

Sports Medicine

UPDATE

MARCH/APRIL 2011

**STOP Sports
Injuries Update**

**Annual Meeting 2011
Around the Corner**

**Baseball Study
Participants Wanted**

**SICKLE
CELL
TRAIT**



AOSSM

www.sportsmed.org



2 Team Physician's Corner

Sickle Cell Trait

- | | |
|---|--|
| 1 From the President | 10 Society News |
| 6 STOP Sports Injuries Campaign Update | 11 Travelling Fellowship Tours Around the World |
| 7 Research News | 11 Names in the News |
| 8 Annual Meeting Preview | 12 Upcoming Meetings and Courses |

SPORTS MEDICINE UPDATE is a bimonthly publication of the American Orthopaedic Society for Sports Medicine (AOSSM). The American Orthopaedic Society for Sports Medicine—a world leader in sports medicine education, research, communication, and fellowship—is a national organization of orthopaedic sports medicine specialists, including national and international sports medicine leaders. AOSSM works closely with many other sports medicine specialists and clinicians, including family physicians, emergency physicians, pediatricians, athletic trainers, and physical therapists, to improve the identification, prevention, treatment, and rehabilitation of sports injuries.

This newsletter is also available on the Society's Web site at www.sportsmed.org.

TO CONTACT THE SOCIETY: American Orthopaedic Society for Sports Medicine, 6300 North River Road, Suite 500, Rosemont, IL 60018, Phone: 847/292-4900, Fax: 847/292-4905.

CO-EDITORS

EDITOR **William N. Levine MD**

EDITOR **Daniel J. Solomon MD**

MANAGING EDITOR **Lisa Weisenberger**

PUBLICATIONS COMMITTEE

Daniel J. Solomon MD, Chair

Kenneth M. Fine MD

Robert A. Gallo MD

Richard Y. Hinton MD

David M. Hunter MD

Grant L. Jones MD

John D. Kelly IV MD

William N. Levine MD

Brett D. Owens MD

Kevin G. Shea MD

Brian R. Wolf MD, MS

BOARD OF DIRECTORS

PRESIDENT **Robert A. Stanton MD**

PRESIDENT-ELECT **Peter A. Indelicato MD**

VICE PRESIDENT **Christopher R. Harner MD**

SECRETARY **Jo A. Hannafin MD, PhD**

SECRETARY-ELECT **James P. Bradley MD**

TREASURER **Robert A. Arciero MD**

TREASURER-ELECT **Annunziato Amendola MD**

UNDER 45 MEMBER-AT-LARGE **David R. McAllister MD**

UNDER 45 MEMBER-AT-LARGE **Mininder S. Kocher MD**

OVER 45 MEMBER-AT-LARGE **Mark E. Steiner MD**

PAST PRESIDENT **James R. Andrews MD**

PAST PRESIDENT **Freddie H. Fu MD**

COUNCIL OF EDUCATION **Andrew J. Cosgarea MD**

COUNCIL OF RESEARCH **Constance R. Chu MD**

COUNCIL OF COMMUNICATIONS **Daniel J. Solomon MD**

EX OFFICIO COUNCIL OF DELEGATES **Patricia A. Kolowich MD**

JOURNAL EDITOR, MEMBER EX OFFICIO **Bruce Reider MD**

AOSSM STAFF

EXECUTIVE DIRECTOR **Irv Bomberger**

MANAGING DIRECTOR **Camille Petrick**

EXECUTIVE ASSISTANT **Sue Serpico**

ADMINISTRATIVE ASSISTANT **Mary Mucciante**

DIRECTOR OF CORPORATE RELATIONS **Debbie Cohen**

DIRECTOR OF FINANCE **Ken Hoffman**

DIRECTOR OF RESEARCH **Bart Mann**

DIRECTOR OF COMMUNICATIONS **Lisa Weisenberger**

COMMUNICATIONS ASSISTANT **Joe Siebelts**

STOP SPORTS INJURIES CAMPAIGN DIRECTOR **Michael Konstant**

DIRECTOR OF EDUCATION **Susan Brown Zahn**

SENIOR ADVISOR FOR CME PROGRAMS **Jan Selan**

EDUCATION & FELLOWSHIP COORDINATOR **Heather Heller**

EDUCATION & MEETINGS COORDINATOR **Pat Kovach**

MANAGER, MEMBER SERVICES & PROGRAMS **Debbie Turkowski**

EXHIBITS & ADMIN COORDINATOR **Michelle Schaffer**

AOSSM MEDICAL PUBLISHING GROUP

MPG EXECUTIVE EDITOR AND AJSM EDITOR **Bruce Reider MD**

AJSM SENIOR EDITORIAL/PROD MANAGER **Donna Tilton**

SPORTS HEALTH EDITORIAL/PROD MANAGER **Kristi Overgaard**



Robert A. Stanton, MD

AS A HISTORY MAJOR AT WILLIAMS, I have a special appreciation for how the past has shaped our present, and how our current activities will influence the lives of those that come after us. I was reminded of this fact last year when the Society leadership held a unique Past President's Retreat.

Twenty-one of the 24 living Society presidents gathered to review activities and provide a constructive critique to current and past activities while providing guidance for AOSSM's future. During the retreat, there were many fascinating stories about AOSSM's inception 40 years ago. Many of the stories were first hand, but a decidedly fewer number of the original founding members were still with us to tell those stories.

After this meeting, I and several of my predecessors felt it was important to preserve our history. I am happy to report that the Board supported my recommendation and the AOSSM History Committee was created. Among its goals will be to record these firsthand accounts about the development of orthopaedic sports medicine and our Society. Chaired by Art Boland, MD, a former Society president whose career has spanned several decades, the committee also includes a number of other remarkable individuals, including past presidents, Royer Collins, MD, (a fellow Williams alum) and Bob Leach, MD. Royer helped found the Society and Bob helped found the *American Journal of Sports Medicine (AJSM)*, our flagship journal, which has served as the intellectual cornerstone of our profession. Also on the committee is Bernie Bach, MD, a past president who has been a strong advocate for this project, and Carol Teitz, MD, a former treasurer who served on the Board during our recent era of growth. The committee is completed by Paul Sethi, MD, who is one of our younger members. He will be providing a unique perspective on what will be important to those assuming our profession's leadership roles in the future.

