

SPORTS medicine

WINTER 2018, ISSUE 4

UPDATE

ICE HOCKEY INJURIES

Team Physician Xs & Os

Cold Injuries

Research Grant Winners

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Washington Update

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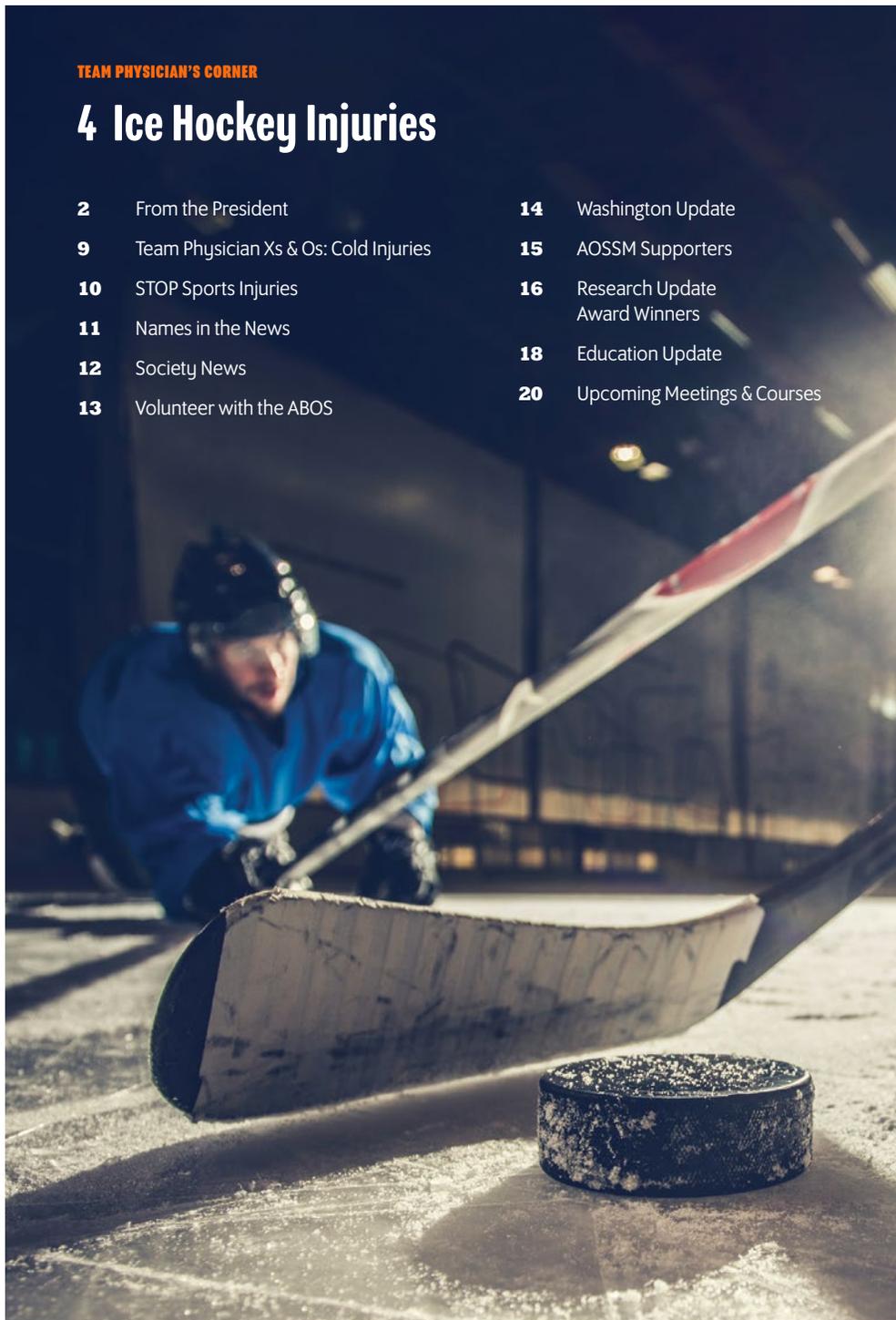
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TEAM PHYSICIAN'S CORNER

4 Ice Hockey Injuries

2	From the President	14	Washington Update
9	Team Physician Xs & Os: Cold Injuries	15	AOSSM Supporters
10	STOP Sports Injuries	16	Research Update Award Winners
11	Names in the News	18	Education Update
12	Society News	20	Upcoming Meetings & Courses
13	Volunteer with the ABOS		



Sports Medicine Update is a quarterly publication of the American Orthopaedic Society for Sports Medicine (AOSSM). AOSSM is a global leader in sports medicine education, research, communication, and fellowship, and is comprised 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 website at sportsmed.org.

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FROM THE PRESIDENT

A Commitment to Excellence



The AOSSM has established a highly regarded international profile for the specialty of sports medicine. Excellence in orthopaedic sports medicine is rooted in achieving the best possible results

by employing best practices, embracing innovation and respecting fundamental values. We accomplish this by fostering mission-critical education, research and practical resources that empower our members to provide the best possible care for our patients and advance the art and science of our specialty. To lead the way in this endeavor, we must be informed, connected and proactive.

As the AOSSM president, I am privileged to lead teams of respected experts who apply knowledge, skills and vision to advance an ever-evolving slate of important priorities. Our collective momentum is exemplified by recent accomplishments that will help prepare and assist us all in embracing an even more successful future.

A Unified Force

AOSSM ensures that the voice of its members is heard on Capitol Hill and elsewhere. Our advocacy efforts recently gained very visible and valuable traction when the Sports Medicine Licensure Clarity Act (H.R.302) was signed into law on October 5, 2018. This critical legislation provides legal protection for traveling team physicians and safeguards injured athletes' timely access to health care professionals who know and understand their medical histories. We celebrate and share this success with our collaborators at the American Academy of Orthopaedic Surgeons (AAOS), American Medical Society for Sports Medicine (AMSSM) and National Athletic Trainers' Association (NATA).

