Significant Publications


Karim Khan, the editor of the British Journal of Sports Medicine, had this to say about Dr. Hewett's new research findings. "Continuing the anterior cruciate ligament (ACL) theme—because who can get enough of that—Associate Editor Hewett provides another jewel in his crown of contributions that aim to make ACL history. Last month, he and newly-minted PhD Carmen Quatman reviewed the arguments for the valgus forces being the primary mechanism in women; this contrasts with the 'saggital plane' forces theory."


This study demonstrated an important link between increased generalized joint laxity in females and increased risk of ACL injury.
Division Highlights
Tim Hewett, PhD
ACL study group traveling scientist which took him to ISAKOS annual meeting in Osaka, Japan: Aristotle University of Thessaloniki in Greece: Speaker at the Japanese Clinical Sports Meeting in Tokyo Japan

Faculty Members
Jon Divine, MD, Associate Professor Clinical; Division Chief; Medical Director
Timothy Hewett, PhD, Professor; Center Director; Research Director
Research Interests: Prevention of knee injuries in the female athlete
Kevin Ford, PhD, Assistant Professor
Michael Shaffer, DO, Assistant Professor Clinical

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
- Lora Harrison, MD, PGY-VI
- Adrick Harrison, PhD Candidate
- Vimarie Rodriguez, MD, PGY-VI
- Greg Myer, PhD Candidate
- Mark Paterno, PhD Candidate
- Carmen Quatman, MD Candidate
- Sam Wordeman, PhD Candidate

Significant Accomplishments
New Faculty and Awards
The Division of Sports Medicine promoted Kevin Ford, PhD to Assistant Professor. Dr. Ford earned his PhD from the University of Kentucky in exercise science and biomechanics where he won the Hackensmith Award, which is presented to the most outstanding graduate student.

Greg Myer, Senior Research Assistant, received the National Strength and Conditioning Association (NSCA) student research award in June.

The Division welcomed a couple new members to the team in fiscal year 2009.
- Michael Shaffer, DO joined Jon Divine, MD (Medical Director) and his staff in August of 2008. Dr. Shaffer was recruited from TexasTechUniversity where is served as an Assistant Professor and team physician for their athletic program.
- Carmen Quatman, PhD was hired as a research fellow during the summer of 2009. Dr. Quatman has worked as a student and research assistant within the Division for the past 7 years, participating in biomechanical data collection, reduction, and analysis at the Sports Medicine Biodynamics Center.

Dr. Tim Hewett Awarded 3 grants for Sports Medicine Research
Dr. Tim Hewett, PhD, FACSM, Director of the Sports Medicine Biodynamics Center was awarded three grants in fiscal year 2009. Dr. Hewett and his team of researchers received a four year, $2.5 million R01 award from the NIH titled “Neuromuscular Intervention Targeted to Mechanisms of ACL Load in Female Athletes”. The major goal of this proposal
is to determine if decreased neuromuscular control of the trunk increases coronal plane knee load in high-risk groups of females. The rationale for this project is that its successful completion will provide a strong, evidence-based intervention that will effectively decrease ACL injury risk in high-risk female athletes.

Last fall, for the third consecutive year, the Division received an award from National Football League Charities. The award titled “Anterior Cruciate Ligament Reconstruction (ACLR): Clinical and Biomechanical Predictors of a Poor Outcome”, seeks to determine the incidence of subsequent ACL injury following ACLR and identify modifiable factors predictive of a second ACL injury. Thus far, Mark Paterno PT, ATC, Laura Schmitt, PhD, PT and Dr. Hewett have successfully completed initial data collection on 65 subjects following anterior cruciate ligament reconstruction and return to sports (ACLR group) and 45 healthy control subjects. These subjects are currently being tracked for subsequent ACL injury and activity exposures during the 12 months following their testing.

The National Institutes of Health awarded Dr. Hewett his second R01 of fiscal year 2009 this past spring. “Multi-faceted Approach Modeling ACL Injury Mechanisms” is a four year $2 million award that will develop, validate and optimize a computational knee model to study ACL injury mechanisms.

In addition to his grant accomplishments, Dr. Hewett also was named to the NIH Federal Advisory Committee on the Musculoskeletal Rehabilitation Sciences Study Section until the year 2015.

Sports Physical Therapy Program Boomed

Within the Division of Sports Medicine, Sports Physical Therapy has completed a productive year. In addition to a heavy clinical load, and the addition of several new staff, the clinician scientists continue to participate in several studies investigating rehabilitation outcomes. The main focus is centered on short and long term outcomes following Anterior Cruciate ligament reconstruction and return to sports. Other projects of note, include investigations into the utility of patient reported outcome measure in a pediatric and adolescent population as well as the efficacy of various end stage rehabilitation interventions in athletic populations. In addition, the physical therapists within the Sports Physical Therapy group have presented their findings at numerous regional and national meetings in the past year. The goal of this group is to continue to produce high quality physical therapy outcome research in an attempt to improve the interventions we implement with our patients and ultimately improve their long term outcome.

Division Publications


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**Grants, Contracts, and Industry Agreements**

**Grant and Contract Awards**

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<tr>
<th>Grant and Contract Awards</th>
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<tr>
<td><strong>HEWETT, T</strong></td>
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<tr>
<td><strong>Identifying Female Athletes at High Risk for ACL Injury</strong></td>
<td>R01 AR 049735 09/21/04 - 08/31/09 $298,560 / $1,753,425</td>
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<td><strong>Cable and Gait in Persons with Stroke</strong></td>
<td>0635006N 07/01/06 - 06/30/10 $12,000 / $12,000</td>
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<td>American Heart Association - National (University of Cincinnati)</td>
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<td><strong>Neuromuscular Intervention Targeted to Mechanisms of ACL Load in Female Athletes</strong></td>
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<td><strong>Anterior Cruciate Ligament Reconstruction</strong></td>
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<td><strong>Multi-Faceted Approach to Modeling ACL Injury Mechanisms</strong></td>
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<td><strong>SCHMITT-HALUSZCZAK, L</strong></td>
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<td><strong>ACL Reconstruction in the Female Athlete: Strength, Knee Mechanisms and Outcome</strong></td>
<td>F32 AR 055844 03/01/08 - 02/28/11 $49,646 / $147,750</td>
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**Current Year Direct** 1,472,225