Sports Medicine

Division Photo

First Row: M.Shaffer, J.Divine, K.Ford, N.Edwards, T.Hewett, M.Paterno

Division Data Summary

Research and Training Details	
Number of Faculty	5
Number of Joint Appointment Faculty	2
Number of Research Fellows	1
Number of Research Students	5
Number of Support Personnel	8
Direct Annual Grant Support	$1,217,091
Peer Reviewed Publications	17
Clinical Activities and Training	
Number of Clinical Staff	2
Number of Clinical Fellows	2
Number of Other Students	6
Outpatient Encounters	4,674

Significant Publications

Paterno M, Schmitt L, Ford K, Rauh M, Myer G, Huang B, Hewett T. Biomechanical Measures during Landing and Postural Stability Predict Second Anterior Cruciate Ligament Injury after ACL Reconstruction and Return to Sport. Am J Sports Med. 2010.

This paper was the winner of the prestigious 2010 NCAA Research Award from the American Orthopaedic Society for Sports Medicine (AOSSM). It was the first study to prospectively identify predictive factors for a second Anterior Cruciate Ligament Injury following ACL reconstruction and return to activity. This data is a critical, preliminary step to help modify management of patients after ACL reconstruction and ultimately improve outcomes after this surgical procedure.

Ford KR, Myer GD, Melson PG, Darnell SC, Brunner HI, Hewett TE. Land-Jump Performance in Patients with

Juvenile Idiopathic Arthritis (JIA): A Comparison to Matched Controls. Int J Rheumatol. 2009; 2009:478526.
This publication is significant because it demonstrates the transnational component of our research techniques that can impact different fields.

Division Collaboration

Collaboration with Orthopaedics

Collaborating Faculty: Eric Wall, M.D.
Bone Bruise Study

Collaboration with Biostatistics & Epidemiology

Collaborating Faculty: Jane Khoury, PhD
Statistical Analysis of Research Data

Collaboration with Heart Institute

Collaborating Faculty: Jeff Robbins, PhD
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.

Collaboration with Preventive Cardiology

Collaborating Faculty: Elaine Urbina, MD & Bob Siegel, MD
These new collaborative efforts between Sports Medicine and Preventive Cardiology examine the relationship between exercise and childhood obesity.

Collaboration with Rheumatology

Collaborating Faculty: 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

Collaboration with Physical Medicine and Rehabilitation

Collaborating Faculty: Brian Huang
This collaborative effort between Sports Medicine and PM&R is a prospective assessment of risk factors for and effects of sports related concussions.

Faculty Members

Jon Divine, MD, Associate Professor Clinical ; *Division Chief; 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, Research Assistant Professor ; *Co-Director of the Human Performance Lab*
Research Interests: Sports injury prevention, biomechanical modeling techniques, lower extremity sports injuries

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

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

Joint Appointment Faculty Members

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

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

Clinical Staff Members

- **Corey Ellis, MD**

Trainees

- **Alex Brown, MD,** PGY-VI,
- **Stephen Chen, MD,** PGY-VI,
- **Mark Paterno, PhD Candidate,**
- **Carmen Quatman, MD Candidate,**

- **Sam Wordeman, PhD Candidate,**
- **Nate Bates, PhD Candidate,**
- **Dai Sugimoto, PhD Candidate,**

Significant Accomplishments

Faculty growth continues

Our growth continued this year with the addition of four staff members: Nicholas Edwards, MD, MPH, a researcher and clinician from TRIA Orthopaedic Center in Minneapolis, Minnesota; Catherine Quatman, PhD, a post-doctoral fellow and physical therapist; Staci Thomas, MS, clinical research coordinator; and Daniel Carson, MS, CSCS, research assistant.

Research grants and honors

Kevin Ford, PhD, received a three-year NIH grant to determine growth-related sex differences that increase knee load and risk of ACL injury in adolescents. Ford also was named a fellow in the American College of Sports Medicine (ACSM) and elected co-chair of the ACSM's Biomechanics Interest Group.

Greg Myer received his PhD from Rocky Mountain University this year. His research focus is developing an algorithm to predict knee abduction in females, a major risk factor for ACL injury.

We received our fourth consecutive award from National Football League Charities for "Longitudinal Study of ACL Reconstruction Outcomes: Knee Mechanics and Quadriceps Strength." Our goal is to understand mechanisms associated with abnormal knee mechanics and decreased functional performance in athletes with ACL reconstruction.

Tim Hewett, PhD, Kevin Ford, PhD and Greg Myer, PhD gave invited symposia at annual meetings of the American College of Sports Medicine and World Congress on Exercise in Medicine. Myer and co-authors Ford, Divine, Wall, Kahanov and Hewett received the Clint Thompson Award for Clinical Advancement for their paper, "Longitudinal Assessment of Noncontact Anterior Cruciate Ligament Injury Risk Factors during Maturation in a Female Athlete: A Case Report."

Mark Paterno, PT, MS, MBA, received the American Orthopaedic Society for Sports Medicine 2010 NCAA Research Award for his paper, "Biomechanical Measures during Landing and Postural Stability Predict Second Anterior Cruciate Ligament Injury After ACL Reconstruction and Return to Sport." The award is given to the best paper pertaining to the health, safety, and well-being of collegiate student-athletes.

Grants, Contracts, and Industry Agreements

Grant and Contract Awards		Annual Direct / Project Period Direct
Hewett, T		
Neuromuscular Intervention Targeted to Mechanisms of ACL Load in Female Athletes National Institutes of Health R01 AR 055563	09/01/08 - 08/31/12	$458,083 / $601,867
Anterior Cruciate Ligament Reconstruction: Clinical and Biomechanics Predictors of a Poor Outcome NFL Charities	01/01/09 - 06/30/10	$124,837 / $124,837
Multi-faceted Approach to Modeling ACL Injury Mechanisms National Institutes of Health R01 AR 056259	05/15/09 - 04/30/13	$447,525 / $1,753,360
CABLE and Gait in Persons with Stroke University of Cincinnati (American Heart Association) 0635006N	07/01/06 - 06/30/10	$12,000 / $46,000
Schmitt-Haluszczak, L		
ACL Reconstruction in the Female Athlete: Strength, Knee Mechanics and Outcome National Institutes of Health F32 AR055844	03/01/08 - 12/31/09	$49,646 / $96,472
Longitudinal Study of ACL Reconstruction Outcomes: Knee Mechanics and Quadriceps Strength		

NFL Charities

01/01/10 - 12/31/10 $125,000 / $125,000

Current Year Direct	**$1,217,091**
Total	**$1,217,091**