As a result of collaboration with the ACGME, I am pleased to report that we are experiencing progress in our efforts to refine the Common Program Requirements (CPR) as they apply and relate to one-year surgical sub-specialty fellowships. This is critical in order to achieve a valued accreditation system that is practical and applicable to ALL of our sports medicine fellowships. This fall we convened a very productive meeting

between leaders of the ACGME, including President and CEO Thomas J. Nasca, MD, MACP, and key representatives of the AOSSM. We are encouraged by the atmosphere of collaboration and understanding that has developed between the leadership of the ACGME and the AOSSM along with the support of the ABOS. I am confident that we are on a constructive path leading to a system that will serve all of our goals and needs.

Fueling the Future

The important work of attracting and engaging young, talented AOSSM members to cultivate the next generation of sports medicine leaders was on the agenda at the AOSSM Board of Directors meeting in October 2018. The importance of these objectives cannot be overstated and are now being addressed by a newly formed ad hoc task force led by AOSSM Vice President Michael Ciccotti, MD, and Armando Vidal, MD. With their energy and enthusiasm, this task force is identifying and developing new strategies and programs that may eventually include the creation of an AOSSM Young Surgeons Advisory Board, special networking events at the AOSSM Annual Meeting, regular columns in Sports Medicine Update and more.

Adjusting Our Focus

During the AOSSM Board of Directors meeting in October 2018, the AOSSM Team Physician Committee was officially renamed the AOSSM Team Physician and Athletes Advocacy Committee. The nuance of this name change signals an additional focus and clarity for this committee. The importance of the expanded focus is clear in the wake of recent revelations of misconduct and sexual abuse of our athletes at

the hands of those entrusted to coach and care for them. Additionally, the important relationship between athlete and physician will always be scrutinized, questioned, and at risk. Even the ethics of being a team physician are being questioned not only by the media but by some in the medical community as well. We would envision that this committee will do the important work of defining how productive working relationships can and should be achieved and managed, underscoring the role of the physician to safeguard our athletes on and off the field of competition.

These efforts will launch with a special session at the 2019 AOSSM Annual Meeting in Boston. I will be joined by Past Presidents Jo Hannafin, MD, PhD, and Peter Indelicato, MD, for an enlightening interview with special guest, Madison Kocian of the 2016 Olympic Gold Medal Gymnastic Team, who will discuss what we can learn from her amazing, world champion career and her experience as a survivor of sexual abuse by the national team's doctor.

Speaking of the Annual Meeting

From patient outcomes and orthobiologics to the management of a sports medicine practice, Program Chair Mathew Provencher, MD, and his committee are busy building a not-to-be missed agenda for the 2019 AOSSM Annual Meeting in Boston, July 11–14.

Seasoned faculty are preparing to share cutting-edge procedures and confront the many changes, challenges and choices shaping today's world of sports medicine. One highlight is a new concurrent session with *Sports Health* contributors that will showcase an interactive discussion on injury prevention and concussion evaluation and treatment. *Sports Health*



Join us in Boston July 11–14, 2019

Editor-in-Chief, Ed Wojtys, MD, will moderate the discussions of leading primary care doctors, physical therapists and athletic trainers.



In the spirit of excellence, we will welcome our outstanding invited presidential speakers: five-time Super

Bowl Champion, New England Patriots Quarterback **Tom Brady**, and two of the greatest American entrepreneurs and philanthropists—**Stanley Druckenmiller** and **Kenneth Langone**.

New Value in the New Year

2019 will also bring with it a practical new member benefit—free member access to the Surgical Outcomes System (SOS). This cloud-based, tablet-friendly,

orthopaedic and sports medicine global registry supports our expanding research priorities and addresses our need for more evidence-based quality data. AOSSM members can use SOS as a tool to easily collect and analyze patient outcomes and procedures, contribute analyses, publish results, educate patients, and assess the cost effectiveness of treatment procedures and products. Likewise, the AOSSM Research Committee can use SOS data to inform new projects and establish new priorities. Complete information about how AOSSM members can register can be found at sportsmed.org.

Neal ElAttrache, MD

Neal ElAttrache, MD

ICE HOCKEY INJURIES



BY CHRISTOPHER TUCKER, MD, AND AMAN DHAWAN, MD



The popularity of the sport of ice hockey has grown steadily throughout the past decade. Despite decreased participation in a number of contact youth sports, participation in youth ice hockey has grown every year since 2009 according to USA Hockey. The growing popularity of the sport seems inevitable—ice hockey is an exciting, fast paced, and physical sport that is exciting to play and watch.

Hockey requires strength, agility, and endurance, as well as excellent hand-eye coordination. Depending upon the level of play, athletes are often moving on their skates at speeds up to 30 mph and shooting the puck at speeds upwards of 100 mph. The sport is exhilarating for both participant and spectator.¹

Injury Epidemiology

As with any high-speed collision sport, injuries in ice hockey are common. Despite improvements in protective padding for all players and the institution of mandatory helmet and facemask rules, injury rates in American collegiate hockey remain high compared to other collegiate sports monitored by the National Collegiate Athletic Association (NCAA) Injury Surveillance System (NCAA-ISS). The overall injury rate for collegiate hockey players is almost five injuries per 1000 athlete exposures (AE)—defined as a single player participating in a single game or practice.¹ Interestingly, injuries occur more than six times as often in games than in practice (13.8 versus 2.2 injuries per 1000 AEs in practice versus games).¹ This translates into 65% of all hockey injuries occurring in games, even though games only account for 23% of all athlete exposures. This can be attributed to the violence and aggressive nature of the sport when it is played at full intensity. Collisions with another player or the boards account for more than 50% of all injuries, and thus it is easy to understand how the frequency of injury increases in proportion to the

frequency and intensity of collisions during game play as opposed to practice. Others have found similarly high rates of injury in ice hockey at other levels, including American Junior A level hockey and the Winter Olympics.^{1,2}

Injuries to the head and face, including concussions and lacerations, are the most commonly injured body part in hockey players across all levels of play, reported as accounting for up to 39% of game injuries.³ In the United States, participants in collegiate and youth organized ice hockey are now required to wear a face mask which has dramatically reduced the laceration risk in these athletes. Concussion still remains the single most common injury across all levels, with an incidence of 18.6% of all injuries sustained and accounts for the second-most amount of time lost from practice or games due to injury.¹ The next most common injuries include knee medial collateral ligament sprains, acromioclavicular joint injuries, and ankle sprains.

