

# SportsMedicine

## Update

July – August 2004



*A world leader in  
sports medicine education,  
research, communication,  
and fellowship.*



*Newsletter of the American Orthopaedic  
Society for Sports Medicine*

[www.sportsmed.org](http://www.sportsmed.org)

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## July – August 2004

**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 website at [www.sportsmed.org](http://www.sportsmed.org). To subscribe to the electronic version, contact the Society at [brian@aossm.org](mailto:brian@aossm.org).

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# President's Message



**AOSSM remains a leader** in sports medicine because it has resisted resting on its laurels. At a time of unprecedented growth in the field, the Society continues to build on its successes and to find new ways to support its membership as the specialty evolves. I want to briefly highlight a number of things on the Society's agenda.

## Upcoming Educational Programs

While meetings have been the staple of AOSSM educational activities, the Society is expanding its program to include a broader array of enduring material. The Society is hiring a staff member who will be dedicated strictly to developing a more diverse array of CME, through the internet, CD-ROM, MP-3s and publications. These educational strategies will be increasingly integrated into the Society's ongoing and new CME activities, such as the subspecialty certification study program. On that front, the Society's steering committee for the Subspecialty Certification Study Program recently launched its effort to develop a new self-assessment prep course by the end of this next year.

While new education strategies are being implemented, the Society has a full schedule of meetings. First up will be the 2nd Hockey and Sports Medicine meeting on August 27–29 in Toronto. This meeting is jointly sponsored with the National Hockey League and NHL Team Physicians Society and is being offered again because of its strong reception in 2002. Next in line will be the AOSSM Surgical Skills Course for the Athlete's Shoulder, held on September 17–19 in the Orthopaedic Learning Center. We expect this popular course will be fully subscribed. Finally, the Society is sponsoring the Advance Team Physicians Course from December 2–5 in Miami, FL. This course is jointly sponsored with the American College of Sports Medicine and the American Society of Sports Medicine.

## Research Activities

An important role of the Society is to serve as a catalyst on critical orthopaedic sports medicine research topics. One such activity has been AOSSM's sponsorship of several workshops and grants on the ACL. A follow-up workshop assessing our progress to date, as well as the next steps on the ACL frontier is now slated for January in Atlanta.

Another AOSSM activity scheduled for the same time in Atlanta is an allograft workshop that will bring together leading educators and researchers on basic science and

clinical/applied issues related to the use of allografts. The conference has been generously sponsored by Regeneration Technologies Incorporated so the Society can provide an independent forum to assess the critical issues in this growing area of sports medicine, identifying those areas where AOSSM members and others should focus their future research energies.

## Publications and Communications

We are continuing to enhance our communications activities so that members and others in the orthopaedic and sports medicine communities can avail themselves of the Society's resources. Of AOSSM's publications, the American Journal of Sports Medicine is preeminent, and Bruce Reider, MD, should be recognized for his ongoing efforts to further enhance direction and delivery of the Journal's valuable information. Significantly, the Journal will begin publishing monthly in 2005 due to the heavy flow of quality papers that are being submitted and the need to provide this information in a timely manner.

For our members and for the lay public, our new website—launched in June ([www.sportsmed.org](http://www.sportsmed.org))—provides a wealth of ready information that you can easily access. As the Society's programs and activities have grown, this site serves as an ever more important resource for you to keep abreast of what is going on in sports medicine and to remain active in the specialty. I strongly encourage you to browse the new site.

It is gratifying to be at the helm of AOSSM at this point in history. We have made great strides as a profession and as a Society, many of which were showcased at the 2004 Annual Meeting. Bill Garrett, MD, AOSSM immediate past president, and Louis Almekinders, MD, 2004 Program Chair, deserve recognition for their numerous successes and for carrying on the AOSSM tradition of strong leadership. As I look to the next year and beyond, I see a wealth of opportunity that we can take advantage of to further add to the successes of our specialty.

A handwritten signature in black ink that reads "Thomas L. Wickiewicz". The signature is written in a cursive, flowing style.

