



37th Injuries in Baseball Course

**January 25 –27, 2019
Hyatt Regency Birmingham
The Wynfrey Hotel
Birmingham, AL**

**FRIDAY
January 25, 2019**

7:30 a.m. WELCOME

James R. Andrews, M.D.
Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.
Glenn S. Fleisig, Ph.D.

SESSION I ELBOW I

Objective: Examine current concepts related to the anatomy, biomechanics, examination and treatment of the throwing shoulder

7:40 a.m. Moderator/Faculty Introductions
Lyle Cain, M.D.

7:45 a.m. VIDEO DEMONSTRATION
Anatomy of the Elbow
Moderator: Michael Ryan, M.D.
Eli Kupperman, M.D.
Michael Rosen, D.O.

8:05 a.m. Biomechanics of the Throwing Elbow
Jonathan S. Slowik, Ph.D.

8:25 a.m. Examination of the Throwing Elbow
James Andrews, M.D.
Michael Ciccotti, M.D.

- 8:45 a.m. Diagnosis and Treatment of Soft Tissue Elbow Injuries: Lacertus/Pronator Syndrome, Tendonitis, etc.
Steve Jordan, M.D.
- 9:05 a.m. Incidence of UCL Injuries in Baseball
Stan Conte, P.T., D.P.T., A.T.,C.
- 9:25 a.m. **Panel Discussion**
Moderator: Lyle Cain, M.D.
 Michael Ryan, M.D.
 Jonathan S. Slowik, Ph.D.
 James R. Andrews, M.D.
 Michael Ciccotti, M.D.
 Steve Jordan, M.D.
- 9:45 a.m. **BREAK**

SESSION II
ELBOW II

Objective: Review the treatment, biomechanics and rehabilitation of injuries to the throwing shoulder

- 10:10 a.m. Moderator/Faculty Introductions
Jeffrey R. Dugas, M.D.
- 10:15 a.m. Treatment of Posterior Elbow Pain: VEO and olecranon stress fractures
Lee Kaplan, M.D.
- 10:35 a.m. The Biomechanics of UCL Reconstruction and UCL Repair
David P. Beason, M.S.
- 10:55 a.m. UCL Reconstruction in Throwing Athletes
Michael Ciccotti, M.D.
- 11:15 a.m. UCL Repair with Internal Brace
Jeffrey R. Dugas, M.D.
- 11:35 a.m. Rehabilitation Following UCL Reconstruction and/or Repair
Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.
- 11:55 a.m. Outcomes of UCL Surgery: Reconstruction and Repair
Lyle Cain, M.D.

12:15 p.m. **Panel Discussion and Case Presentations**
Moderator: Jeffrey R. Dugas, M.D.
Lee Kaplan, M.D.
Michael Ciccotti, M.D.
David P. Beason, M.S.
Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.
Lyle Cain, M.D.
James R. Andrews, M.D.

12:35 p.m. **JAMES R. ANDREWS AWARD FOR EXCELLENCE IN
BASEBALL SPORTS MEDICINE**

12:45 p.m. **LUNCH**

SESSION III REHABILITATION

Objective: Discuss current advances in the rehabilitation of injuries to the throwing shoulder

1:40 p.m. Moderator/Faculty Introductions
Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.

1:45 p.m. Early Single-Sport Specialization: A Survey of 3000 Baseball Players
Michael Ciccotti, M.D.

2:05 p.m. Baseball Conditioning and Training Program: The Miami Way!
Lee Kaplan, M.D.

2:25 p.m. Live Video Demonstration
Soft Tissue Techniques (Manual & Instrumented) to Improve Mobility
Kyle Yamashiro, P.T., D.P.T., C.S.C.S.

2:45 p.m. In-season Compared to Off Season Conditioning and Exercises for the
Pitcher and Positional Player
Robert A. Williams, Jr., P.T., D.P.T.

3:05 p.m. Live Video Demonstration
Scapular & Postural Exercises
Russ Paine, P.T.

3:25 p.m. **Panel Discussion**
Moderator: Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.
Michael Ciccotti, M.D.
Kyle Yamashiro, P.T. , D.P.T., C.S.C.S.
Robert A. Williams, Jr., P.T., D.P.T.
Russ Paine, PT

3:45 p.m. **BREAK**

SESSION IV
STRENGTH & CONDITIONING

Objective: Identify and discuss current trends associated with training procedures in baseball

4:05 p.m. Moderator/Faculty Introductions
Michael Axe, M.D.