Player position has been examined as it relates to risk of injury. While forwards and defensemen have similar reported overall rates of injury (5 injuries per 1000 AEs), goalies have significantly lower rates of injury (2.7 injuries per 1000 AEs).¹



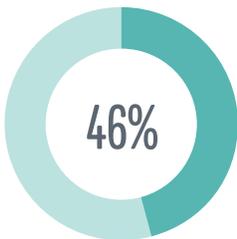
65% of hockey injuries occur during games.



50% of hockey injuries occur because of collisions with another player or the boards.



39% of game injuries are to the head and face, including concussions and lacerations.



Both men and women sustain a majority of injuries (46%) to the head and face.

Interestingly, position plays an even more important role in the risk of concussion, with studies reporting a 2.1 times increased risk of concussion for forwards as compared to defensemen.¹ Some variability has been reported across levels of play, styles of play (American “dump and chase” versus European), and size of rink (American 1560 m² versus European 1800 m²).

In light of the reported collision data, body checking has received significant attention over the past decade as a potential risk factor associated with injury, especially in youth hockey. In 2011, USA Hockey increased the age at which body checking was allowed from Pee Wee (age 11–12 years) to Bantam (age 13–14 years). Studies evaluating the epidemiology of injury patterns in the Pee Wee age group before and after the change demonstrate a remarkable difference. Following the rules change, there was an almost 20% decrease in overall injury, with a 23% drop in fractures and a 41% drop in internal organ damage.⁴

Shoulder Injuries

Injuries to the shoulders of ice hockey players are common. The risk of upper extremity injury is influenced by player position with upper extremity injuries occurring most frequently in forwards.⁵ The most common upper extremity injury sustained is that of an acromioclavicular (AC) joint sprain, accounting for 59% of all shoulder injuries.⁵ The most common mechanism of AC joint injury is a direct blow to the acromion, either via direct contact with another player or with the boards, as often happens during a body check. These injuries can result in significant amounts of playing time loss for the athlete with one study demonstrating an average of 18 days lost after an AC joint sprain in collegiate athletes.⁶ Fortunately, most AC joint sprains, including Type I, Type II, and even many Type III injuries, can be treated non-operatively with rest, icing, NSAIDs, and additional protective equipment worn to prevent joint aggravation.

Glenohumeral labral injuries also frequently occur in ice hockey, often through a collision mechanism, and

the player may sustain an anterior or posterior subluxation/dislocation event depending upon the position of the shoulder at the time of contact. Glenohumeral joint injury accounted for 40.4% of upper extremity injuries in a recent 7-year study of the international ice hockey federation adult world championship tournaments and Olympic Winter Games.³ In players without previous history of shoulder instability or pathology, and without an osseous component to injury, it is sometimes possible to return to play with a program of rehabilitation, including range of motion and strengthening and possible bracing. In athletes who have persistent instability symptoms, surgical stabilization may be required with an average return to sport in 4–6 months.⁷

Knee Injuries

Knee and leg injuries account for 22% of all ice hockey injuries. Injury to the medial collateral ligament is the most commonly injured knee structure, encompassing 56.6% of all injuries to the knee with a reported incidence of 0.44 injuries per 1000 AEs.^{1,9} The most common mechanism of injury is collision with another player or the boards during body checking (77% of injuries).⁹ These injuries typically result in several days to weeks of lost playing time to injury, with one study demonstrating a direct relationship between grade of injury and time lost (grade 1: 2–4 days, grade 2: 10–19 days, and grade 3: 127 days).⁹ These injuries are frequently treated non-operatively with a rehabilitation program, taping, and/or bracing. Some grade III injuries, especially with avulsion of the tibial insertion, may be candidates for operative fixation.

ACL tears of the knee are relatively infrequent injuries, as compared to other injuries, with 67 ACL tears sustained during a 10-year period in the National Hockey League from 2006–2015.⁸ Incidence for all professional players was 0.42/1000 player game hours.⁸ While infrequent, these injuries usually require surgical reconstruction and have a significant impact on player



performance. Not only does the player require a significant amount of time off for surgical recovery and rehabilitation, but performance data following return to play demonstrates an initial decrease in goals per season, goals per game, points per game, and points per season as compared to uninjured controls.⁸

Ankle Sprains

One injury that is relatively common in ice hockey players and somewhat unique to the sport is syndesmosis injury or “high ankle” sprain. The predisposition to this injury, which occurs when excessive torque is applied to the lower extremity, lies in the combination of the elevation of the player off the ice from the hockey skate blade along with the high speeds and rapid direction changes that can occur when skating at speeds of up to 30 mph. The stiffness of the hockey boot adequately supports the ankle, but can leave the lower leg just above the boot at risk for rotational injury. Foot and ankle injuries have been shown to account for 12% of all hockey injuries in collegiate hockey players.¹ Syndesmosis injuries have been shown to account for the most

playing time lost of all hockey injuries, with a mean of 5.4 games and 14.6 practices missed.¹

Gender Differences

Men sustain higher rates of injury than women across all ages and levels of play, yet the predominant mechanism of injury is player contact for both genders, despite the difference in rules with respect to body checking. In youth and adolescent level hockey, boys averaged 36 injuries/1000 hours as compared to girls averaging 34.5 injuries/1000 hours. In collegiate level hockey, those differences are smaller with comparative studies reporting only 1.4 more injuries in men per 1000 exposures.¹⁰ Both men and women sustain at least twice as many injuries in games as compared to practices—likely attributed to the decreased frequency and intensity of player contact, the most frequent mechanism of injury. Game injury rates have been reported as 5 and 8 times higher than practice injury rates for women and men, respectively.¹⁰ Both men and women sustain a majority of injuries (46%) to the head and face. However, concussion rates differ, with these injuries accounting for

17% of injuries in women and 8% in men.¹⁰ Location of extremity injuries also differ by gender, with men having a higher percentage of injuries to the shoulder (13%) and women having more injuries to the thigh (17%) and knee (15%).¹⁰ The larger percentage of upper extremity injuries in men has been attributed to the allowance of body checking in older age groups.

Conclusion

Ice hockey is a high-speed collision sport that brings with it a high risk of injury. The majority of injuries are caused by player contact, and the rates and locations of injury vary by gender, player position, and age group. The majority of injuries are minor contusions or sprains, do not require surgery, and do not lead to significant lost time from competition. More investigation into injury patterns, particularly as they relate to the increased concussion risk in women—for whom body checking is not allowed in the rules—may potentially lead to improvements in player protective measures such as equipment improvements or rules modifications.