The committee met twice during the first quarter of 2011 to outline the work ahead, and to consider a format that captures and presents our history in a way that is not just restricted to print but that can be shared through the Internet and in

exhibits. This end-product will allow us to maintain an active, collective cognizance of our Society's unique role in orthopaedic sports medicine.

The value of looking back, however, is minimized if we also do not take the time to look forward. Consequently, my second priority in 2012 is to engage our leadership in strategic planning so that we can establish direction for our immediate future. We've enlisted the assistance of Tom Nelson, who in his youth was one of the Society's first executive directors before moving on to be the executive director of the American Academy of Orthopaedic Surgeons. In addition, Morna Conway, our external publishing consultant, will help us assess our publishing priorities. Both have worked with us before and facilitated our decision to develop a more robust research program, public education program and launch our second journal, *Sports Health: A Multidisciplinary Approach*. Tom has an amazing ability to motivate the Board to look to the future, as I have witnessed first-hand, having had the pleasure of sitting through these planning meetings twice in the past 12 years. I look forward to sharing with you our new priorities as we continue to grow and evolve as a Society.

Although AOSSM is a professional organization—not a historical society—I believe an informed sense of our professional evolution is a key ingredient for our continued success. If we understand our past successes, as well as appreciate our current strengths and limitations, then we will have the tools to continue thriving as a profession. I welcome your thoughts and suggestions.

A handwritten signature in black ink that reads "Robert A. Stanton".





SICKLE CELL TRAIT

MATTHEW L. SILVIS, MD

Department of Orthopedics and Rehabilitation
Department of Family and Community Medicine
Pennsylvania State University College of Medicine
Milton S. Hershey Medical Center
Hershey, Pennsylvania

ROBERT A. GALLO, MD

Department of Orthopedics and Rehabilitation
Pennsylvania State University College of Medicine
Milton S. Hershey Medical Center
Hershey, Pennsylvania

On April 13, 2010, the National Collegiate Athletic Association (NCAA) acted to implement universal sickle cell trait screening in all Division I athletes. Starting the academic year 2010–2011, more than 150,000 student athletes have been or will be tested for the first year they are eligible to compete.¹ While the wisdom of instituting such an extensive program has been questioned¹ the mandatory screening has brought to the forefront an alarming, and often neglected, cause of sudden death in athletes, exertional sickling, and resultant rhabdomyolysis. The purpose of this paper is to review sickle cell trait, its medical implications, and the controversies surrounding screening programs.

Background

Sickle cell trait is a condition in which an individual has inherited one gene for normal hemoglobin and one gene for sickle hemoglobin. Sickle hemoglobin has an increased propensity to form large polymers on the erythrocyte cell membrane when deoxygenated.² This sickling, or change in erythrocyte shape from coin-shaped to quarter-moon, causes sluggish flow through smaller vessels and may lead to end-organ damage, especially within the kidney.

Those with sickle cell trait differ from those with sickle cell disease because those with sickle cell trait have a much lower concentration of sickle hemoglobin. When the intensity of activity increases, local pH decreases and temperature increases. In both subgroups, these conditions lead to increased concentrations of deoxygenated hemoglobin and therefore increases in the amount of erythrocyte sickling.² The propensity to sickle is amplified at higher altitudes. While sickling does occur during deoxygenated states, those with sickle cell trait usually remain asymptomatic without any effects of exercise performance because these individuals possess a higher ratio of normal hemoglobin.³

Grave consequences can occur at extremes of physical exertion, even in those with sickle cell trait. Multiple case reports have described athletes and/or military personnel with sickle trait who sustained disastrous complications, such as fulminant rhabdomyolysis and exercise-associated sudden death, caused by erythrocyte sickling during periods of increased activity.^{2,4} Indeed, the exercise-related sudden death rate is 10 to 30 times higher in sickle cell trait carriers compared to non-carriers.² Heat exposure, dehydration, and intense physical activity are the common denominators that potentiate erythrocyte sickling and predispose these individuals to potential catastrophe.

One recent review cited exertional sickling as the leading killer in NCAA Division I football in the last decade.⁵ In the review of 16 conditioning-related

deaths, ten (63 percent) were presumed to be due to exertional sickling. Other causes included cardiac (four), asthma (one), and exertional heat stroke (one). Overall, the actual incidence of exercise-related sudden death due to exertional sickling is likely underestimated. Lack of recognition of sickle cell trait and few distinct pathological findings cause exertional sickling and its sequelae to be misdiagnosed as exertional heat stroke and hypertrophic cardiomyopathy during autopsies.⁶

The relative neglect of sickle cell trait by many medical professionals is surprising given the high prevalence of the disease, which affects more than 2 million

Myoglobin, a component of the intracellular space within normal skeletal muscle, is responsible for much of the renal damage incurred during rhabdomyolysis. Myoglobin contributes to acute renal failure in two major ways:

- Direct cytotoxicity on renal epithelial cells
- Cast formation creating intra-tubular obstruction.⁷

While potentially reversible, rhabdomyolysis and acute renal failure may require renal dialysis and has mortality rates estimated at 20 percent.⁸

In addition to acute renal failure, electrolyte imbalances, including

Those with sickle cell trait differ from those with sickle cell disease because those with sickle cell trait have a much lower concentration of sickle hemoglobin.

Americans.¹ Experts have estimated that one in 12 African-Americans and one in 2,000 Caucasians possess the sickle cell trait.¹ This condition is more prevalent in athletes whose ancestors come from malarial regions of the world such as Africa, South or Central America, Caribbean or Mediterranean countries, India, and Saudi Arabia.

Exertional Sickling and Rhabdomyolysis

Exertional sickling is dangerous for athletes because of the potential for progression to rhabdomyolysis, a disease characterized by skeletal muscle death and release of breakdown products. Rhabdomyolysis preferentially affects those with sickle cell trait because of the erythrocyte sickling that occurs within the vessels supplying skeletal muscle.³ When the circulation to skeletal muscle is limited, skeletal muscle death occurs and the intracellular contents of the skeletal muscle cells are released into the systemic circulation. This process initiates a potential fatal cascade of events, including myoglobinuria and electrolyte abnormalities.³

hyperkalemia and hypocalcemia, are grave threats during rhabdomyolysis. When skeletal muscle cells die, potassium, which is found predominantly in the intracellular space, is released into circulation and serum potassium can reach perilous heights. At serum potassium levels above 5.0 mEq/L, serious cardiac arrhythmias can occur and lead to cardiac arrest. The cardiotoxicity associated with hyperkalemia is further potentiated by the hypocalcemia and metabolic acidosis that accompanies rhabdomyolysis.

