



1ST ITALIAN STRENGTH & CONDITIONING CONFERENCE ISCC

**Principles and Practice
of Performance and
Rehabilitation**



26/27 ottobre 2024
Gorgonzola (MI)



M O V E

 **New
Master**

**Physiotherapy
Applied Science**

 **Middlesex
University**

1ST ITALIAN STRENGTH AND CONDITIONING CONFERENCE - ISCC

Principles and Practice of Performance and Rehabilitation

Across this two-day workshop, we will explore methods to measure and enhance performance, as well as how to build robust athletes, resilient to injury. We will explore exercise prescription, testing methodology and data interpretation, and examine return to play protocols.

The similarities between strength and conditioning and rehabilitation should become clear, and why practitioners need to have a good understanding of both. A detailed overview of each session is available overleaf



DAY 1

Underpinning principles

0900 - 0915	Introduction	Prof. Anthony Turner	Evidence-based practice in S&C
0915 - 1045	Lecture 1	Prof. Rhodri Llyod	Adopting a holistic approach to managing training prescription during the growth spurt
1045 - 1115	Break		
1115 - 1245	Lecture 2	Dr. Chris Bishop	Are we aiming for symmetry and what type of symmetry are we aiming for?
1245 - 1400	Lunch		
1400 - 1530	Lecture 3	Dr. Tom Dos Santos	Mediating the "performance-injury conflict" during change of direction (COD): implications for sports performance, injury mitigation, and rehabilitation
1530 - 1545	Break		
1545 - 1715	Lecture 4	Dr. Paul Read	Optimizing assessment and trainability of strength and power in injured athletes to enhance return to sport readiness.
1715 - 1800	Roundtable	All	Q&A as well as pre-scripted questions



DAY 2

Evidence-Based Practice

0900 - 1030	Practical 1	Prof. Rhodri Llyod	Early-stage strength and conditioning for youths
1030 - 1100	Break		
1100 - 1230	Practical 2	Dr. Chris Bishop	Testing and training for inter-limb asymmetry
1230 - 1345	Lunch		
1345 - 1515	Practical 3	Dr. Tom Dos Santos	The change of development (COD) framework: technical models and coaching principles for athletic performance, injury mitigation, and rehabilitation
1515 - 1530	Break		
1545 - 1715	Lecture 4	Dr. Paul Read	Assessment guided reconditioning to enhance return to sport readiness.
1700 - 1730	Roundtable	All	

**Prof. Rhodri S. Lloyd**

Bio: Rhodri is a Professor of Paediatric Strength and Conditioning and Chair of the Youth Physical Development Centre at Cardiff Metropolitan University. His research interests surround the impact of growth and maturation on long-term athletic development and the neuromuscular mechanisms underpinning training responsiveness and injury risk in young athletes.

Lecture: *Adopting a holistic approach to managing training prescription during the growth spurt.*

This session will examine the influence of growth and maturation on physical performance and injury risk during childhood and adolescence, before focusing specifically on those athletes experiencing rapid periods of growth. Firstly, considerations will be given to the factors influencing temporary disruptions in motor control, potential reductions in physical performance, and heightened growth-related injury risk. Secondly, the session will briefly explore some testing strategies that can be used to monitor performance and injury risk and to identify targeted training strategies. Finally, examples of strength and conditioning provision modifications will be presented alongside overall programming alterations to help foster healthy and successful athletic development for young athletes.

Practical: *Early-stage strength and conditioning for youths.*

This practical will be a hands-on session that will initially examine the key athletic qualities to target in the early stages of a strength and conditioning programme for youth. Secondly, delegates will explore the process of identifying suitable exercises and activities for young athletes of mixed abilities and consider suitable associated exercise progressions and regressions. Throughout the session, consideration will be given to the technical errors often displayed by young athletes during such activities.

**Dr. Chris Bishop**

Bio: Chris is an Associate Professor in Strength and Conditioning and completed both his MSc and PhD in Strength and Conditioning at Middlesex University in 2011-2012 and 2016-2020, respectively. Chris has authored /co-authored 220+ peer-reviewed journal articles, 3 book chapters, and is currently co-editing 2 textbooks.