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Cold Injuries—Frostnip & Frostbite

BY LEE DIEHL, MD

OUTDOOR ATHLETES IN WINTER are at risk for non-freezing cold injury or “frostnip” as well as more significant freezing injury commonly called “frostbite.” Cold injury to the skin and underlying structures occurs when heat loss to the environment exceeds the ability of a person’s blood supply to warm the tissue sufficiently enough to keep it from freezing.

Risk of cold injury is increased by lack of preparation such as inadequate clothing or shelter, poor nutrition, inadequate hydration, or failure to recognize the environmental threat. Fortunately the risk to young healthy athletes is low, but non-modifiable factors may also increase risk. Children have a relatively larger skin surface area for heat loss and less fat for insulation. Older athletes may have chronic medical problems, less physiologic reserve, or require prescription medications which increase risk. Additionally, having experienced prior episodes of cold injury is also associated with increased risk.

Frostnip is a superficial, non-freezing cold injury due to areas of intense vasoconstriction at the exposed skin. At risk areas are typically cheeks, ears, nose, and extremities. The skin, initially red, becomes increasingly blanched or pale, often focally swollen and slightly numb. Appropriate treatment—covering the area or warming the skin with direct contact, gaining shelter, or removal from exposure to the elements—would be expected to result in complete recovery with no tissue loss or long-term damage. Frostnip should be recognized as a signal that conditions are right to cause more significant frostbite injury and the athlete needs to take appropriate action.

Frostbite represents a freezing injury of the skin and underlying structures. When exposed to cold, the body shunts blood away from the extremities in order to keep the core warm. When continued loss of heat to the environment exceeds the body’s ability to send warming blood to the peripheral tissues, they can begin to cool and ultimately freeze. Ice crystals begin to form in and around cells in the skin and subcutaneous tissues. The tissues become pale, firm, and the sensory nerves, lacking an adequate blood supply don’t function normally, leading to a loss of sensation. More extensive

freezing leads to deeper and deeper layers of tissue involvement. Progressive tissue destruction occurs from disruption of the microcirculation with platelet aggregation and thrombosis, progressive tissue ischemia, infarction, and the resultant inflammatory cascade.

Frostbite, similar to burn injury, can be characterized as superficial—causing blisters but minimal significant tissue loss, or deep with more extensive tissue damage involving deeper skin layers, muscle, bone, and all the associated structures. Treatment of frostbite injury starts with recognition and removal from the ongoing environmental threat. Followed by rapid rewarming of the frozen tissues, optimally with warm water emersion, in a protected environment once the threat of re-freezing is eliminated. Recurring cycles of freezing and thawing tissue compounds the amount of tissue damage and subsequent loss. It can often take weeks or months to know the true extent of tissue damage after deep frostbite injury.

With many things in medicine, prevention is often better than treatment. It is important to remind athletes to maintain good nutrition to provide fuel for the body’s heat production. Maintenance of adequate hydration facilitates good tissue perfusion. Activity appropriate clothing, covering exposed skin and scalp, layered to keep the body warm while moving moisture (perspiration) away from the skin, and allowing it to evaporate, can mitigate wind exposure and core heat loss. It’s important to avoid constrictive clothing or footwear that may reduce circulation, and to keep moving. Exercise helps increase vasodilation in the extremities.

Encourage awareness among athletes and participate in frequent “cold checks” to assess exposed skin and look for signs of tissue at risk. Proper preparation, recognition of the environmental risk, and appropriate behavioral response is important to prevent cold injury.

Changing the Youth Sports Training Approach

BY KEN FINE, MD, STOP SPORTS INJURIES OUTREACH COMMITTEE CHAIR

The culture of youth sports training in the United States often follows the concept that “more is better.” Teams train for several hours a day, sometimes doing two- and even three-a-day practices. It is not unusual for athletes to play on more than one competitive team at a time. Soccer, basketball, hockey, and baseball tournaments often consist of several games in a single weekend.

Reckless overtraining of young athletes contrasts how we handle professional athletes—taking care to assure they train at a healthy volume and take time to properly recover between contests. Professional soccer teams provide a good example of this. If there is a league match on the weekend and a midweek international game, most teams will try to play their second team in the early rounds of the international games to rest their starters for the considered “more important” weekend game. Serious distance athletes understand the concept of tapering down their training prior to the important races to maximize their performance. Elite youth soccer academy programs in Europe limit intensive training for their athletes sometimes to no more than 4 hours per week.

We need to do more to prevent overtraining our youth athletes. The negatives include increased injury risk and decreased performance, but the worst risk of all is turning sports into an unenjoyable burden rather than a fun, life-enriching activity—which is what it should be.

If you haven't joined the STOP Sports Injuries campaign, please sign up today at stopsportsinjuries.org.



Share Why Sports Safety Matters to You

Are you an advocate for preventing injuries in young athletes? Share why keeping kids in the game is important to you—just download and print our “Sports Safety Matters” sheet, write in your answer, and have someone take a photo of your response. Be sure to post on social media with the #SportsSafety hashtag or send to joe@aossm.org to post directly from the STOP Sports Injuries accounts.

Download available at:
www.stopsportsinjuries.org/STOP/SportsSafety.pdf

Come Grow with STOP Sports Injuries

Did you know more than 1,100 organizations currently collaborate with STOP Sports Injuries? The program was founded on the idea that grassroots efforts could help spread awareness and information about preventing overuse and trauma injuries in young athletes. This number includes more than 800 sports medicine practices, which hold local events and share our injury prevention information with patients. If you have not already signed up, be sure to visit STOPSportsInjuries.org and click “Get Involved” to learn more.

WELCOME TO OUR NEW COLLABORATING ORGANIZATIONS!

Thank you to the newest STOP Sports Injuries collaborating organizations for their commitment to keeping young athletes safe. Interested in having your practice or institution listed in the next *SMU*? Head over to STOPSportsInjuries.org and click “Join Our Team” to submit an application!