Recognition of the exertional sickling is important to prevent or limit progression to rhabdomyolysis. Features of exertional sickling collapse are often confused with heat cramping and heat stroke. However, several key distinctions exist. Because exertional sickling is an ischemic process and not solely a product of hyperthermia and lactic acidosis, athletes suffering from exertional sickling can have core body temperatures less than 105°F and often appear to be in less pain than those having heat-related problems.⁶ Additionally, heat-related illness typically progresses

Table 1. Exertional Sickling and Heat Cramping Differences (NATA Consensus Statement)

Exertional sickling	Heat cramping
Slump to the ground with weak muscles	Muscle twinges
Muscles appear normal	Pain
Quick recovery	“Hobble to a halt”
	Visible contracted and spastic muscles
	Slower recovery

over a period of time with painful heat cramping often preceding heat stroke. Exertional sickling can occur quickly and without warning signs. If symptoms exist, pain and weakness in the working muscles, such as the thigh, buttocks, and back, are most common among exertional sicklers. Other differences between athletes suffering from exertional sickling and heat cramping have been described by the National Athletic Trainers' Association and outlined in Table 1.

Prompt recognition and treatment of rhabdomyolysis, especially among those with sickle cell trait, is critical to limit potentially fatal consequences. If exertional sickling and/or rhabdomyolysis are suspected, initial efforts should include removal from play and fluid resuscitation. Rehydration to expand the intravascular volume increases renal blood flow and helps limit further erythrocyte sickling and buildup of myoglobin casts. If symptoms persist, the athlete should be transported for further treatment and closer monitoring.

While rhabdomyolysis and its sequelae account for the majority of sudden-death fatalities among those with sickle cell trait, evidence suggests that asymptomatic repetitive exertional sickling may have long-term effects on renal function. Repetitive renal papillary necrosis caused by intermittent ischemia eventually leads to isothermia, the inability to maximally concentrate urine.¹⁰ The chronic renal damage and resultant isothermia may contribute to the eight-fold higher death rate of 28–29 year olds versus that of 17–18 year olds with sickle cell trait.²



Screening

With the treatment of exertional sickling and rhabdomyolysis largely supportive, most efforts have been focused upon the identification of those with sickle cell trait to prevent or limit episodes of exertional sickling. While no clear evidence exists that screening for sickle cell trait prevents death, athletic programs have begun to develop programs to identify those carrying the sickle cell trait. Many professional organizations have already electively chosen to screen athletes with blood tests to confirm sickle cell status. Screening practices among most high schools are less sophisticated and consist solely of the following question on the Pre-Participation Physical Evaluation monograph: “Do you or someone in your family have sickle trait or disease?”

The NCAA's decision to institute a universal screening program represents the largest effort to detect athletes possessing the sickle cell trait. The decision to proceed with the testing resulted largely from the settlement of Dale Lloyd II against the NCAA and Rice University.¹ Lloyd, a 19-year-old freshman with sickle cell trait, died from exertional rhabdomyolysis after football practice in 2006. According to the new regulations, all Division I student-athletes must be tested for sickle cell trait, show proof of a prior test, or sign a waiver so that athletes with sickle cell trait can be identified and precautions instituted. It is expected that as a result of this testing program between 400 and 500 new cases of sickle cell trait will be identified each year.¹

The use of routine screening for sickle cell trait has been questioned by researchers who argue that the program may result in more harm than benefit. A recent commentary in the *New England Journal of Medicine* suggested that the new NCAA program has many of the potential pitfalls that plagued sickle cell trait screening efforts in the past.¹ The authors cited the since-abandoned screening efforts for sickle cell trait during reproductive counseling. This voluntary screening effort was halted due to lack of counseling and confusion in conveying proper information to patients differentiating sickle cell trait versus sickle cell disease.¹ Furthermore, due in part to potential discrimination against sickle cell trait carriers, the Sickle Cell Disease Advisory Committee of the National Heart, Lung, and Blood Institute (a section of the National Institute of Health) has urged the military to halt routine testing of their recruits.² Pundits of mass screening for sickle cell trait claim that the costs, both financial and discriminatory, and benefits of these screening programs have not been clearly elucidated.

The goal of sickle cell screening is not to disqualify or prevent these athletes from participating in intercollegiate athletics.

Table 2. NATA Guidelines in the Management of Athletes with Sickle Cell Trait (NATA Consensus Statement)

1. All athletes with sickle cell trait who develop symptoms (e.g., cramping, pain, weakness, fatigue, shortness of breath) should stop exercise immediately and report to their athletic trainer and coach. Symptoms of suspected sickling can occur after just 2 to 3 minutes of sprinting or similar sustained exertion.
2. Preventive measures include decreasing exercise intensity, encouraging a slow build-up of conditioning activities, allowing for frequent rest and recovery periods, and increasing opportunities for hydration. Athletes with sickle cell trait often function best if they are allowed to set their own pace.
3. All athletes with sickle cell trait should avoid timed serial sprints and sustained exertion for greater than 2 to 3 minutes without a break.
4. Because environmental heat, stress, dehydration, asthma, and illness predispose athletes with sickle cell trait to exertional sickling, activities should be adjusted.
5. Athletes with sickle cell trait who plan to exercise and/or compete at an elevated altitude (5,000 feet or greater) should be closely monitored when new to the altitude. In these situations, training efforts should be reduced and oxygen should be readily available to prevent exertional sickling.

Rather, the knowledge gained from screening efforts may enable health care providers to establish simple precautions to prevent complications of exertional sickling and enable athletes with sickle cell trait to excel in their sport. To this end, the National Athletic Trainers' Association has offered a series of guidelines in the management of athletes with the sickle cell trait. These guidelines are outlined in Table 2.