4:10 p.m. Weighted Ball Throwing Programs: Are They Safe and Effective in
Enhancing Throwing Velocity?
Michael Reinold, D.P.T., S.C.S., C.S.C.S.

4:30 p.m. Resistance Training Programs: Are They Safe and Effective in Enhancing
Throwing Velocity?
Rafael Escamilla, Ph.D., P.T., C.S.C.S., F.A.C.S.M.

4:50 p.m. Conditioning the Female Softball Player
Lynn Snyder-Mackler, Sc.D., P.T., F.A.P.T.A.

5:10 p.m. Interval Throwing Program & Pitch Count
Michael Axe, M.D.

5:30 p.m. **Panel Discussion**
Moderator: Michael Axe, M.D.
Michael Reinold, D.P.T., S.C.S., C.S.C.S.
Rafael Escamilla, Ph.D., P.T., C.S.C.S., F.A.C.S.M.
Lynn Snyder-Mackler, Sc.D., P.T., F.A.P.T.A.

5:50 p.m. **ADJOURN**

6:00 p.m. **REGISTRANTS' RECEPTION**

SATURDAY
January 26, 2019

- 7:00 a.m. Roundtable Open Discussion: UCL: When to Start Throwing and When to Return to Play and Criteria**
James R. Andrews, M.D.
E. Lyle Cain, Jr., M.D.
Jeffrey R. Dugas, M.D.
Michael M. Reinold, D.P.T., S.C.S., C.S.C.S.
Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.
Stan Conte, P.T., D.P.T., A.T.,C.
Lee Kaplan, M.D.

SESSION V
SHOULDER I

- Objective: Integrate shoulder anatomy with biomechanics, examination, treatment and rehabilitation of the unstable shoulder
- 8:00 a.m. Moderator/Faculty Introductions
Jeffrey R. Dugas, M.D.
- 8:05 a.m. VIDEO DEMONSTRATION
Anatomy of the Shoulder
Moderator: Wayne McGough, M.D.
Brad Clay, M.D.
Ryan Roach, M.D.
- 8:25 a.m. Biomechanics of the Throwing Shoulder
Alek Z. Diffendaffer, M.S.
- 8:45 a.m. Examination of the Throwing Shoulder
Lee Kaplan, M.D.
James R. Andrews, M.D.
- 9:05 a.m. Non-Operative Rehabilitation for Selected Shoulder Lesions
Michael M. Reinold, D.P.T., S.C.S., C.S.C.S.
- 9:25 a.m. SLAP Lesions: When to Operate and When to Rehab
Lee Kaplan, M.D.

9:45 a.m. **Panel Discussion**
Moderator: Jeffrey R. Dugas, M.D.
Wayne McGough, M.D.
Alek Z. Diffendaffer, M.S.
Lee Kaplan, M.D.
James R. Andrews, M.D.
Michael M. Reinold, D.P.T., S.C.S., C.S.C.S.

10:05 a.m. **BREAK**

SESSION VI
SHOULDER II

Objective: Apply current advances in treatment and rehabilitation to injuries of the
 throwing shoulder

10:25 a.m. Moderator/ Faculty Introductions

10:30 a.m. Biceps Pain in Throwers
Jeffrey R. Dugas, M.D. or Lyle Cain, M.D.

11:10 a.m. Rotator Cuff Lesions: The Granddaddy of Them All
Lee Kaplan, M.D.

11:30 a.m. Rehabilitation of Rotator Cuff Lesions: Non-Op & Post-Op Return to Play
Criteria
Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.

11:50 a.m. Major League Baseball Research Report
Glenn S. Fleisig, Ph.D.

12:10 p.m. Latissimus Dorsi and Pectoralis Major Injuries in Baseball
Players
Karim A. Meijer, M.D.

12:30 **Panel Discussion**
Moderator:
Jeffrey R. Dugas, M.D. or Lyle Cain, M.D.
Lee Kaplan, M.D.
James R. Andrews, M.D.
Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.
Glenn S. Fleisig, Ph.D.
Karim A. Meijer, M.D.