Child Safety Organizations

Ravik Foundation Inc.
Decatur, Georgia

Medical Institutions

Milford Regional Medical Center
Northbridge, Massachusetts

Thomas Health

South Charleston, West Virginia

UK Orthopaedic Surgery & Sports Medicine
Lexington, Kentucky

Sports Medicine Practices

ATI Physical Therapy
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NAMES IN THE NEWS



Matava Inducted into Missouri Sports Hall of Fame

Congratulations to AOSSM member **Dr. Matthew Matava** who was recently inducted into the Missouri Sports Hall of Fame for his long-time career helping athletes from youth through professionals in the St. Louis area.



UPMC Renames Building After Fu

The University of Pittsburgh Medical Center (UPMC) recently honored AOSSM Past President **Freddie Fu's** pioneering work, dedication, and commitment to sports medicine and the university by renaming the sports medicine medical building on the campus to the UPMC Freddie Fu Sports Medicine Center. Fu founded UPMC's sports medicine program in 1986 and it has grown to become one of the largest, most comprehensive clinical and research programs of its kind in the world, uniquely placing multiple specialists under one roof.

Miller Receives Medical Services Award



Congratulations to AOSSM Board of Directors Secretary, **Mark Miller, MD**, for his recent Medical Services Award from the Health Sciences Alumni Association of the Uniformed Services University. Dr. Miller received this honor for outstanding meritorious service

and recognition to military medicine throughout an exemplary career in leadership, warfighter medical care, and contributions to military health. Dr. Miller is a retired colonel in the Medical Corps in the United States Air Force.



AOSSM Member Pace Becomes First in the Nation to Perform Arthroscopic Trochleoplasty

Earlier this fall, **Dr. Lee Pace** with Elite Sports Medicine and Connecticut Children's Hospital and Danish trochleoplasty pioneer, Lars Blond, MD, performed the first three arthroscopic trochleoplasties in the United States. During the procedure, the malformed part of the knee joint, called the trochlea, is reshaped into the V-shape found in a more typical knee. The new groove allows the bones to fit securely into place like pieces of a puzzle. This procedure represents a less invasive way to treat high grade trochlear dysplasia in the setting of patellar instability. The traditional open trochleoplasty procedure is extremely effective at treating trochlear dysplasia but it is associated with a significant sized scar and risk of arthrofibrosis (knee stiffness) afterwards.

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 at lisa@aossm.org. High resolution (300 dpi) photos are always welcomed.



Housing Open for AOSSM 2019 Annual Meeting

Reserve your room now at sportsmed.org for the best availability and rates for the 2019 Annual Meeting in Boston, July 11–14. This year’s conference hotel is the Boston Marriott Copley Place, which is located just 0.5 miles from the Hynes Convention Center where all sessions and exhibits will take place. Meeting registration will open in March 2019.

Get in the Sports Medicine Conversation

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Join an AOSSM Committee

As an AOSSM member we rely on your expertise and talents for us to continue to be the global leader in orthopaedic sports medicine. AOSSM has multiple committees that have space for you to share your opinions and help shape our organization from research to publications to self assessment exam question preparation. Put your name in the hat for a committee and help make a difference with AOSSM. View complete details and committee openings at sportsmed.org. **Deadline for applications is February 15, 2019.**

Nominate Your Mentor for the Hall of Fame

Do you have a mentor or know of another outstanding member of the sports medicine community who should be part of the AOSSM Hall of Fame? The Hall of Fame honors members of the orthopaedic sports medicine community who have contributed significantly to the specialty and set themselves apart. Being inducted into the Hall of Fame is one of the highest honors given to a Society member. Visit sportsmed.org to submit a nomination before February 19, 2019. Questions? Contact Camille Petrick at camille@aossm.org.



Give the Gift of Sports Health

Support your local athletic trainer by giving them the gift of knowledge this holiday season! AOSSM members can purchase a gift subscription to *Sports Health: A Multidisciplinary Approach* for only \$45! This subscription includes 6 print issues (1 year), online access to the entire *Sports Health* archive. Simply go to www.sportsmed.org/AOSSMIMIS/SHGift to complete your purchase! Question? Contact Colleen Briars, Director of Journal Publishing, at colleen@aossm.org.

Volunteer with the ABOS

BY DAVID F. MARTIN, MD, EXECUTIVE MEDICAL DIRECTOR, AMERICAN BOARD OF ORTHOPAEDIC SURGERY

The American Board of Orthopaedic Surgery (ABOS) is a small organization. We have 13 full-time staff members and a handful of contractors. A lot of the success of the ABOS is due to the hard work of orthopaedic surgeons who take time away from their practices who volunteer with us. While we have several hundred volunteers, we are always looking for more. I'd like to highlight a few ways to participate.

Board of Directors

Our Board of Directors is a diverse group of 20 individuals which currently includes three orthopaedic surgeons who have a subspecialty certificate in orthopaedic sports medicine. It's a huge commitment but it is well worth it. I served on the Board for 10 years and found that time incredibly rewarding. Director-Elect nominations come from the American Academy of Orthopaedic Surgeons (AAOS), the American Orthopaedic Association (AOA), and the American Medical Association (AMA). If you are interested in being nominated, please reach out to these organizations.

Oral Examiners

Our ABOS volunteer oral examiners spend four days in Chicago each July to help administer both the Part II Oral Examination and the Oral Recertification Examination. These examinations demonstrate to patients that ABOS board certified orthopaedic surgeons perform safe and reasonable surgeries.

Case Selectors

Prior to the oral examinations, we have volunteer case selectors who review candidates' submitted case lists and choose the 12 cases that will be presented at the oral examination. We have started using computer algorithms to help pick the cases to be presented, but veteran

orthopaedic surgeons have the final say as to the 12 selected cases for presentation.

Examination Creators & Validators

When a new examination is introduced, and every five years thereafter, a group is formed to develop the examination blueprint. These surgeons help determine the subject matter that working orthopaedic surgeons need to know for each area. There are several rounds of review that take place in the creation of each blueprint, each with its own set of volunteers, to make sure that they truly represent what orthopaedic surgeons are doing in practice.

Each question on an examination is written by an ABOS board certified orthopaedic surgeon. The examination item writers draft 8–12 questions annually and then attend a two-day meeting to edit the questions. Those questions are reviewed regularly to make sure that they are still relevant.

The Field Test Task Force volunteers review the questions which have been chosen from the question bank for inclusion on the examination based on the blueprint. There are several rounds to make sure that the most appropriate questions are included and that they match the examination blueprint.

