Division Data Summary

Research and Training Details

<table>
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<tr>
<td>Number of Faculty</td>
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<td>Number of Joint Appointment Faculty</td>
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<tr>
<td>Number of Research Fellows</td>
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<td>Number of Research Students</td>
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<tr>
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<td>Peer Reviewed Publications</td>
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Clinical Activities and Training

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<td>Outpatient Encounters</td>
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Significant Publications


Patellofemoral pain was often thought to be a self-limiting, relatively benign condition. This article examined the pathomechanics of this condition, but more importantly identified that the incidence of PFP was occurring at the middle school level, earlier than previously thought. This fact is important because it shows that intervention programs need to be targeted to younger athletes.


This manuscript was significant because of its fundamental clinical application. It combined the knowledge gained from our previous research on how to identify and classify high risk athletes with practical application of that knowledge to the athletes in need.


This article was tantamount in identifying measures readily available to the clinician to aid in identifying athletes at higher risk of ACL injury. Classification was previously only available through high tech and expensive laboratory equipment. Now, this ground breaking information is available to clinicians across the country. The information presented has far reaching opportunity to aid in reducing ACL injury through proper risk classification.

Myer GD, Ford KR, Khoury J, Succop P, Hewett TE. Biomechanics laboratory-based prediction algorithm to

This article was significant because it provided the foundation to identify those athletes at increased risk of ACL injury. The identification of those athletes at increased risk of ACL injury is crucial to initiate targeted injury prevention training programs. This laboratory based algorithm lead to the development of clinic based prediction tools.


This manuscript was significant because it led to the development, and more importantly, the validation of a clinical tool to identify athletes at high risk of ACL injury. It determined that the clinic based measures were valid in identification of risk factors.

Division Collaboration

**Orthopaedics » Eric Wall, MD**
Bone Bruise Study

**Biostatistics & Epidemiology » Jane Khoury, PhD ; Bin Huang, PhD**
Statistical Analysis of Research Data

**Heart Institute; » Jeff Robbins, PhD ; Jeffrey Anderson, MD, Richard Czosek, MD, Michelle Grenier, MD, Timothy Knilans, MD**
These long-term, ongoing studies involve Molecular Cardiovascular Biology and Sports Medicine examine the congenital basis for heart disease especially diseases that involve sudden death in the young.

This collaboration will utilize a unique screening protocol to study sudden deaths in athletes.

**Preventive Cardiology » Elaine Urbina, MD**
This new five year study will measure the rate of cardiovascular aging in adolescents and young adults and determine which risk factors best predict accelerated aging.

**Rheumatology » Susan Thompson, PhD**
This collaborative effort between Sports Medicine and Rheumatology involved an examination of genetic risk factors for ACL tears and long-term knee osteoarthritis

**Physical Medicine and Rehabilitation » Brian Hang, MD**
This collaborative effort between Sports Medicine and PM&R is a prospective assessment of risk factors for and effects of sports related concussions

**Occupational Therapy/Physical Therapy » Becky Reder**
This collaborative effort between Sports Medicine and OT/PT includes working on projects related to the effects of interventions on injury risk, concussion and foot/ankle research.

**Comprehensive Children’s Injury Center ( »**
Development of multi-disciplinary head injury/concussion clinic, prevention program and treatment pathways

**Center for Better Health and Nutrition » Robert Siegel, MD**
This project will evaluate advanced methods of physical activity assessment and feedback and their utility in children.
Faculty Members

**Jon Divine, MD**, Associate Professor
*Medical Director*

**Nicholas Edwards, MD, MPH**, Assistant Professor
*Research Interests* Physical activity promotion, obesity prevention and treatment, fitness monitoring, exercise counseling, infectious disease and the athlete.

**Kevin Ford, PhD**, Assistant Professor
*Co-Director of Research*

**Research Interests** Sports injury prevention, biomechanical modeling techniques, lower extremity sports injuries

**Timothy Hewett, PhD**, Professor
*Research Interests* Prevention of knee injuries in the female athlete

**Greg Myer, PhD**, Assistant Professor
*Co-Director of Research*

**Research Interests** Injury Biomechanics, Pediatric Exercise Science, Child Health

**Michael Shaffer, DO**, Assistant Professor
*Fellowship Director*

**Research Interests** Injury prevention, altered foot mechanics, manipulative treatment of spine and pelvis related dysfunction, treatment of female athlete’s medical and physical issues related to sport

Joint Appointment Faculty Members

**Mark Paterno, PT, MS, MBA, SCS, ATC**, Assistant Professor
*Occupational Therapy and Physical Therapy*

**Research Interests** Clinical Outcomes after Lower Extremity Injury, Rehabilitation Intervention Outcomes, Outcome after ACL Reconstruction

**Eric Wall, MD**, Associate Professor
*Orthopaedic Physicians and Staff*

Clinical Staff Members

- Corey Ellis, MD

Trainees

- Nate Bates, PhD Candidate
- Mike Puchowicz, MD, PGY-VI
- Sarah Murdick, MD, PGY-VI
- Carmen Quatman, MD Candidate
- Catherine Quatman-Yates, Post-Doctoral Fellow
- Dai Sugimoto, PhD Candidate
- Sam Wordeman, PhD Candidate
- Casey Reed, Medical Student
- Tamara Masters,
Significant Accomplishments

Preventing Heart Disease
Nicholas Edwards, MD, MPH, was awarded a Clinical and Translational Science Award KL2 Research Scholars mentored career development award for “Effects of Physical Activity on Cardiovascular Risk Factors in Youth.” In the United States, more people die from heart attacks and heart-related illnesses than any other cause. This study will help find the best ways to prevent children from developing heart problems as they grow up.

Division Award and Honors
Mark Paterno, PhD, was named the winner of the 2010 NCAA Research Award from the American Orthopaedic Society for Sports Medicine for his work, “Biomechanical Measures During Landing and Postural Stability Predict Second Anterior Cruciate Ligament Injury after ACL Reconstruction and Return to Sport.”

Carmen Quatman, MD, and coauthor Laura Schmitt were named as the recipients of the AJSM Systematic Review Award.

Sam Wordeman received the American College of Sports Medicine Biomechanics interest group student research award.

New Division Director and Advanced Degrees Awarded
Teri Metcalf McCambridge, MD, was hired as the new division director and medical director for Sports Medicine. McCambridge received her undergraduate degree from the Ohio State University and medical degree from Johns Hopkins School of Medicine.

Mark Paterno received his doctorate of philosophy in orthopaedic and sports science from Rocky Mountain University of Health Care Professions. Greg Myer received his PhD in athletic training from Rocky Mountain University and was promoted to research instructor. Carmen Quatman received her medical degree from the University of Toledo College of Medicine.

Division Publications


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<tr>
<th>Grant and Contract Awards</th>
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<td><strong>FORD, K</strong></td>
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<td><strong>Sex Differences in ACL Injury Risk Factors Emerge During Adolescent Growth</strong></td>
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<td><strong>Neuromuscular Intervention Targeted to Mechanisms of ACL Load in Female Athletes</strong></td>
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