12:50 p.m. ASMI CAREER SERVICE AWARD

1:00 p.m. Lunch

**CONCURRENT SESSION VII -A
ULTRASOUND WORKSHOP
Evaluating and Treating Injuries in the Thrower's Arm**

Objective: Review anatomy, pathologies, ultrasound examination, dynamic testing, and most common procedures done in the thrower's upper extremity

2:00 p.m. Moderator /Faculty Introductions
Ricardo Colberg, M.D.

Lectures

2:05 p.m. Ultrasound Imaging of the Basic Anatomy and Basic Ultrasound Guided Procedures
Ricardo Colberg, M.D.

2:30 p.m. Ultrasound Imaging of Common Injuries in Throwers
Josh Hackel, M.D.

3:00 p.m. Basic and Advanced Ultrasound Guided Procedures for Thrower's
Ricardo Colberg, M.D.

3:30 p.m. Orthobiologics in Baseball: From PRP to Stem Cells for Upper Extremity Injuries
Josh Hackel, M.D.

3:45 p.m. Panel Discussion

Scanning Workshop

4:00 p.m. **Live Demonstration**
Ultrasound Evaluation of the Shoulder
Jorge Vidal, M.D.

4:20 p.m. Ultrasound Scanning Workshop - Shoulder

5:00 p.m. **Live Demonstration**
Ultrasound Evaluation of the Elbow
Jorge Vidal, M.D.

5:20 p.m. Ultrasound Scanning Workshop - Elbow

6:00 p.m. ADJOURN

**CONCURRENT SESSION VII -B
BASEBALL AND SOFTBALL COACHING**

Objective: Examine current concepts in prevention and treatment of injuries in baseball and softball

2:00 p.m. Moderator/Faculty Introductions
E. David Osinski, M.A.

2:05 p.m. Shoulder and Elbow Injuries in High School Softball
Monika Drogosz, M.P.H.

2:25 p.m. Identifying the Pathomechanics of Windmill Softball Pitching
Gretchen Oliver, Ph.D., F.A.C.S.M., A.T.,C., C.E.S.

2:45 p.m. Biomechanics of the Trunk in Baseball Pitching and Hitting
Glenn S. Fleisig, Ph.D.

3:05 p.m. Mechanics of Various Pitch Types
E. David Osinski, M.A.

3:25 p.m. Find the Flaws: Pitching Analysis Examples
Alek Diffendaffer, M.S.

3:45 p.m. How Mound Slope Affects Pitching Mechanics
Rafael Escamilla, Ph.D., P.T., C.S.C.S., F.A.C.S.M.

4:05 p.m. Locker Room Dermatology
Kenneth Wasserman, M.D.

4:25 p.m. **Panel Discussion**
Moderator: E. David Osinski, M.A.
Monika Drogosz, M.P.H.
Gretchen D. Oliver, Ph.D., F.A.C.S.M., A.T.,C., C.E.S.
Rafael Escamilla, Ph.D., P.T., C.S.C.S., F.A.C.S.M.
Alek Diffendaffer, M.S.
Glenn S. Fleisig, Ph.D.
Kenneth Wasserman, M.D.

4:45 p.m. ADJOURN

CONCURRENT SESSION VII -C REHABILITATION

Objective: Discuss the importance of rehabilitation and conditioning for the athlete

- 2:00 p.m. Moderator /Faculty Introductions
Michael Reinold, D.P.T., S.C.S., C.S.C.S.
- 2:05 p.m. UCL Rehabilitation: My Way
Stan Conte, P.T., D.P.T., A.T.,C.
- 2:25 p.m. Plyometrics: The Science
Rafael Escamilla, Ph.D., P.T., C.S.C.S., F.A.C.S.M.
- 2:45 p.m. Plyometrics: The Technique
Kyle Yamashiro, P.T. , D.P.T., C.S.C.S.
- 3:05 p.m. Training for Power & Velocity
Lenny Macrina, M.S.P.T., S.C.S., C.S.C.S.
- 3:25 p.m. Return to Play Criteria following Knee Injuries
Lynn Snyder-Mackler, Sc.D., P.T., F.A.P.T.A.
- 3:45 p.m. Rehabilitation of Lower Back and Neck Injuries
- 4:05 p.m. Rehabilitation following Shoulder Arthroscopy
Russ Paine, P.T.
- 4:25 p.m. Case Presentation
Michael Reinold, D.P.T., S.C.S., C.S.C.S.
- 4:45 p.m. **Panel Discussion**
Moderator: Michael Reinold, D.P.T., S.C.S., C.S.C.S.
Stan Conte, P.T., D.P.T., A.T.,C.
Rafael Escamilla, Ph.D., P.T., C.S.C.S., F.A.C.S.M.
Kyle Yamashiro, P.T. , D.P.T., C.S.C.S.
Lenny Macrina, M.S.P.T., S.C.S., C.S.C.S.
Lynn Snyder-Mackler, Sc.D., P.T., F.A.P.T.A.
Andrew Hutchinson, P.T., D.P.T., S.C.S.
Russ Paine, P.T.
- 5:05 p.m. **ADJOURN**