Lecture: *Are we aiming for symmetry and what type of symmetry are we aiming for?*

This presentation will focus on: a) the history of inter-limb symmetry / asymmetry relating to sport performance, b) common issues associated with its use, and c) subsequent suggestions on how to maximise its utility if included as part of the testing process.

Practical: *Testing and training for inter-limb asymmetry.*

The practical session will focus on 2 key components: a) testing of inter-limb asymmetry using commonly employed jump assessments, and b) a range of weight-room exercises, focusing on strength and power, which if trained over time, will help to reduce existing side-to-side differences.

**Prof. Anthony Turner**

Bio: Anthony is a Professor of Strength and Conditioning, and the Research Degrees Coordinator for Sport, at the London Sport Institute, Middlesex University. Anthony has published over 200 peer-reviewed journal articles and book chapters, edited three textbooks, and is an associate editor for Strength and Conditioning Journal. Anthony has been a sport science consultant and S&C coach to numerous sports teams, Olympic and Paralympic athletes, and was formerly head of physical preparation for GBR fencing for the Rio Olympic cycle. Anthony is currently a consultant in human performance for the British Military, a strength and conditioning coach for Tottenham Hotspur Women's Academy, and is a recipient of the UKSCA coach of the year for education and research.

**Dr. Tom Dos-Santos**

Bio: Tom is a Senior Lecturer in Strength and Conditioning and Sports Biomechanics at Manchester Metropolitan University (MMU), having completed his PhD in Sports Biomechanics at the University of Salford (2020) where he investigated the biomechanical determinants of performance and injury risk during change of direction. Tom has published over 95 peer-reviewed journal articles, and he is a co-editor of the book: *Multidirectional Speed in Sport: Research to Application.*

Lecture: *Mediating the "performance-injury conflict" during change of direction (COD): implications for sports performance, injury mitigation, and rehabilitation.*

In this presentation, Tom will discuss the biomechanical and physical considerations for developing COD technique in the context of sports performance, injury mitigation, and rehabilitation. Tom will also discuss the "performance injury-conflict" which is present during COD and share a multidimensional approach and the four pillars to best mediate the "performance-injury conflict" through conditioning and monitoring.

Practical: *The change of development (COD) framework: technical models and coaching principles for athletic performance, injury mitigation, and rehabilitation.*

In this practical, Tom will discuss the importance of deceleration and cover a variety of technical models to optimise COD performance and mitigate injury risk. Tom will also introduce his COD development framework where he will discuss the different phases of developing COD ability, and provide examples of how this can be integrated in performance, injury mitigation, and rehabilitation environments.

**Dr. Paul J. Read**

Bio: Paul is an independent high-performance consultant, Senior Lecturer in Strength & Conditioning at St Mary's University, hon. Associate Professor at the University College London (UCL) and the University of Gloucestershire, and head of performance for ACL Rehab Online. Previously Paul has held roles as the General Manager of the Institute of Sport, Exercise and Health (London), Clinical Lead Researcher and Head of the Athlete Assessment Unit at Aspetar Sports Medicine Hospital (Qatar), and Program Director of Strength and Conditioning at the University of Gloucestershire (UK).

Lecture: *Optimizing assessment and trainability of strength and power in injured athletes to enhance return to sport readiness.*

This session will discuss and critically analyse the various testing protocols used in return to play scenarios and how using technology and objective data capture can optimise this process. With an understanding of these methodologies, examples will be provided of how the data can be used to guide programming to enhance return to sport readiness.

Practical: *Assessment guided reconditioning to enhance return to sport readiness.*

This session will include a practically led demonstration to gain insight and confidence in the delivery of return to sport tests. This information will then be used to discuss and practically perform reconditioning activities to target residual deficits commonly shown following injury across the return to sport continuum. Collectively this session will enable delegates to design interventions to address common deficits shown following injury to enhance return to sport readiness in their athletes.