For the computer-based examinations, standard setters work with psychometricians to determine the minimum passing standard. This an important step to ensure that while there are different questions from year-to-year, the likelihood of an individual candidate passing the examination is statistically the same each year.

WLA Question Writers

With the ABOS Web-Based Longitudinal Assessment (ABOS WLA), a new group of individuals help to determine which knowledge sources should be chosen for



the ABOS WLA. They then assist in writing the questions for each of these knowledge sources. Unlike most other volunteers, these volunteers serve a three-year term. If you would like to be a part of these activities, please contact Heather Hodge at hhodge@aossm.org.

Peer Reviewer

There is one additional way that every ABOS board certified orthopaedic surgeon can volunteer that requires minimal effort. When a candidate finalizes a Part II or recertification application, emails requesting candid peer review are sent by the ABOS. In addition, when candidates do not have many peer reviews completed, we send emails to diplomates who practice nearby. If you receive one of these requests, please complete it truthfully. Overall, our peer review process has been an important tool for the Credentials Committee and your assistance greatly helps us.

To volunteer with the ABOS, log in to your ABOS dashboard and click on the volunteer button. Complete the brief form online and upload a short form of your Curriculum Vitae (CV).



WASHINGTON UPDATE

BY JORDAN VIVIAN, AAOS LEGISLATIVE LIAISON

Passage of Sports Medicine Clarity Act Improves Care for All Athletes

AOSSM is proud to have been part of the process to cross the finish line with the passage of the Sports Medicine Licensure Clarity Act (H.R.302) which was signed into law in early October as part of the FAA Reauthorization Act of 2018.

The legislation provides legal protection for traveling team physicians and safeguards injured athletes' timely access to the health care professionals who know and understand their medical history best. Advocacy efforts on behalf of team physicians and sports medicine professionals began in 2015 when several members of the sports medicine community, including AOSSM Past President Allen Anderson, MD, and previous AOSSM Council of Delegates Chair Christopher Kaeding, MD, were called by Congress and state legislators, respectively, to address the issue and provide common sense solutions which would allow medical professionals to comply with state licensing rules. This new legislation clarifies how healthcare services and medical liability insurance are provided outside of a professional's primary state of licensure.

AAOS Offers Recommendations on Proposed EHR Reporting Program

On August 24, the Office of the National Coordinator (ONC) for Health IT

released a Request for Information (RFI) on reporting criteria for the Electronic Health Record (EHR) Reporting Program, as required by the 21st Century Cures Act.

The AAOS recently sent a response to ONC detailing important recommendations to consider when implementing the EHR Reporting Program, which provides a new avenue for ensuring EHRs work to improve clinical care. AAOS wrote that it believes, when properly designed and utilized, health information technology (health IT), such as EHRs, Personal Health Records (PHRs), e-prescribing (eRx), and secure messages can improve patient safety, increase clinical efficiency, reduce costs, provide for the seamless transfer of vital patient information, and allow physicians to better utilize their time and expertise treating patients.

That said, many improvements need to be made with respect to EHR usability, utility, and the ability for clinicians to meaningfully choose EHR products that work best for them and their patients. In ONC's own Report to Congress on Health Information Blocking, it acknowledged that providers are left to compare and shop in "a marketplace that is opaque and in which acquirers often lack up-front information."

Ultimately, it is critical that ONC ensures that any changes made to an EHR Reporting Program reduce provider burden, instead of worsening the existing problem. By incorporating physician-input throughout these discussions, ONC can ensure that health IT is successful and enhances clinical decisions that are best suited for patient and practice needs.

Bills Introduced to End Surprise Billing for Out-of-Network Care

As the 115th Congress nears an end, several senators have introduced legislation to prevent patients from receiving surprise bills for care that they may not have

realized was out-of-network. Surprise bills can happen any time, but they frequently happen during emergency care, when patients and doctors have no way of knowing who is in and out-of-network.

A bipartisan working group in the Senate has produced draft legislation called the Protecting Patients from Surprise Medical Bills Act. The proposal bans "balance billing," or the practice of billing a patient for the balance of the bill not covered by insurance, for emergency services and out-of-network care provided at in-network facilities. The legislation's payment methodology for determining out-of-network reimbursement gives insurers the ability to determine usual and customary rates for emergency care and could create an incentive for insurers to systematically drive physician payments downward.

AAOS has joined with the American Society of Plastic Surgeons to write a comment letter to the authors of the Protecting Patients from Surprise Medical Bills Act. In it, AAOS advocates for adequate health insurance networks, holding patients harmless under all circumstances, retaining a balance billing option, insuring fair and timely payment, and maintaining uniformity of self-insured health insurance plans. AAOS is committed to a solution that takes patients out of the middle, by requiring insurers to handle unexpected out-of-network bills directly with physicians. Requiring insurance companies to cover unexpected out-of-network care directly with providers at a fair rate will protect patients from surprise bills in emergency situations, strengthen patient networks, and increase access to care for patients.

None of the proposals are likely to pass before the end of the session in December and will need to be reintroduced in the 116th Congress. They are, however, a preview of the items that may be on the agenda in the upcoming session.

SUPPORT AOSSM RESEARCH



Thanks to your help and that of your colleagues we can continue to promote high-impact clinical studies like the Multicenter ACL Revision Study (MARS), Young Investigator Grant, and the exploration into new therapies through translational and basic science investigations in biologics.

Stop and consider the difference AOSSM has made in your career and then pay it forward by visiting sportsmed.org to make a secure, online 2018 contribution! Thank you in advance to all those individuals who have already made a pledge of support in 2018.

Visit sportsmed.org today to support AOSSM research.

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Research Award Winners Announced

Congratulations to the 2019 AOSSM Research Award winners! These high-quality research projects will be featured on the podium at the Annual Meeting in July.