In conclusion, sickle cell trait has become increasingly recognized as a cause

of sudden death among athletes. Prompt recognition of exertional sickling, which occurs during periods of increased physical exertion, is critical to avoiding complications from rhabdomyolysis. In an effort to identify athletes at risk of developing exertional sickling, the NCAA has initiated mandatory sickle cell screening among its first-year athletes. It is hoped that in the athletic cohort preventive measures and early detection will eradicate sudden death among those with sickle cell trait.

References

1. Bonham VL, Dover GJ, Brody LC. Screening student athletes for sickle cell trait—a social and clinical experiment. *N Engl J Med*. 2010. 363:997-999.
2. Mitchell BL. Sickle cell trait and sudden death—bringing it home. *J National Med Assoc*. 2007. 99:300-305.
3. Dincer HE, Raza T. Compartment syndrome and fatal rhabdomyolysis in sickle cell trait. *Wisc Med J*. 2005. 104:67-71.
4. Harrelson GL, Fincher AL, Robinson JB. Acute exertional rhabdomyolysis and its relationship to sickle cell trait. *J Athl Training*. 1995. 30:309-312.
5. Eichner RE. Sickle cell trait in sports. *Curr Sports Med Rep*. 2010. 9:347-351.
6. Scheinin L, Wetli CV. Sudden death and sickle cell trait. *Am J Forensic Pathol*. 2009. 30:204-208.
7. Chatzizisis YS, Misirli G, Hatzitolios AI, Giannoglou GD. The syndrome of rhabdomyolysis: complications and treatment. *Europ J Int Med*. 2008. 19:568-574.
8. Huerta-Alardin AL, Varon J, Marik PE. Bench-to bedside review: rhabdomyolysis—an overview for clinicians. *Crit Care*. 2005. 9:158-169.
9. NATA Consensus Statement: Sickle cell trait and the athlete, June 2007. Found at: <http://www.nata.org/sites/default/files/SickleCellTraitAndTheAthlete.pdf>
10. Statius van Eps IW, Earley LE. The kidney in sickle cell disease. In: Earley LE, Gottschalk CW, eds. *Strauss and Welt's Diseases of the Kidney*. Vol 2. 3rd ed. Boston, MA. Little, Brown, and Co. 1979. 1229-1240.

STOP Sports Injuries Continues to Educate and Grow Support

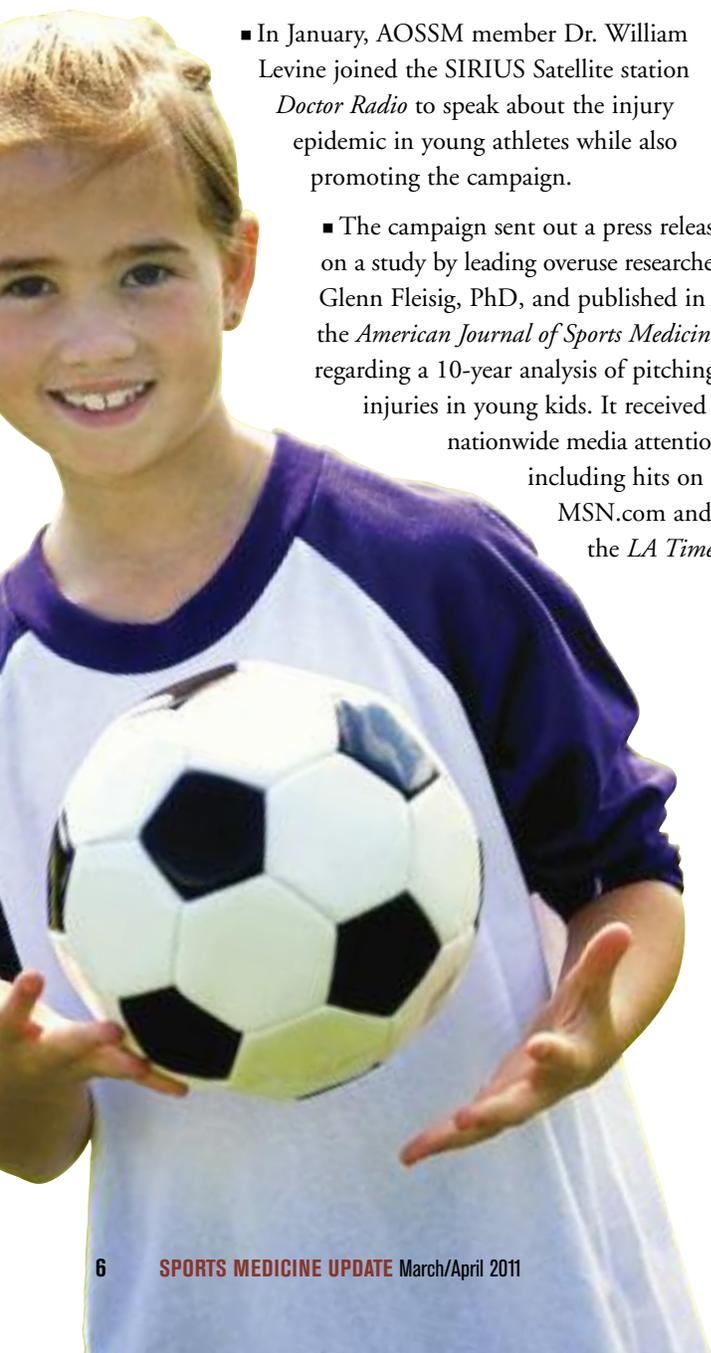
Campaign in the Media

The STOP Sports Injuries campaign has continued to keep the issue of youth sports safety in the spotlight in the past several months. Some highlights include:

- A special report in *Sports Illustrated for Kids* focused on the growing number of young athletes overdoing it in sports. The article discussed how the STOP Sports Injuries campaign aims to prevent this with additional commentary from AOSSM members and STOP Sports Injuries supporters, Drs. James Andrews, John Hurley, Matthew Matava, and Kevin Shea.

- In January, AOSSM member Dr. William Levine joined the SIRIUS Satellite station *Doctor Radio* to speak about the injury epidemic in young athletes while also promoting the campaign.

- The campaign sent out a press release on a study by leading overuse researcher, Glenn Fleisig, PhD, and published in the *American Journal of Sports Medicine* regarding a 10-year analysis of pitching injuries in young kids. It received nationwide media attention, including hits on MSN.com and the *LA Times*.



