

TREAT SPORT-RELATED CONCUSSION CONFERENCE



April 20-21, 2024 • Pittsburgh, PA



**UPMC | SPORTS
MEDICINE**
CONCUSSION PROGRAM



**CONCUSSION
RESEARCH
LAB**

TREAT SPORT-RELATED CONCUSSION CONFERENCE



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In support of improving patient care, the University of Pittsburgh is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

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Athletic Trainers (BOC CEUs):



UPMC Sports Medicine is approved by the Board of Certification, Inc. to offer continuing education to Certified Athletic Trainers.

12.5 CEUs will be eligible for Certified Athletic Trainers.

Physical Therapists

CEUs for Physical Therapists have also been approved for the State of Pennsylvania.

Other healthcare professionals will receive a certificate of attendance confirming the number of contact hours commensurate with the extent of participation in this activity.

FACULTY LISTING

Course Directors

Micky Collins, PhD

Clinical Executive Director, UPMC Sports Medicine Concussion Program
Professor and Arthur J. Rooney, Sr. Chair in Sports Medicine, Department of Orthopaedic Surgery, University of Pittsburgh
Pittsburgh, PA

Anthony Kontos, PhD

Professor and Vice-Chair Clinical Research, Department of Orthopaedic Surgery, University of Pittsburgh
Research Director, Concussion Research Laboratory, UPMC Sports Medicine Concussion Program
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Faculty Speakers

David Brody, MD, PhD

Chief Science Officer, Center for Neuroscience and Regenerative Medicine
Professor of Neurology, Uniformed Services University of the Health Sciences
Bethesda, MD

Chris Burley, PhD

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Enda Devitt, MICGP, MRCSI, FFSEM

Clinical Lead, Whitehall Medical Centre, UPMC Nationwide Concussion Network
Galway Football and Connacht Rugby Team Doctor
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Kori Durfee, MA

Doctoral Student, Office for Sport Concussion Research, University of Arkansas
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Shawn Eagle, PhD

Research Assistant Professor, Department of Neurological Surgery, University of Pittsburgh
Pittsburgh, PA

RJ Elbin, PhD

Associate Professor in Exercise Science, University of Arkansas
Director of the Office for Sport Concussion Research
Fayetteville, AR

Rachel Grashow, PhD, MS

Director of Epidemiological Research Initiatives and Co-Investigator of Family Experiences Managing Football Lives (FEM-FL) for the Football Players Health Study, Harvard University
Senior Research Scientist, Harvard T. H. Chan School of Public Health
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Grant Iverson, PhD

Professor, Department of Physical Medicine and Rehabilitation, Harvard Medical School
Director, Concussion Research Program, Schoen Adams Research Institute at Spaulding Rehabilitation
Director, Mass General for Children Sports Concussion Program
Boston, MA

Sabrina Jennings, PhD

Clinical Neuropsychologist and Fellowship Director, Inova Sports Concussion Program
Fairfax, VA

Julia Kofler, MD

Associate Professor and Director of the Division of Neuropathology, Department of Pathology, University of Pittsburgh
Co-Director and Neuropathology Core Leader, University of Pittsburgh Alzheimer's Disease Research Center (ADRC)
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Clinical Neuropsychologist and Director, Aptiva Health Concussion Program
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Michael McCrea, PhD, ABPP

Endowed Professor, Department of Neurosurgery, Medical College of Wisconsin
Vice Chair of Research and Director of the Medical College of Wisconsin Center for Neurotrauma Research
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Sean Moffatt, MB, MICGP, MScSEM, DipSEM, FFSEM

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Team Doctor, Mayo Senior Gaelic Football Team
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Anne Mucha, DPT

Program Coordinator, Vestibular Rehabilitation, UPMC Sports Medicine Concussion Program & Rehabilitation Institute
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David Okonkwo, MD, PhD

