	24;57(6):2003722.	Hull JH, Jackson AR, Ranson C, Brown F, Wootten M, Loosemore M.
James Hull & Mike Loosemore	Clinical patterns, recovery time and prolonged impact of COVID-19 illness in international athletes: the UK experience.	Aug 2021	Br J Sports Med	2:bjsports-2021-104392. Doi: 10.1136/ bjsports-2021-104392.	Hull JH, Wootten M, Moghal M, Heron N, Martin R, Walsted ES, Biswas A, Loosemore M, Elliott N, Ranson C
James Hull	Characteristics and impact of exercise-induced laryngeal obstruction: an international perspective	Jun 2021	ERJ Open Res.	28;7(2):00195-2021.	Walsted ES, Famokunwa B, Andersen L, Rubak SL, Buchvald F, Pedersen L, Dodd J, Backer V, Nielsen KG, Getzin A, Hull JH.
James Hull	Asthma-related sudden death in athletes: a retrospective analysis of the US NCCSIR database (1982-2018)	Jul 2021	Eur Respir J	1;58(1):2100088.	Price OJ, Kucera KL, Price HM, Drezner JA, Menzies-Gow A, Hull JH
Mark Hamer	Prevalence and early-life determinants of mid-life multimorbidity: evidence from the 1970 British birth cohort	Jul 2021	BMC Public Health.	28;21(1):1319.	Gondek D, Bann D, Brown M, Hamer M, Sullivan A, Ploubidis GB.
Mark Hamer	Sleep and physical activity in relation to all-cause, cardiovascular disease and cancer mortality risk	Jun 2021	Br J Sports Med.	29:bjsports-2021-104046. Doi: 10.1136/ bjsports-2021-104046.	Huang BH, Duncan MJ, Cistulli PA, Nassar N, Hamer M, Stamatakis E.
Mark Hamer	Cross-sectional associations between domain-specific sitting time and other lifestyle health behaviours: the Stormont study.	Aug 2021	J Public Health (Oxf).	3:fdab298. Doi: 10.1093/pubmed/ fdab298.	Kettle VE, Hamer M, Munir F, Houdmont J, Wilson K, Kerr R, Addley K, Sherar LB, Clemes SA.
Mark Hamer	Effects of Regular Physical Activity on the Immune System, Vaccination and Risk of Community-Acquired Infectious Disease in the General Population: Systematic Review and Meta-Analysis	Aug 2021	Sports Med.	51(8):1673-1686.	Chastin SFM, Abaraogu U, Bourgois JG, Dall PM, Darnborough J, Duncan E, Dumortier J, Pavón DJ, McParland J, Roberts NJ, Hamer M.
Mark Hamer	Prospective associations of different contexts of physical activity with psychological distress and well-being among middle-aged adults: An analysis of the 1970 British Cohort Study.	Aug 2021	J Psychiatr Res.	140:15-21. Doi: 10.1016/j. jpsychires.2021.05.049.	Werneck AO, Stubbs B, Kandola A, Hamer M, Silva DR.

NAME OF ISEH CONTRIBUTOR	TITLE OF PAPER	DATE	PUBLICATION	ADDITIONAL REFERENCING DETAILS	OUTPUT COLLABORATORS (names of other contributors)
Mark Hamer	Contribution of 20-year body mass index and waist circumference history to poor cardiometabolic health in overweight/obese and normal weight adults: A cohort study.	Jun 2021	Nutr Metab Cardiovasc Dis.	22:S0939- 4753(21)00282-9. Doi: 10.1016/j. numecd.2021.06.005.	Robson E, Norris T, Costa S, Kivimäki M, Hamer M, Johnson W.
Fares Haddad	Biologics in professional and Olympic sport: a scoping review	Jul 2021	Bone Joint J.	103-B(7):1189-1196	Murray IR, Makaram NS, Rodeo SA, Safran MR, Sherman SL, McAdams TR, Murray AD, Haddad FS, Abrams GD.
Fares Haddad	Integrated care systems in trauma to elective care: Can we emulate the integration of services in orthopaedic trauma care within elective practice?	Jun 2021	Bone Jt Open	2(6):411-413	Thompson JW, Haddad FS.
Snehal Pinto Pereira	Early-Life Socioeconomic Position and the Accumulation of Health-Related Deficits by Midlife in the 1958 British Birth Cohort Study	Aug 2021	Am J Epidemiol.	1;190(8):1550-1560.	Rogers NT, Blodgett JM, Searle SD, Cooper R, Davis DHJ, Pinto Pereira SM.
Jo Blodgett	Associations of word memory, verbal fluency, processing speed and crystallised cognitive ability with one-legged balance performance in mid and later life.	Jun 2021	J Gerontol A Biol Sci Med Sci.	14:glab168. Doi: 10.1093/ erona/glab168.	Blodgett JM, Cooper R, Davis DHJ, Kuh D, Hardy R.