Spreading the Word

Local Events

CJW Sports Medicine of Virginia held the “Stop It Before It Starts” youth sports safety clinic in January. The event featured presentations on a variety of topics, including concussion regulations, hydration, and overtraining, as well as a discussion on reducing ACL injury rates in young athletes. The group made use of the STOP Sports Injuries campaign as a model for helping young athletes understand and avoid more serious consequences of sports injuries. More than 100 people attended the event.

Prepare Now for April’s Youth Sports Safety Month

Be sure to check your inbox and the Web site for the STOP Sports Injuries Event Toolkit which includes a sample agenda, press releases, and other pertinent tips on organizing a youth sports safety event.



BONUS: Register your event online with the campaign and receive a free STOP Sports Injuries campaign starter kit (\$110 value). The kit includes 50 copies of each of the 30 tip sheets, folders, stickers, tattoos, and lapel pins. Be sure to e-mail pictures and details of your event to Joe Siebelts at joe@aossm.org.

The STOP Sports Injuries campaign continues to consistently grow and add supporters and resources. If you have not become a collaborating supporter yet and would like more information on how to become involved, e-mail Mike Konstant, campaign director, michael@stopssportsinjuries.org or visit our Web site at www.STOPSportsInjuries.org and click on the “Join Our Team” button. In the past month we have added these collaborators to our team:

Medical Institutions

Center for Sports Medicine at Children’s Mercy Hospital
Cleveland Clinic
Columbia Memorial Bone and Joint Centers
Kaiser Permanente

Professional Health Organizations

American Osteopathic Academy of Sports Medicine
Professional Baseball Athletic Trainers Society

Sports Medicine Practices

Advanced Therapy Solutions
Azzatori Chiropractic
Breland Physical Therapy and Sports Rehab Clinic
Georgia Sports Medicine
Harborview Sports Medicine and Physical Therapy
Preferred Therapy Providers, Inc.
Shoulder Center of Kentucky—Lexington Clinic
Virtual Center for Sports Medicine

Individual Donation

Michael Immel, MD

2011 Pre-Conference Research Workshop at 2011 Annual Meeting

The AOSSM Research Committee will be holding a workshop on “Clinical Outcomes Research” the afternoon prior to the 2011 AOSSM Annual Meeting in San Diego. The workshop will be highlighted by a keynote address, “Clinical Outcomes Research: Its Importance and Barriers for Clinicians and Physician-Scientists,” to be presented by Mohit Bhandari, MD, MSc.

Dr. Bhandari holds the Canada Research Chair in Musculoskeletal Trauma and Surgical Outcomes at McMaster University, is an Associate Member of the Department of Clinical Epidemiology and Biostatistics, and recently served as the Section Editor of *Evidence-Based Orthopaedic Surgery for the Journal of Orthopaedic Trauma*.

Dr. Bhandari has received the Edouard J. Samson Award for a Canadian orthopaedic surgeon with the greatest impact on research in the last five years, the Founder’s Medal for Research, and the Randomized Trial Mentoring Award from the Canadian Institutes of Health Research. He is widely acknowledged as the one of the foremost authorities in the translation of orthopaedic research to clinical practice.

Other presentations during the workshop will include using evidence-based medicine to guide clinical practice, the role of randomized clinical trials and prospective longitudinal cohort studies, clinical study design, interpreting the orthopaedic literature, and how to conduct clinical research in your practice.

The workshop is open to all free of charge and will run from noon to 5:30 p.m. on Wednesday, July 6, 2011, in the Manchester Grand Hyatt in San Diego. Please see the AOSSM Annual Meeting Preliminary Program for more information and for registration information.



AOSSM Youth Baseball Project

With the baseball season right around the corner, AOSSM will once again be collecting data on the pitching practices and upper extremity injuries among young pitchers. Last year, AOSSM members recruited almost 700 subjects from 21 states into the project. The goal is to have representation among as many states as possible so as to explore regional differences in pitching and injury patterns. States from which we particularly would like more subjects include Arizona, California, Texas, New York, Illinois, Ohio, Pennsylvania, Massachusetts, Washington, and North Carolina. To find out more information about the project and how to get involved, go to www.sportsmed.org, then click the “Research” tab and click on “Youth Baseball Studies.”

AOSSM and Smith & Nephew Innovative Outcomes Assessment Grant

AOSSM is pleased to announce a new grant sponsored by Smith & Nephew to support development of innovative approaches to measuring the effects of surgical procedures in orthopaedic sports medicine. This \$25,000 grant is meant to advance the evaluation of clinical outcomes related to surgery by encouraging development of novel approaches, techniques, and methodology that will facilitate and enhance clinical research. Examples might include new Web-based instruments to allow inter-institutional collaborative efforts, tools to quantify joint laxity, or innovative methods to measure the results of arthroscopic procedures about the hip.

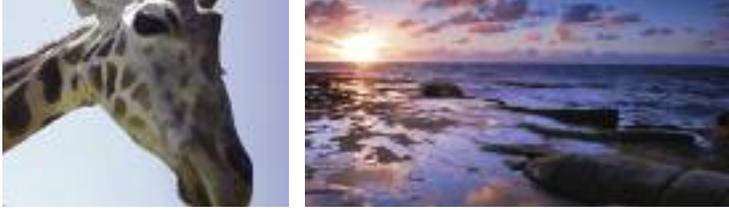
The intent of the award is to provide start-up funding for the development of tools and technology that can be leveraged and used for future, larger-scale clinical research studies.

Applications are limited to three pages and will be judged on three criteria: 1) innovation, 2) feasibility, and 3) clinical significance. The proposal should define the limitations with currently available assessments, clearly describe the proposed innovative approach, state how the new assessment will be tested, and discuss the clinical significance of this novel method to the field if successful. Because this grant is

intended to foster new ideas and creativity, prior data related to the innovation is not required but can be presented to establish feasibility.

The deadline for applications is April 18, 2011. Submissions along with biosketches in NIH format should be sent as e-mail attachments to Bart Mann, bart@aossm.org, AOSSM Director of Research. The principal investigator or a co-investigator must be an AOSSM member in good standing. The grant winner will be announced at the 2011 AOSSM Annual Meeting in San Diego.