2019 O'Donoghue Sports Injury Award

Lateral Extra-Articular Tenodesis Reduces Failure of Hamstring Tendon Autograft ACL Reconstruction—Two Year Outcomes from the STABILITY Study Randomized Clinical Trial

Alan M. Getgood, MD, FRCS (Tr&Orth) and the STABILITY Study Group

Fowler Kennedy Sports Medicine Clinic
London, Ontario

2019 Excellence in Research Award

Characterization of Growth Factors, Cytokines, and Chemokines in Bone Marrow Concentrate and Platelet Rich Plasma: A Prospective Analysis

Connor G. Ziegler, MD

The Steadman Clinic
Vail, Colorado

2019 Cabaud Memorial Award

Improvement of Cartilage Repair with Biologically Regulated Marrow Stimulation by Blocking TGF- β 1 in A Rabbit Osteochondral Defect Model

Hajime Utsunomiya, MD, PhD

Steadman Philippon Research Institute
Vail, Colorado

AOSSM Selects Researcher for Clinician Scholar Development Program



Kwado Owusu-Akyaw, MD, participates in the recent Clinician Scholar Development Program.

AOSSM recently selected Kwado Owusu-Akyaw, MD, to participate in the AAOS/OREF/ORS Clinician Scholar Development Program. Dr. Owusu-Akyaw, a PGY-5 orthopaedic surgery resident at Duke University, attended the annual retreat earlier this fall with a select group of young orthopaedic surgeons dedicated to clinician-scientist careers, as well as established clinician scientists. "Spending the weekend with clinician-scholars at all stages of career truly gave me a realistic perspective of what a successful academic career looks like. Moreover,

the early exposure to the grant writing and review process has already reshaped my mental approach to asking clinical and translational research questions. In a field with rapidly evolving possibilities in imaging, biologics and potential tissue regeneration, my generation stands to revolutionize the way orthopaedics is practiced. Opportunities such as the CSDP are critical to encouraging synergy and partnership amongst like-minded colleagues as we enter the next frontier of musculoskeletal care," said Owusu-Akyaw.

"In a field with rapidly evolving possibilities in imaging, biologics and potential tissue regeneration, my generation stands to revolutionize the way orthopaedics is practiced." —Dr. Owusu-Akyaw

Think Tank Held on Biologics for the Prevention and Treatment of Post-Traumatic Osteoarthritis

On November 2 several pre-eminent sports medicine experts gathered in Washington, D.C. to discuss the role of biologic treatments in post-traumatic osteoarthritis (PTOA). This think-tank meeting identified the most important research questions through expert presentations and panel discussions. Participants identified the needs, opportunities, and challenges in the field to advance the understanding of biologics in PTOA. The information gathered by these experts in biologics and PTOA will inform the scope of a competitive grant from AOSSM for \$250,000 that will be awarded in 2019.



A special thanks to **rti surgical** for their sponsorship of this think tank and the Biologics for the Prevention and Treatment of PTOA Grant.

Deadline for Young Investigator Initiative Grant Mentoring and Career Development Program Approaching

The United States Bone and Joint Initiative (USBJI) and Bone and Joint Canada are dedicated to increasing research of musculoskeletal diseases. To keep pace with the increasing burden of these diseases, a higher level of research performed by young investigators in the musculoskeletal diseases is required, and future levels of research assured.

In response, the Young Investigator Initiative is a grant mentoring program providing early-career investigators an opportunity to work with experienced researchers to assist them in securing

funding and other survival skills required for pursuing an academic career.

This grant mentoring program and career development program is open to promising junior faculty, senior fellows, or post-doctoral researchers nominated by their department or division chairs seeking to pursue a career in clinical or basic research. It is also open to senior fellows or residents who are doing research and have a faculty appointment in place or confirmed. Basic and clinical investigators, without or with training awards, are invited to apply. Investigators selected to take part in the program

attend two workshops, 12–18 months apart, and work with faculty between workshops to develop their grant applications.

The Spring 2019 workshop is scheduled to take place April 26–28, 2019, in Rosemont, Illinois. The unique aspect of this program is the opportunity for attendees to maintain a relationship with a mentor until their application is funded. Deadline for applications is January 15, 2019. For more about the program and detailed application instructions, please refer to www.usbji.org/programs/yii.

2019 AOSSM Research Grant Opportunities

Be sure to review the guidelines and instructions for the grant opportunities as they have been updated. Applicants should ensure they have the most recent information from our website at sportsmed.org/Research. Please contact Kevin Boyer, AOSSM Research Director, at kevin@aossm.org with questions. Grant winners will be selected by the AOSSM Research Committee at the 2019 Annual Meeting in Boston.

Steven P. Arnoczky Young Investigator Grant

All interested applicants are REQUIRED to submit a pre-review to be eligible for this grant opportunity.

Grant Amount: up to \$50,000

Pre-Review Deadline: January 5, 2019, 11:59 p.m. PST

Final Deadline: April 1, 2019, 11:59 p.m. PST

Project Period: 12–24 months, starting no earlier than August 2019 and completed by August 2021

Sandy Kirkley Clinical Outcomes Research Grant

Pre-Review is strongly encouraged but not required for this grant opportunity.

Grant Amount: up to \$20,000

Pre-Review Deadline: January 5, 2019, 11:59 p.m. PST

Final Deadline: April 1, 2019, 11:59 p.m. PST

Project Period: 12–24 months, starting no earlier than August 2019 and completed by August 2021

AOSSM/Aircast Foundation Return to Play Grant

Grant Amount: up to \$150,000

Application Deadline: April 1, 2019, 11:59 p.m. PST

Project Period: 30–36 months, starting no earlier than August 2019 and completed by August 2022

AOSSM/Sanofi Osteoarthritis Grant

Grant Amount: up to \$50,000

Application Deadline: April 1, 2019, 11:59 p.m. PST

Award Selection: July 2019

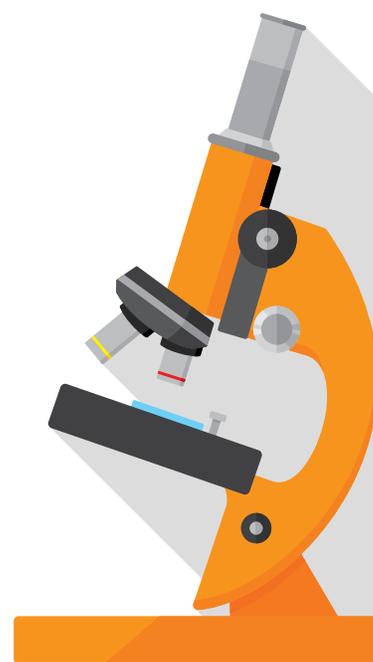
Project Period: 12–24 months, starting no earlier than August 2019 and completed by August 2021