SUNDAY
January 27, 2019

- 7:00 a.m. **PARTICIPATORY DEMONSTRATION**
Dynamic Warm-Ups for Baseball
Michael Ryan, A.T.,C., C.S.C.S.
(Wear comfortable clothes for moderate activity)
- 8:00 a.m. Introduction of Keynote Address
Glenn S. Fleisig, Ph.D.
- 8:05 a.m. **GOLDBERG MUELLER KEYNOTE ADDRESS ON INJURY**
PREVENTION (Sponsored by USA Baseball)
How Exercise, Flexibility, and Fatigue Relate to Pitching Mechanics in
Baseball and Softball
Gretchen D. Oliver, Ph.D.

SESSION VIII
Youth & High School Baseball

- Objective: Review current concepts in prevention and treatment to injuries in youth
baseball
- 8:25 a.m. Moderator/Faculty Introductions
Glenn S. Fleisig, Ph.D.
- 8:30 a.m. Why Are So Many of our Young Baseball Players Getting Hurt?
James R. Andrews, M.D.
- 8:50 a.m. Pitch Count Regulations vs Reality
Monika Drogosz, M.P.H.
- 9:10 a.m. Appearance and Performance Enhancement Substances: The Pressure to
Perform
Brian Parker
- 9:30 a.m. Medial Epicondyle Fractures in Baseball Pitchers
Michael Axe, M.D.
- 9:50 a.m. Training the Youth Baseball Player
Chris Arrigo, M.S., P.T., A.T.,C.
- 10:10 a.m. Don't Whiff on Injuries: How to Work WITH the Media
Stephanie Bell, P.T., O.C.S., C.S.C.S.

10:30 a.m. Skin Cancer Update
Kenneth Wasserman, M.D.

10:50 a.m. **Panel Discussion**
Moderator: Glenn S. Fleisig, Ph.D.
Monika Drogosz, M.P.H.
Brian Parker
Michael Axe, M.D.
Chris Arrigo, M.S., P.T., A.T.,C.
Kenneth Wasserman, M.D.
Stephania Bell, P.T., O.C.S., C.S.C.S.

11:10 a.m. BREAK

SESSION IX
Knee

Objective: Examine current advances in treatment of injuries of the knee

11:20 a.m. Moderator/Faculty Introductions
Benton Emblom, M.D.

11:25 a.m. Youth & Adolescent Knee Injuries in Baseball
Daryl Osbahr, M.D.

11:45 a.m. Extensor Mechanism Injuries: Biologic & Ultrasound Aided Treatment
Ricardo Colberg, M.D.

12:05 p.m. Copers vs. Non-Copers: ACL Injured Knee
Lynn Snyder-Mackler, Sc.D., P.T., F.A.P.T.A.

12:25 a.m. Post-Operative Management and Return to Play Criteria
Robert A. Williams, Jr., P.T., D.P.T.
Lenny Macrina, M.S.P.T., S.C.S., C.S.C.S.

12:45 a.m. **Panel Discussion**
Moderator: Benton Emblom, M.D.
Daryl Osbahr, M.D.
Ricardo Colberg, M.D.
Lynn Snyder-Mackler, Sc.D., P.T., F.A.P.T.A.
Robert A. Williams, Jr., P.T., D.P.T.
Lenny Macrina, M.S.P.T., S.C.S., C.S.C.S.

1:05 p.m. CLOSING
James R. Andrews, M.D.
Kevin E. Wilk, P.T., D.P.T., F.A.P.T.A.
Glenn S. Fleisig, Ph.D.

1:10 p.m. ADJOURN