Annual Meeting 2011 Brings Education and Fun Together

In the second of a series of articles on this year's Annual Meeting, we provide a focused look at what to expect from the educational activities and some insights on our social activities. Be sure to be on the lookout in your mailbox and inbox in March for the 2011 Annual Meeting Preliminary Program.

This year's AOSSM Annual Meeting travels to the Pacific Coast and the beautiful, sun filled city of San Diego. San Diego has a multitude of activities for the whole family along with some great educational offerings to take advantage of at the Annual Meeting.

The meeting begins on Wednesday, July 6, with a half-day, free pre-conference workshop on clinical outcomes research. AOSSM Research Committee Chair, Constance Chu, MD, and her team have worked diligently to create an informative workshop on clinical research, study design, outcome measures, and implementation. Dr. Mohit Bhandari, of McMaster University, will give the keynote presentation, "Clinical Outcomes Research: Its Importance and Barriers for Clinicians and Physician-Scientists." Be sure to sign up early for this exciting opportunity to learn from some of the top sports medicine researchers.

On Thursday, July 7, the meeting begins in full swing with an incredible line-up of research and poster presentations. Program Chair, Marlene DeMaio, MD, and her committee have masterfully selected papers from more than 350 abstract submissions, including such hot topics as the disabled athlete, side-line management of the concussed athlete, and many more.

Also taking place on Thursday afternoon are the live surgical demonstrations on the



Experience San Diego and all there is learn, see, and do at the 2011 AOSSM Annual Meeting.

upper extremity. This new educational opportunity will allow attendees to learn techniques from some of the top surgeons in the country.

In addition, 24 instructional courses have been developed by Instructional Course Chair, Charles Bush Joseph, MD. Attendees can choose from a variety of options, including knee cartilage defects; platelet rich plasma uses; "Young Adult Hip—From Hip Dysplasia to FAI: A Case Based Approach to Open and Arthroscopic Management;" "Performance Issues in the Masters Athlete II: Return to Sport;" and "Game Day Decisions: How to Keep Them in the Game and Off the Sideline." Each instructional course has limited availability so be sure to register early to get the courses you want.

One of the highlights of the meeting is always the Presidential Guest Speaker, who

this year will be well-known sports writer and NPR radio host, Frank Deford. In his speech, *Sports: The Hype and the Hypocrisy*, he will talk about modern sports issues and controversies. Mr. Deford is also the author of fourteen books, the senior correspondent on *Real Sports with Bryant Gumbel* on HBO, and a senior contributing writer at *Sports Illustrated*.

An exciting Saturday afternoon activity is always the Young Sports Medicine Specialist Workshop which offers practical and pragmatic examples of how to succeed in sports medicine and set up your own practice. Come listen and interact with some of the top sports medicine faculty, including Dr. DeMaio and many of her esteemed colleagues. The informal small groups give everyone involved an opportunity to benefit from shared universal experiences and proven solutions.



The social activities at any AOSM Annual Meeting are always a good way to entertain and interact with family and colleagues and this year's activities are no different. A few highlights include:

Thursday, July 7

Welcome Reception

Supported by BREG, Inc.

Join us for an informal outdoor gathering poolside at the Manchester Grand Hyatt. This reception is an AOSM tradition that offers an enjoyable evening for renewing acquaintances and socializing. A full complement of beverages and appetizers is provided in addition to child friendly activities. Everyone and their families are welcome to attend.

Friday, July 8

Family Olympics

No Charge

Thanks to the generous support of Breg Inc., we are excited to be bringing back the tradition of the Family Olympics. The Manchester Grand Hyatt's Backyard Activity Area will house the Olympics with various sports and games for attendees and their families. This will include, volleyball, horseshoes, and a basketball shoot out amongst other activities.

Walking Tour of Coronado Island

What better way to discover the magic of Coronado Island than on a leisurely guided walking tour? Coronado is one of San Diego's unspoiled gems and rich in history. On this unique outing, guests will enjoy a strolling 1.5 hour tour led



Annual Meeting preliminary programs will be arriving in your inbox and mailbox in late March. Be on the lookout and register early.

Attendee lodging for the 2011 AOSM Annual Meeting is now available. The Manchester Grand Hyatt is the host hotel and location for exhibits, scientific sessions, and instructional courses. Book your housing at www.sportsmed.org or call 888-421-1442 or 619-232-1234 and identify yourself as an AOSM 2011 Annual Meeting attendee. Rates are \$229 per night. Rooms with a view are limited but available at an additional premium. Rates are guaranteed until June 4, 2011, but are subject to availability. You are encouraged to book early.

by a knowledgeable local guide. The tour is recommended for ages 13 and up and includes round trip transportation from the Manchester Grand Hyatt and lunch. Coronado Island is approximately 10 minutes from the hotel.

Golf Tournament

Supported by DJO Inc.

The Coronado Municipal Golf Course has been selected for the 22nd Annual Golf Tournament on Friday with a shotgun start at 1:00 p.m. Opened in 1957, the course continues to reign as one of the finest public golf courses in Southern California with dramatic views of the Coronado Bay Bridge and San Diego skyline. The course is approximately 15 minutes from the Manchester Grand Hyatt.

The tournament is open to men and women, members and nonmembers. Pre-registration is required.

Saturday, July 9

San Diego Zoo Behind the Scenes Tour

Come to a timeless place where the surroundings are as exotic as the animals, and the adventure changes with every step you take. This legendary zoo never disappoints, with winding trails shrouded in heavy mists and rushing waterfalls ringed in tropical ferns. On this tour, visitors see the zoo the way everyone wishes they could . . . from behind the scenes. The "Inside Story" gives guests an

exclusive two-hour tour that's filled with experiences and information you couldn't get anywhere else. The tour may include:

- The giraffe barn, where you'll visit the giraffes' bedrooms. Watch from up close as your tour guide feeds them grass.
- The forage warehouse, where you'll see the myriad of foods it takes to feed all the zoo's inhabitants. Even more interesting are the diets posted on the wall listing the menus, everything from bear breakfast to snake suppers.
- The elephant barn, where you'll venture into the cavernous elephant bedrooms and see the keepers' tools of the trade.