Professor of Neurological Surgery and Director of Neurotrauma Clinical Trials Center,
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Sarah Ostop, PT, DPT, ATC

Exertion Coordinator for the UPMC Sports Medicine Concussion Program, UPMC Rehabilitation Institute
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Jonathan Preszler, PhD

Clinical Neuropsychologist, Sanford Health
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Philip Schatz, PhD

Professor of Psychology, Saint Joseph's University
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Alicia Trbovich, PhD

Clinical Neuropsychologist, UPMC Sports Medicine Concussion Program
Assistant Professor, Department of Orthopaedic Surgery, University of Pittsburgh
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Melissa Womble, PhD

Clinical Neuropsychologist and Director, Inova Sports Concussion Program
Co-Director, Inova Concussion Program
Fairfax, VA

Aaron Zynda, PhD

Post-Doctoral Research Associate, Department of Orthopaedic Surgery, University of Pittsburgh
UPMC Sports Medicine Concussion Program
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Session Moderators

Micky Collins, PhD

Clinical Executive Director, UPMC Sports Medicine Concussion Program
Professor and Arthur J. Rooney, Sr. Chair in Sports Medicine, Department of Orthopaedic Surgery, University of Pittsburgh
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Nate Kegel, PhD

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Oscar Lopez, MD

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Chief, Cognitive and Behavioral Neurology Division
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Mark Lovell, PhD

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Alicia Trbovich, PhD

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TREAT SPORT-RELATED CONCUSSION CONFERENCE



April 20-21, 2024 • Pittsburgh, PA

Targeted Rehabilitation and Evidence-based Active Treatments (TREAT) for Sport-related Concussion

DAY 1

Saturday, April 20, 2024

| | | |
|-------------|------------------------------------|--|
| 7:00-7:45am | CHECK-IN/BREAKFAST Hang Posters | Box Office Atrium Box Office Atrium |
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WELCOME/INTRODUCTION

| | | |
|-------------|--|-------------------|
| 7:45-8:00am | Welcoming Remarks <i>Macalus V. Hogan, MD, MBA</i> <i>David Silver Professor and Chair</i> <i>Department of Orthopaedic Surgery</i> <i>University of Pittsburgh/UPMC</i> | Box Office Room 1 |
|-------------|--|-------------------|

Introduction to the Conference
Micky Collins, PhD; Anthony Kontos, PhD
Conference Co-Directors
University of Pittsburgh/UPMC

| | | |
|--|--|-------------------|
| SESSION 1- CONCUSSION CLINICAL PROFILES AND TARGETED TREATMENTS | | Box Office Room 1 |
|--|--|-------------------|