Mathew Wilson	Moderate-To-Vigorous Intensity Physical Activity and Sedentary Behaviour across Childhood and Adolescence, and Their Combined Relationship with Obesity Risk: A Multi-Trajectory Analysis	2021	International Journal of Environmental Research and Public Health	18(14):7421	Farooq A, Basterfield L, Adamson AJ, Pearce MS, Hughes AR, Janssen X, Wilson MG, Reilly JJ.
Noel Pollock	A 4-year study of hamstring injury outcomes in elite track and field using the British Athletics rehabilitation approach	Apr. 2021	Br J Sports Med.	14:bjsports-2020-103791. Doi: 10.1136/ bjsports-2020-103791.	Pollock N, Kelly S, Lee J, Stone B, Giakoumis M, Polglass G, Brown J, MacDonald B.
Mark Hamer	Physical activity and mental well-being under COVID-19 lockdown: a cross-sectional multination study.	May 2021	BMC Public Health	27;21(1):988. Doi: 10.1186/ s12889-021-10931-5.	Karageorghis CI, Bird JM, Hutchinson JC, Hamer M, Delevoye-Turrell YN, Guérin SMR, Mullin EM, Mellano KT, Parsons-Smith RL, Terry VR, Terry PC.
Mark Hamer	Estimating changes in physical behavior during lockdowns using accelerometry-based simulations in a large UK cohort.	Aug 2021	Scand J Med Sci Sports	11. doi: 10.1111/sms.14032	Speirs C, Granat M, Stamatakis E, Hamer M.
Courtney Kipps & Charlie Pedlar	Medical encounters at community-based physical activity events (parkrun) in the UK	Aug 2021	Br J Sports Med.	4:bjsports-2021-104256. Doi: 10.1136/ bjsports-2021-104256.	Pedlar CR, Myrissa K, Barry M, Khwaja IG, Simpkin AJ, Newell J, Scarrott C, Whyte GP, Kipps C, Baggish AL.
Charlie Pedlar	COVID-19-Considerations for the Female Athlete	Feb 2021	Front Sports Act Living	16;3:606799. Doi: 10.3389/ fspor.2021.606799	Bruinvels G, Lewis NA, Blagrove RC, Scott D, Simpson RJ, Baggish AL, Rogers JP, Ackerman KE, Pedlar CR.
Charlie Pedlar	Hormonal Contraceptive Use in Football Codes in Australia	Feb 2021	Front Sports Act Living	25;3:634866. Doi: 10.3389/ fspor.2021.634866	Clarke AC, Bruinvels G, Julian R, Inge P, Pedlar CR, Govus AD
Charlie Pedlar	Modelling menstrual cycle length in athletes using state-space models	Aug 2021	Sci Rep.	11(1):16972. Doi: 10.1038/ s41598-021-95960-1.	De Paula Oliveira T, Bruinvels G, Pedlar CR, Moore B, Newell J.
Charlie Pedlar	Prevalence and frequency of menstrual cycle symptoms are associated with availability to train and compete: a study of 6812 exercising women recruited using the Strava exercise app.	Apr 2021	Br J Sports Med.	55(8):438-443. Doi: 10.1136/ bjsports-2020-102792	Bruinvels G, Goldsmith E, Blagrove R, Simpkin A, Lewis N, Morton K, Suppiah A, Rogers JP, Ackerman KE, Newell J, Pedlar C.
Charlie Pedlar	Jumping in Ballet: A Systematic Review of Kinetic and Kinematic Parameters.	Jun 2021	Med Probl Perform Art	36(2):108-128. Doi: 10.21091/mppa.2021.2011	Mattiussi A, Shaw JW, Brown DD, Price P, Cohen DD, Pedlar CR, Tallent J.

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Charlie Pedlar	Dance Exposure, Individual Characteristics, and Injury Risk over Five Seasons in a Professional Ballet Company	Jun 2021	Med Sci Sports Exerc	10. doi: 10.1249/ MSS.000000000002725. Epub ahead of print.	Shaw JW, Mattiussi AM, Brown DD, Williams S, Kelly S, Springham M, Pedlar CR, Tallent J.
Charlie Pedlar	The effect of custom-fitted compression garments worn overnight for recovery from judo training in elite athletes.	Mar 2021	Eur J Sport Sci.	14:1-9. Doi: 10.1080/17461391. 2021.1891294. Epub ahead of print.	Brown FCW, Hill JA, van Someren K, Howatson G, Pedlar CR.
Charlie Pedlar	The Association Between Alterations in Redox Homeostasis, Cortisol, and Commonly Used Objective and Subjective Markers of Fatigue in American Collegiate Football.	May 2021	Int J Sports Physiol Perform.	29:1-7. Doi: 10.1123/ ijspp.2020-0933	McKay BA, Delaney JA, Simpkin A, Larkin T, Murray A, Pedlar CR, Lewis NA, Sampson JA.