AOSSM/JRF Ortho Basic Science Allograft Grant

Grant Amount: up to \$50,000

Application Deadline: April 1, 2019, 11:59 p.m. PST

Project Period: 12–24 months, starting no earlier than August 2019 and completed by August 2021



Orthobiologics Course Brings Together Latest Techniques and Research

Under the expert direction of co-chairs Brian J. Cole, MD, Jason L. Dragoo, MD, and Rachel M. Frank, MD, AOSSM hosted a first-of-its-kind surgical skills course entitled, *OrthoBiologics: Integrating Biologics and Clinical Ultrasound into Your Practice*, at the OLC Education & Conference Center in Rosemont, Illinois, on October 12–13, 2018. The sold-out course featured didactic lectures on orthobiologics in the real world and ultrasound theory and technology, as well as an overview of the available technology, case discussions and video techniques. In addition, attendees were able to practice a variety of techniques along with ultrasound guided injections in the cadaver lab. Participant comments included, “The discussion of federal regulatory guidelines, the basic science of the biologic techniques, and then the application to a specific clinical issue was extremely valuable. It was highly educational and worthwhile.”

The next AOSSM surgical skills course, conducted in partnership with ISAKOS, entitled, *Osteotomies Around the Knee: From Ligament Insufficiency to Cartilage/*



Meniscus Pathologies and Arthritis, takes place April 12–13, 2019. There is limited availability for these courses and they do sell out so register today at sportsmed.org.

AOSSM thanks Arthrex, Biorich Medical, Fujifilm Sonosite, JRF Ortho, Lipogems, the ON Foundation, Regenacell Therapy, Reinvent Biologics, Terumo BTC, and Zimmer Biomet for their support of the course.

“The discussion of federal regulatory guidelines, the basic science of the biologic techniques, and then the application to a specific clinical issue was extremely valuable. It was highly educational and worthwhile course.”

AOSSM Leaders Participate in the 15th International Congress of the Argentina Arthroscopy Association



AOSSM President Neal ElAttrache, MD, Past President Charles Bush-Joseph, MD, Current and Past Education Chairs Steven Brockmeier, MD, and Steven Cohen, MD, and Fellowship Committee members Robert LaPrade, MD, and Marc Safran, MD, represented the Society as faculty at the 15th International Congress of the Argentina Arthroscopy Association (AAA), September 5–7, 2018, in Buenos Aires, Argentina. AOSSM faculty gave more than 20 presentations, covering the topics of shoulder, knee, hip, and biologics.

AAA exists to promote, support, and encourage continuous medical education, scientific development, and accreditation of Argentine specialists who are dedicated to the treatment of musculoskeletal pathologies. Thank you to our leaders for not only helping AAA meet their mission, but also for their tireless efforts on behalf of AOSSM!

Need Extra CME at the End of the Year?

Did you know that AOSSM provides more than 130 different opportunities for online CME? If you need additional credits at the end of the year, check out the following:



The 2016, 2017, and 2018 Self-Assessment Examinations

Each unique exam includes 12 AMA PRA Category 1 Credits™.



AJSM CME/Current Concepts

There are more than 90 articles available, each worth 1 AMA PRA Category 1 Credit™.



Online Instructional Courses (ICs)

There are 30 ICs from the 2016, 2017, and 2018 Annual Meetings. Each is worth between 1.25 to 1.75 AMA PRA Category 1 Credits™.

To see a list of all available options, click the Online Education tab on the AOSSM website at sportsmed.org. Questions? Contact the AOSSM Education Department at 847/292-4900 or hhodge@aossm.org.

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Course Co-Chairs

James Kinderknecht MD
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UPCOMING MEETINGS

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AANA Sports
Medicine Course**
January 30–February 3, 2019
Park City, Utah

**AANA/AOSSM
Specialty Day**
March 16, 2019
Las Vegas, Nevada

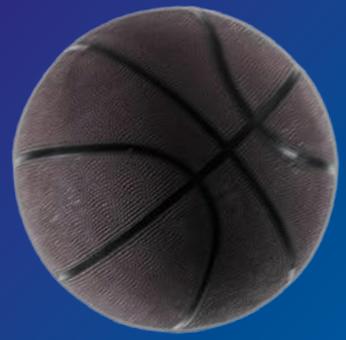
**Football Sports Medicine
2019: Youth to the NFL**
March 29–31, 2019
Nashville, Tennessee

**AOSSM & ISAKOS
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the Knee: From Ligament
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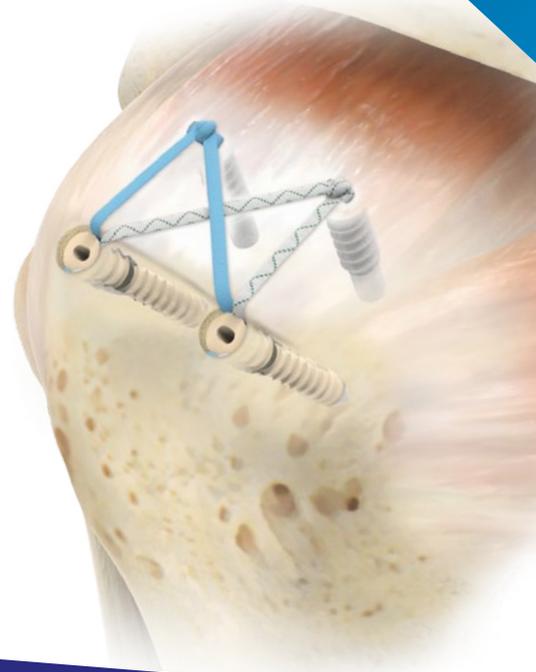
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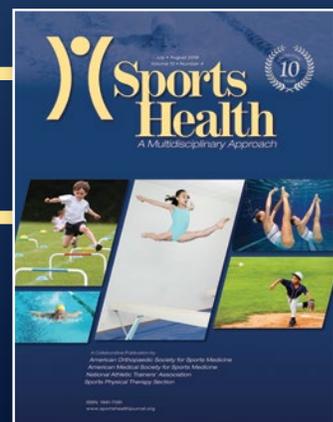
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