Moderator: Mark Lovell, PhD

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| 8:00-8:30am | Concussion Clinical Profiles Model: Updates and New Evidence <i>Micky Collins, PhD- University of Pittsburgh/UPMC</i> | |
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| 8:30-9:00am | Identification of Concussion Profiles and Effectiveness of Active, Targeted Treatments <i>Anthony P. Kontos, PhD- University of Pittsburgh/UPMC</i> | |
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| 9:00-9:30am | The Anxiety/Mood Profile: A Deep Dive <i>Melissa Womble, PhD- INOVA Sports Concussion</i> | |
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|---|---|--|
| 9:30-9:45am | Session 1 Panel Discussion/Q & A | |
| 9:45-10:00am | <i>BREAK</i> | <i>Box Office Atrium</i> |
| SESSION 2- MULTIDOMAIN CONCUSSION ASSESSMENTS | | Box Office Room 1 |
| <i>Moderator: Anthony Kontos, PhD- University of Pittsburgh/UPMC</i> | | |
| 10:00-10:30am | Role of Risk Factors in Concussion Outcomes <i>RJ Elbin, PhD- University of Arkansas</i> | |
| 10:30-11:00am | Evidence for a Multidomain Concussion Assessment <i>Alicia Trbovich, PhD- University of Pittsburgh/UPMC</i> | |
| 11:00-11:30am | Emerging Role of Biomarkers and Neuroimaging for Concussion <i>Michael McCrea, PhD- Medical College of Wisconsin</i> | |
| 11:30-11:45am | Session 2 Panel Discussion/Q & A | |
| 11:45-12:30pm | <i>LUNCH</i> | <i>Box Office Atrium & Balcony</i> |
| | <i>Closed Media Session (invitation only)</i> | <i>Box Office Conference Room</i> |
| SESSION 3- ATHLETE PERSPECTIVE | | Box Office Room 1 |
| <i>Moderator: Micky Collins, PhD- University of Pittsburgh/UPMC</i> | | |
| 12:30-1:30pm | Athlete and Clinician Panel Discussion | |
| SESSION 4- TARGETED TREATMENTS FOR CONCUSSION | | Box Office Room 1 |
| <i>Moderator: Alicia Trbovich, PhD- University of Pittsburgh/UPMC</i> | | |
| 1:30-2:00pm | Targeted Vestibular Rehabilitation following Concussion <i>Anne Mucha, DPT- Center for Rehab Services/UPMC</i> | |
| 2:00-2:30pm | The Role of Dynamic Exercise in Concussion Care <i>Sarah Ostop, DPT- Centers for Rehab Services/UPMC</i> | |
| 2:30-3:00pm | Emerging Medical Treatments for Concussion <i>David Brody, MD, PhD- Uniformed Services University</i> | |
| 3:00-3:15pm | Session 4 Panel Discussion/Q & A | |
| 3:15-3:30pm | <i>BREAK</i> | <i>Box Office Atrium</i> |

SESSION 5- BEYOND CONSENSUS- A CRITICAL EXAMINATION OF CURRENT CONCUSSION CONSENSUS

Box Office Room 1

Moderator: Micky Collins, PhD- University of Pittsburgh/UPMC

3:30-4:00pm Social Determinants of Health and Health Equity in the Treatment and Rehabilitation of Sport-Related Concussion: The Evidence for Current Consensus Statements
Grant Iverson, PhD- Harvard University

4:00-4:25pm Current Consensus: What's Missing?
Phil Schatz, PhD- St. Joseph's University

4:25-4:45pm Evidence for the SCOAT-6
Anthony Kontos, PhD- University of Pittsburgh/UPMC

4:45-5:00pm Session 5 Panel Discussion/Q & A

SESSION 6- EMERGING FINDINGS IN CLINICAL CONCUSSION AND BRAIN HEALTH RESEARCH: LIGHTNING LECTURES

Box Office Room 1

Moderator: Anthony Kontos, PhD- University of Pittsburgh/UPMC

5:00-5:15pm Exercise and Autonomic Function: The Anxiety Problem
Aaron Zynda, PhD- University of Pittsburgh/UPMC

5:15-5:30pm Emerging Perspectives on Concussion Symptoms
Jonathan Preszler, PhD- Sanford Health

5:30-5:45pm Markers of Brain Health in Former Athletes: Emerging Findings
Shawn Eagle, PhD- University of Pittsburgh/UPMC

5:45-6:00pm Physical Activity, Sleep, and Other Long-term Outcomes following Concussion
Kori Durfee, MS- University of Arkansas