Fares Haddad	Time to call out camouflage.	Oct 2021	Bone Joint J.	doi: 10.1302/0301-620X. 103B10.BJJ-2021-1260.	
Fares Haddad	Looking Ahead to 2021	Jan 2021	Bone Jt Open.	3;2(1):1-2. doi: 10.1302/2633-1462.21. BJO-2020-0196	
Fares Haddad	Kingella kingae: rewriting the textbooks.	Mar 2021	Bone Joint J.	103-B(3):421-422. doi: 10.1302/0301-620X.103B3. BJJ-2021-0076.	Perry DC, Porter DW, Haddad FS.
Fares Haddad & Sam Oussedik	Safe elective surgery: addressing the need.	Apr 2021	Bone Joint J.	103-B(4):597-599. doi: 10.1302/0301-620X.103B4. BJJ-2021-0317	Kader DF, Oussedik S, Kader N, Haddad FS.
Fares Haddad	Integrated care systems, research, and innovation.	Sep 2021	Bone Joint Res.	10(9):591-593. doi: 10.1302/2046-3758.109. BJR-2021-0281.R1.	Thompson JW, Simpson AHRW, Haddad FS.
Fares Haddad	High-quality research and technology to the forefront.	June 2021	Bone Joint J.	103-B(6):1005-1006. doi: 10.1302/0301-620X.103B6. BJJ-2021-0647.	
Fares Haddad	Musculotendinous Junction Injuries of the Proximal Biceps Femoris: Response	Jan 2021	Am J Sports Med.	49(1):NP1-NP2. doi: 10.1177/03635 46520974379.	Ayuob A, Kayani B, Haddad FS.
Fares Haddad	Some challenges of data synthesis and its interpretation.	Feb 2021	Bone Joint J.	103-B(2):205-206. doi: 10.1302/0301-620X.103B2. BJJ-2020-2536.	
Fares Haddad	The Hip Society Members Meeting 2020 and 2021 awards.	Jul 2021	Bone Joint J.	103-B(7 Supple B):1-2. doi: 10.1302/0301-620X.103B7. BJJ-2021-0847.	Clohisy JC, Haddad FS.
Fares Haddad	ACL graft failure: surgical technique may affect outcomes.	Sep 2021	Bone Joint J.	103-B(9):1439-1441. doi: 10.1302/0301-620X.103B9. BJJ-2021-0919.	Robinson JR, Haddad FS.
Fares Haddad	Introducing new procedures and devices: the IDEAL way.	Aug 2021	Bone Joint J.	103-B(8):1326-1327. doi: 10.1302/0301-620X.103B8. BJJ-2021-0964.	Craven J, Haddad FS, Perry DC.

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Fares Haddad	Tourniquet use in knee surgery: is it time to move on?	May 2021	Bone Joint J.	103-B(5):805-806. doi: 10.1302/0301-620X.103B5. BJJ-2021-0293.	Magan AA, Haddad FS.
Fares Haddad	Advances and innovations in total hip arthroplasty	Apr 2021	SICOT J.	7:26. doi: 10.1051/ sicotj/2021025	Fontalis A, Epinette JA, Thaler M, Zagra L, Khanduja V, Haddad FS.
Fares Haddad	The Development of a Surgical Oncology Center During the COVID-19 Pandemic	Mar 2021	J Patient Saf.	1;17(2):81-86. doi: 10.1097/ PTS.0000000000000821.	Moriarty P, Chang J, Kayani B, Roberts L, Bourke N, Dann C, MacArthur E, Haddad FS.
Fares Haddad	Long-term results of revision total knee arthroplasty using a rotating hinge implant.	Jan 2021	Knee.	28:72-80. doi: 10.1016/j. knee.2020.11.009	Wignadasan W, Chang JS, Kayani B, Kontoghiorghe C, Haddad FS.
Fares Haddad	Nursing considerations for patients undergoing roboticarm assisted joint replacements	May 2021	Br J Nurs.	27;30(10):580-587. doi: 10.12968/ bjon.2021.30.10.580	Asokan A, Baawa-Ameyaw J, Kayani B, Radhakrishnan GT, Magan AA, Haddad FS.
Fares Haddad	North central London elective orthopaedic network and health service innovation to improve the quality of NHS patient care.	Jul 2021	Br J Hosp Med (Lond)	2;82(7):1-4. doi: 10.12968/ hmed.2021.0326	Thompson JW, O'Brien A, Stewart A, Hurd R, Haddad FS.
Fares Haddad	Functional alignment achieves soft-tissue balance in total knee arthroplasty as measured with quantitative sensor-guided technology	Mar 2021	Bone Joint J.	103-B(3):507-514. doi: 10.1302/0301-620X.103B. BJJ-2020-0940.R1	Chang JS, Kayani B, Wallace C, Haddad FS.