Afterward, explore the zoo's sprawling 100 acres by foot or aboard the aerial tram for spectacular panoramas of the grounds and San Diego's beautiful bayside skyline.

A Night at the New Children's Museum San Diego

6:00-10:00 p.m., Free

Situated in the heart of downtown San Diego and less than a 10 minute walk from the Manchester Grand Hyatt is the newly renovated Children's Museum San Diego. The museum spans three stories and offers an assortment of dynamic arts based education and exhibits. There are numerous interactive exhibits for people of all ages, including doodle stations, bubble machines, a teen studio, climbing wall, and much more. Regain your youthful spirit and join us for this unique and interactive event for all ages.

Review Annual Meeting and Specialty Day Presentations

Did you know you can access presentations from the AOSSM Annual Meeting, Specialty Day, and sport specific meetings by purchasing a yearly meeting subscription with your dues renewal or you can pay for each meeting individually? For information visit www.sportsmed.org and click on "Education and Meetings."

Revised CME Mission Statement from AOSSM

The AOSSM Board of Directors recently approved a revised CME mission statement to guide our CME program. The Society has a broad-ranging and highly effective education program based on our Educational Curriculum. Our activities support both CME and MOC requirements.

Need MOC? Register for Self Assessment and Board Review—2011



The print version of the AOSSM Self Assessment and Board Review fulfills the ABOS requirement for a "scored and recorded self assessment examination" for Maintenance of Certification (MOC). Complete the print version and submit your answers to be eligible for both MOC™ and CME credit. Visit www.sportsmed.org and click on "Education and Meetings" then "Self Assessment" to register.

Sports Health Call for Papers for T. David Sisk Awards for Research Excellence

The AOSSM is announcing the T. David Sisk Awards for Research Excellence in clinical, laboratory, and international research. Winners will be selected from the best papers in each category submitted to *Sports Health: A Multidisciplinary Approach*. These annual awards will include a \$2,500 cash prize and a plaque. All manuscripts submitted through May 1, 2011, will be considered. Winners will be announced at the AOSSM Annual Meeting in San Diego, California, July 7–10, 2011. Visit <http://submit.sportshealthjournal.org> to submit your manuscript. Contact Kristi Overgaard, *Sports Health* Editorial Manager, at kristi@aossm.org, with any questions.



Subspecialty Certification Grandfather Option Ends March 31, 2011

If you did not attend an ACGME or Canadian Orthopaedic Association accredited orthopaedic sports medicine fellowship, you must register with the American Board of Orthopaedic Surgery (ABOS) by March 31, 2011, to take the subspecialty certification exam. After that deadline, individuals who did not attend an accredited program will no longer be eligible to sit for the exam. This deadline is especially important because after 2011, a combined subspecialty certification written recertification exam will only be offered to individuals who hold a general certificate and a subspecialty certificate.

The 2011 exam will be offered on November 3, 2011. In order to sit for the exam, applicants must complete the application, submit their case list, provide the supplemental required documents, and pay the \$450 fee by March 15, 2011. Late applications to sit for the exam will be accepted until March 31, 2011, for an additional \$350 late fee.

The application process is detailed and requires preparation, so anyone interested in sitting for the exam is encouraged to get an early start in learning the requirements and collating the materials. Specific details are available under the Diplomates section of the ABOS site, www.abos.org.

Got News We Could Use?

Sports Medicine Update Wants to Hear from You!

Have you received a prestigious award recently? A new academic appointment? Been named a team physician? AOSSM wants to hear from you! *Sports Medicine Update* welcomes all members' news items. Send information to Lisa Weisenberger, AOSSM Director of Communications, at lisa@aossm.org, fax to 847/292-4905, or contact the Society office at 847/292-4900. High resolution (300 dpi) photos are always welcomed.

Newest Members Added to the Travelling Fellowship Family

Latin American Tour



Dr. Curl Dr. Gamradt Dr. Svoboda Dr. Wahl

This year AOSSM will be involved in three Traveling Fellowship tours. The first tour will be between AOSSM and SLARD with North America visiting Latin America. This tour will be led by Godfather, Walt Curl, MD. Dr. Curl's companions will be Seth Gamradt, MD, from the University of California at Los Angeles, Steven Svoboda, MD, from West Point, and Christopher Wahl, MD, from the University of Washington.

The Latin America tour will be held April 24–May 19. Members will be hosted by many former traveling fellows and make stops in Mexico, Colombia, Chile, Argentina, and Brazil. Their final stop on the tour will be at the ISAKOS Congress in Rio de Janeiro, Brazil.

European Tour



Dr. Karlsson Dr. Jelic Dr. Lorbach Dr. Lustig

The second tour will be between ESSKA and AOSSM with Europe visiting North America. Our visitors will include Godfather, Prof. Jon Karlsson, MD, from Sweden, Mislav

Jelic, MD, from Croatia, Olaf Lorbach, MD, from Germany, and Sebastien Lustig, MD, from France.

The fellows on the North American tour will be hosted by Fowler Kennedy Sports Medicine Center, the University of Rochester, the U.S. Naval Academy, Johns Hopkins Hospital, the University of Virginia, the University of Iowa, the University of Wisconsin-Madison, Mayo Clinic, and the Steadman-Philippon Research Institute. The final stop on this tour will be the AOSSM Annual Meeting in San Diego, July 7–10.

Asian-Pacific Tour



Dr. Baker Dr. Slabaugh Dr. Tokish Dr. Whelan

Finally, the Asian-Pacific Tour will be between AOSSM and APOSSM with North American fellows visiting the Asia Pacific. The tour will be lead by Godfather, Champ Baker, Jr., MD. Joining Dr. Baker is Mark Slabaugh, MD, from Brooke Army Medical Center, John Tokish, MD, from Tripler Army Medical Center, and Daniel Whelan, MD, from St. Michael's Hospital in Toronto.

The fellows will visit Manila, Jakarta, Sydney, Melbourne, and Auckland, and finish in Queenstown, New Zealand, at the combined meeting of the Australian Knee Society and New Zealand Knee & Sports Medicine Society held October 5–7.

The AOSSM, Traveling Fellowship Committee, and all past participants of the Traveling Fellowship Program thank DJO for their continued generous support.