6:00pm *Adjournment*

POSTER SESSION/RECEPTION

Box Office Atrium

6:00-7:30pm Poster Session and Reception

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DAY 2

Sunday, April 21, 2024

| | | |
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| 7:00-8:00am | BREAKFAST | Box Office Atrium |
| SESSION 7- EMERGING FINDINGS IN BRAIN HEALTH | | Box Office Room 1 |
| <i>Moderator: Oscar Lopez, MD- University of Pittsburgh/UPMC</i> | | |
| 8:00-8:30am | Former Professional Football Player's Brain Health Initiative: Emerging Findings <i>David Okonkwo, MD/PhD- University of Pittsburgh</i> | |
| 8:30-9:00am | The Football Players Health Study at Harvard University: What Are We Learning? <i>Rachel Grashow, PhD, MS- Harvard University</i> | |
| 9:00-9:30am | University of Pittsburgh Brain Bank: The Future of Brain Health Research <i>Julia Kofler, MD- University of Pittsburgh/UPMC</i> | |
| 9:30-9:45am | Session 7 Panel Discussion/Q & A | |
| 9:45-10:00am | BREAK | Box Office Atrium |
| SESSION 8- TREATMENT APPLICATION & CASE PRESENTATIONS | | Box Office Room 1 |
| <i>Moderator: Nate Kegel, PhD- University of Pittsburgh/UPMC</i> | | |
| 10:00-10:20am | Case 1 <i>Micky Collins, PhD- University of Pittsburgh/UPMC</i> | |
| 10:20-10:40am | Case 2 <i>Lisa Manderino, PhD- Aptiva Health Concussion Program</i> | |
| 10:40-11:00am | Case 3 <i>Chris Burley, PhD- University of Pittsburgh/UPMC</i> | |

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| 11:00-11:20am | Case 4 <i>Sabrina Jennings, PhD- INOVA Sports Concussion</i> | |
| 11:20-11:40am | Case 5- International Case Perspective <i>Dr. Sean Moffat- Ballina Medical Centre (Ballina, IRE)</i> <i>Dr. Enda Devitt- Whitehall Medical Centre (Galway, IRE)</i> <i>UPMC Concussion Network Ireland</i> | |
| 11:40-12:00pm | Session 8 Clinician Panel Discussion/Q & A <i>Micky Collins, PhD- University of Pittsburgh/UPMC</i> <i>Vanessa Fazio-Sumrok, PhD- University of Pittsburgh/UPMC</i> <i>Jonathan French, PsyD - University of Pittsburgh/UPMC</i> <i>Dr. Enda Devitt- Whitehall Medical Centre (Galway, IRE)</i> <i>Sabrina Jennings, PhD- INOVA Sports Concussion</i> <i>Lisa Manderino, PhD- Aptiva Health Concussion Program</i> <i>Chris Burley, PhD- University of Pittsburgh/UPMC</i> | |
| CLOSING | | Box Office Room 1 |
| 12:00-12:15pm | Closing Remarks <i>Micky Collins, PhD; Anthony Kontos, PhD</i> <i>Conference Co-Chairs</i> <i>University of Pittsburgh/UPMC</i> | |
| 12:15pm | <i>Adjournment</i> | |
| <u>12:30-2:00pm</u> | <u><i>Closed Session for Faculty (invitation only)</i></u> | <u><i>Conference Room</i></u> |

POSTER SESSION TITLES & NUMBERS (BY TOPIC)

Pediatric and Adolescents

1. Beidler et al., Emotional Brain Injury Perceptions and Concussion Assessment Outcomes in Pediatric Patients
2. Mackey et al., Brain Injury Perceptions of Pediatric Patients Following Concussion: A Preliminary Investigation
3. Dzadovsky et al., The Intersection of Brain Injury Perceptions in Pediatric Patients With A Concussion
4. Johnson et al., A Preliminary Exploration of Tandem Gait Completion Time and Return-To-Activity Clearance in Pediatric Concussion Patients
5. Maietta et al., ADHD, Race, and Lifetime History of Concussion in Adolescent Student Athletes
6. Ghiles et al., Graph Theoretic Analysis of Resting-State Functional MRI in High School Football Athletes Over a Season
7. Bunker et al., The Role of Family Functioning on Concussion Recovery in Adolescents And Young Adults
8. Stephenson et al., Examining Symptom Reporting and Change Across Consecutive Baseline Assessments in Uninjured Adolescent Athletes