Fares Haddad	Cementless knee arthroplasty: a review of recent performance.	Jan 2021	Bone Jt Open.	22;2(1):48-57. doi: 10.1302/2633-1462.21. BJO-2020-0172.R1	Asokan A, Plastow R, Kayani B, Radhakrishnan GT, Magan AA, Haddad FS.
Fares Haddad	Fracture of heterotopic mass in the lower limb: surgical case report and review of the literature	Jul 2021	BMJ Case Rep	1;14(7):e242715. doi: 10.1136/bcr-2021- 242715	Thompson JW, Plastow R, Rogers M, Haddad FS.
Fares Haddad & Sam Oussedik	A prospective randomized controlled trial comparing the systemic inflammatory response in conventional jig-based total knee arthroplasty versus robotic-arm assisted total knee arthroplasty.	Jan 2021	Bone Joint J.	103-B(1):113-122. doi: 10.1302/0301-620X.103B1. BJJ-2020-0602.R2.	Kayani B, Tahmassebi J, Ayuob A, Konan S, Oussedik S, Haddad FS.
Fares Haddad	Mesenchymal stromal cells and platelet-rich plasma promote tendon allograft healing in ovine anterior cruciate ligament reconstruction	Nov 2021	Knee Surg Sports Traumatol Arthrosc	29(11):3678-3688. doi: 10.1007/s00167-020- 06392-9	Hexter AT, Sanghani-Kerai A, Heidari N, Kalaskar DM, Boyd A, Pendegrass C, Rodeo SA, Haddad FS, Blunn GW
Fares Haddad	Outcomes of Surgical Repair Versus Primary Tenodesis for Proximal Rectus Femoris Avulsion Injuries in Professional Athletes	Jan 2021	Am J Sports Med.	49(1):121-129. doi: 10.1177/0363546 520970912.	Kayani B, Singh S, Chang JS, Magan AA, Plastow R, Haddad FS
Fares Haddad	Celebrating three years of Hip Society and Knee Society supplements	Jul 2021	Bone Joint J	103-B(7):1174-1175. doi: 10.1302/0301-620X.103B7. BJJ-2021-0765.	

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Fares Haddad	The introduction of day-case total knee arthroplasty in a national healthcare system: A review of the literature and development of a hospital pathway	Mar 2021	Surgeon.	22:S1479- 666X(21)00039-1. doi: 10.1016/j. surge.2021.01.017.	Thompson JW, Wignadasan W, Ibrahim M, Plastow R, Beasley L, Haddad FS.		
Fares Haddad & Flaminia Ronca	Time for return to sport following total knee arthroplasty: a meta-analysis.	Sep 2021	Arch Orthop Trauma Surg	26. doi: 10.1007/ s00402-021-04180-9	Magan A, Baawa-Ameyaw J, Kayani B, Radhakrishnan G, Ronca F, Haddad FS.		
Fares Haddad	Surgical Repair of Distal Biceps Femoris Avulsion Injuries in Professional Athletes.	Mar 2021	Orthop J Sports Med	26;9(3):23259671 21999643. doi: 10.1177/232596 7121999643	Thompson JW, Plastow R, Kayani B, Moriarty P, Asokan A, Haddad FS.		
Fares Haddad & Flaminia Ronca	Time for return to sport following total hip arthroplasty: a meta-analysis	Sep 2021	Hip Int.	19:112070002110 41975. doi: 10.1177/1120700 0211041975	Magan AA, Radhakrishnan GT, Kayani B, Ronca F, Khanduja V, Meek RMD, Haddad FS.		
Fares Haddad	A Prospective Randomized Controlled Trial Comparing Medial-Pivot versus Posterior- Stabilized Total Knee Arthroplasty	May 2021	J Arthroplasty	36(5):1584-1589. e1. doi: 10.1016/j. arth.2021.01.013	Chang JS, Kayani B, Moriarty PD, Tahmassebi JE, Haddad FS		
Fares Haddad	Incidence of Symptomatic Venous Thromboembolism in Proximal Hamstring Repair: A Prospective Cohort Study	Jul 2021	Orthop J Sports Med	19;9(7):2325967 1211012420. doi: 10.1177/2325967 1211012420	Asokan A, Plastow R, Chang JS, Kayani B, Moriarty P, Thompson JW, Haddad FS		
Fares Haddad	Day-case total hip arthroplasty: a literature review and development of a hospital pathway.	Feb 2021	Bone Jt Open	2(2):93-102. doi: 10.1302/2633-1462.22. BJO-2020-0170.R1	Thompson JW, Wignadasan W, Ibrahim M, Beasley L, Konan S, Plastow R, Magan A, Haddad FS		
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