NAMES IN THE NEWS

Freddie Fu Receives Prestigious AAOS Award



Congratulations to AOSSM Past President, Dr. Freddie Fu who received the American Academy of Orthopaedic Surgeons (AAOS) Diversity Award during its annual meeting in San Diego, February 17, 2011. A video salute to Dr. Fu was shown at the beginning of the award ceremony. The Diversity Award recognizes members of AAOS who have distinguished themselves through their outstanding commitment to making orthopaedics more representative of and accessible to diverse patient populations. The award is in recognition of Dr. Fu's efforts over the past 30 years to provide top opportunities in orthopaedic surgery to talented individuals without regard for sex, race, ethnicity, nationality, or socioeconomic background. Dr. Fu's nomination was supported by 65 heartfelt letters written by residents, fellows, faculty, and national and international luminaries.

Upcoming Meetings and Courses



3rd Combined Meeting of the Japanese and American Orthopaedic Societies for Sports Medicine

Maui, Hawaii

March 26–29, 2011

Advanced registration closes January 7, 2011.

AOSSM 2011 Annual Meeting

San Diego, California

July 7–10, 2011

AOSSM/AOS Review Course for Subspecialty Certification in Orthopaedic Sports Medicine

Chicago, Illinois

August 5–7, 2011

Check Out the New Format and Bonus Features for Board Review Course

If you are going to be sitting for your boards, the 2011 AOSSM/AOS Review for Subspecialty Certification in Sports Medicine is the ideal course. Held in Chicago, August 5–7, the three-day course with renowned faculty provides a comprehensive resource for the ABOS subspecialty certification in orthopaedic sports medicine or recertification. Presenters review in-depth the key sports medicine topics. **New this year, all attendees will receive post-meeting online access to all PowerPoint presentations, videos, and faculty commentary, along with online access to AOSSM's Self-Assessment 2011 (\$165 value).**

For more information and to register visit www.sportsmed.org and click on the “Education and Meetings” tab.

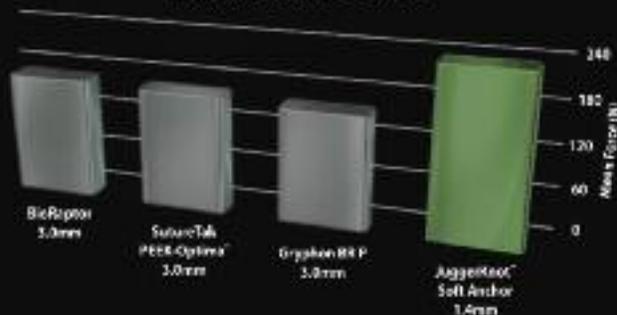
It's small. It's strong.^{1,2} And it's all suture.

Size is **not** indicative of strength! Ants can carry more than 50 times their body weight. The 1.4mm JuggerKnot™ Soft Anchor has been shown to be stronger than comparable 3mm anchors.^{1,2} The JuggerKnot™ Soft Anchor represents the next generation of suture anchor technology. This 1.4mm anchor is completely suture-based and the first of its kind.

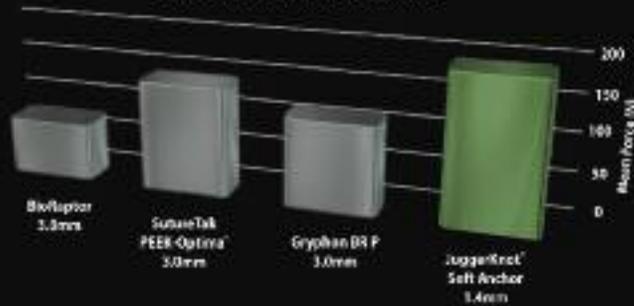


JuggerKnot™
SOFT ANCHOR

Cortical Loads to Failure^{1,2}



Cancellous Loads to Failure^{1,2}



Biologics • Bracing • Microfixation • Orthopedics • Osteobiologics • Spine • **Sports Medicine** • Trauma • 3i

1. Barber FA, Herber MA, Beavis RC, and Oro TB. "Suture Anchor Materials, Eyelets, and Designs Update 2008" *Arthroscopy* Vol. 24, No. 8 pp. 899-907, 2008

2. Barber FA, Herbert WA, Hapa O, Rapley JH, Barber CA, Bynum JA, Hrnack SA. "Suture Anchor Update 2010" *Arthroscopy* 2010; In Press.

For indications, risks and warnings, visit:

biometsportsmedicine.com • 800.348.9500 x 1501

All trademarks herein are the property of Biomet, Inc. or its subsidiaries unless otherwise indicated. SutureTak™ is a trademark of Arthrex, Inc. BioRaptor™ is a trademark of Smith & Nephew. Gryphon™ is a trademark of DePuy.

BIOMET
SPORTS MEDICINE
One Surgeon. One Patient.™

Sports Medicine Update

AOSSM
6300 North River Road
Suite 500
Rosemont, IL 60018



PRESORT STANDARD
U.S. POSTAGE
PAID
GURNEE, IL
PERMIT NO. 152



Your Front Row Seat to the Latest Information



2010 Athletic Health Handbook Updates Available

The 2010 Team Physician Corner articles from *SMU* are now available to insert into your *Athletic Health Handbook*. Log in to your My AOSSM page at www.sportsmed.org and click on the resources tab to download. If you haven't ordered your copy of the handbook, we still have copies available for just \$10. Order this valuable resource today!



Personalize *In Motion*

AOSSM offers members the ability to add their practice name and logo to the electronic version of *In Motion* for just \$300 for all four issues, which includes the high-resolution and low-resolution PDFs to print the newsletter yourself, e-mail to patients, or post on your Web site. Get this exciting newsletter into your patients' hands today. E-mail Lisa Weisenberger at lisa@aossm.org for information.



Need a Gift for Your Athletic Trainer? Give Them *Sports Health*

AOSSM members can give subscriptions to *Sports Health: A Multidisciplinary Approach* to athletic trainers in their institutions and communities for the special rate of \$45. The amount of subscriptions you may sponsor is unlimited. Visit www.sportsmed.org/shj to enter a gift subscription. Contact Kristi Overgaard at kristi@aossm.org for information.

AOSSM thanks Biomet for their generous support of *Sports Medicine Update*.

BIOMET
SPORTS MEDICINE