Collegiate Athletes

9. Bretzin et al., Sleep Symptomology And Concussion Recovery: Findings From The Ivy League-Big Ten Epidemiology Of Concussion Study
10. Loffin et al., Unmasking the Impact: Analyzing the Role of Athletic Identity on Concussion Outcomes In Collegiate Athletes
11. Klein et al., Comparative Utility of Vestibular Ocular Motor Assessments Following Concussion
12. Pandey et al., Most Collegiate Athletes Do Not Receive Diagnostic Benefit from Individualized Baseline Testing Compared to Normative Data
13. Pandey et al., Optimizing Concussion Assessment: A Mixed-Integer Optimization Approach with Time Constraints
14. Nakamoto & Fukuba, The Impact Of Concussion Knowledge On History Of Concussion Among Collegiate Athletes
15. Gantz Marker et al, University Of Pittsburgh National Sports Brain Bank For Contact Sports Participants
16. Nolan & Hayes, An Investigation Into Acute Recovery Profiles Following Sports-Related Concussion
17. Kelshaw et al., The Association of Athletic Trainer and Athlete Sex Concordance On Concussion Clinical Milestones

Mental Health

18. Zynda et al., Relationship Between Fear-Avoidance Behavior, Clinical Outcomes, and Recovery Time in Adults Following Concussion
19. Klein et al., Changes In Coping Skills Throughout Concussion Recovery In Collegiate Athletes Compared To Healthy Controls
20. Tracey et al., Monitoring Psychological Health-Related Quality Of Life (Phrqol) Using Ecological Momentary Assessment Platform Recoups Throughout Concussion Recovery
21. Patel et al., Predictors Of Post-Concussion Anxiety In Patients Without Pre-Existing Anxiety History

22. Stephenson et al., Examining Change In Baseline Physical, Cognitive, Sleep, And Emotional Symptom Reporting In Adolescent Athletes With And Without A History Of Psychiatric Treatment
23. Anish et al., Concussion Clinical Outcomes and Recovery Time in Individuals With Pre-Existing Anxiety and/or Depression

Older Adults

24. Giordano et al., Predictors of Severe Cervical Symptoms and Association with Clinical Outcomes Following Concussion In Older Adults
25. Ramirez et al., A Comparison of Multidomain Clinical Assessment Outcomes in Older Adults Following Concussion

Exertion

26. Kochick et al., Dynamic Exertion Test (Exit): Failed Attempts to Inform Future Assessments
27. Sinnott et al., Convergent Validity of a Brief Dynamic Exertion Test (B-Exit) With the Buffalo Concussion Treadmill Test
28. Burley et al., Differences in Exercise Tolerance and Autonomic Function Based on Concussion Clinical Profile
29. Pyndiura et al., Assessing the Validity of A Multimodal Exertional Test (Met) For Sport-Related Concussion

Vestibular/Ocular Motor

30. Whelan et al., The Diagnostic Accuracy and Reliability of The King Devick Test for Acute Diagnosis of Concussion
31. Edwards & Caccese, Vergence Pursuit Function After Concussion Using A Virtual Reality Eye Tracker
32. Guercio et al., Impact of Pre-Existing Attention-Deficit/Hyperactivity Disorder On Vestibular/Ocular Motor Outcomes Following Concussion
33. Mehmel et al., Impact of Emotional Symptomology on Vestibular/Ocular Motor Functioning Following Concussion in Adolescents
34. Todd et al., Sex & Age-Related Differences in Symptom Provocation on Vestibular/Ocular Motor Screening (VOMS) After Concussion

Rugby/Gaelic Athletes

35. Miller et al., Predictors of Borderline Baseline Neurocognitive Scores in Gaelic Athletes
36. Power et al., Whole Body Injury and Time-Loss Following Sports Related Concussion in Irish Amateur Rugby Players Over A Competitive Season
37. Kenny et al., Concussion Time-Loss Severity in Amateur Rugby Union

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