Thomas L. Wickiewicz, MD  
President

# Common Modalities in Sports Medicine

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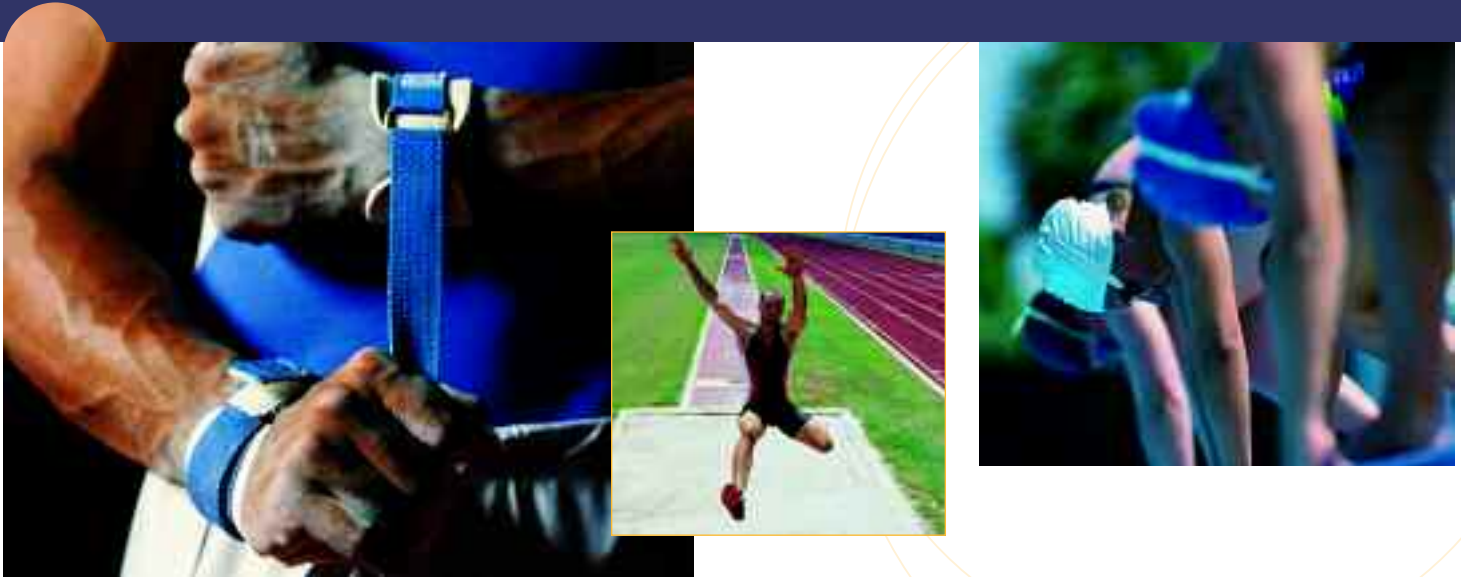
Modalities are frequently utilized in athletic training rooms and rehabilitation centers to assist in the treatment of athletic injuries. Common modalities such as electrical stimulation, superficial heat and ultrasound are often utilized to control pain from injury or surgery, increase blood flow to the injured area, reduce inflammation, improve tissue function and increase healing. Additionally, heat or ultrasound can be employed to prepare the tissue for various treatments. Thus, these modalities are most often utilized by clinicians to treat common musculoskeletal injuries. In this article, we will briefly discuss the effects of several popular sports medicine modalities as well as their indications and contraindications.

## Cryotherapy

The application of ice or cold therapy is the most common modality utilized by clinicians treating sports medicine injuries. Cryotherapy can be administered with ice packs, commercial cold packs, ice massage or cold whirlpools. Clinically, the primary goal of cryotherapy is the prevention of swelling by blocking the histamine response and impeding edematous fluids from building up at the injury site, as well as any secondary injury that may have occurred due to surrounding tissue hypoxia. The body's response to cryotherapy application includes vasoconstriction, decreased cellular metabolism and temperature, decreased peripheral nerve conduction, and a decrease in pain. These effects are commonly useful during an acute injury or

in the immediate postoperative period in which a localized inflammatory response has occurred with resultant swelling and pain. Cryotherapy can also reduce spasticity in CNS conditions through a decrease in muscle spindle activity.

The normal sensation experienced by the patient receiving cryotherapy is a sequence of cold, burning, aching and finally numbness. Typically, cold packs are applied for 20 minutes, with periodic skin checks to prevent blister and frost bite formation. Ho, et al<sup>9</sup> studied the effects of icing time on skeletal blood flow, bone metabolism and knee temperatures. The results indicated that the optimal time of icing a knee is 25 minutes, which resulted in a three to four fold increase in the desired effects. Cold application will also decrease nerve conduction speed



through the gate theory mechanism and prevent or slow pain impulses from reaching the brain. Thus, occasional ice or cold massage may be utilized prior to ROM or stretching such as spray and stretch.<sup>26</sup> Clinical trials conducted by Osbahr et al<sup>17</sup> reported the effects of continuous commercial cold therapy to the shoulder joint following rotator cuff repair surgery. The investigators reported the continuous cold group exhibited significantly cooler subacromial space temperatures compared to the control group. Martin et al<sup>13</sup> determined a statistically significant decline of 2°C in knee intra-articular temperature with the application of cryotherapy and compression after routine knee arthroscopy. The contraindications to cryotherapy are cold allergy/sensitivity, skin irritation, compromised circulation and cold intolerance. Continuous cold therapy over nerve tissue (ie. the peroneal) should be avoided.

### Hot Packs

Hot packs are a form of superficial therapeutic heat. They are frequently used in the training room and rehabilitation clinic to assist in the treatment of a variety of injuries. Through conduction, moist heat is capable of reaching subcutaneous tissues to a depth of 1cm or less. The application of heat causes vasodilation with resultant increases in local circula-

tion, thus increasing oxygen and nutrients delivered to the area. Generally these packs are stored in a hydrocollator unit maintained at a temperature of 170° F (76.6° C). When the hot packs are in contact with the skin tissue, temperature is raised by a few degrees (to 104° F) and maintained only for a very short period of time.<sup>10</sup> The topical application of heat may aid in relieving pain by the stimulation of cutaneous thermoreceptors which may block the pain impulses at the CNS (gate theory) before they are transmitted to the brain.<sup>8</sup>

Pain due to joint capsule tightness or muscle spasms may be relieved by increasing tissue extensibility or reducing tone, respectively. Much controversy still exists on the exact mechanism of action of superficial heat, however clinical application continues to be very successful in relieving painful symptoms. Lentell, et al<sup>11</sup> reported that use of superficial heat with concomitant low load, long stretching to improve shoulder external rotation was extremely beneficial compared to non-thermal agents or ice.

### Whirlpool

Whirlpools have been a mainstay in athletic training rooms for years and continue to be utilized for a variety of reasons. Their uses can be classified as a deep or superficial heating modality to treat chronic or acute injuries.

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Whirlpools range in size from being able to submerge an extremity to Hubbard size, which allows full body submersion. Water in the tank is generally between 98–104°F (36–40°C) but varies based on the desired effects. Turbines are used to agitate the water, serving several purposes: provide phasic stimulation to reactive skin afferents, increase hydrostatic pressure, apply resistance/assistance for exercise, remove necrotic tissue and decrease the thermal gradient to keep the temperature stable. The following is a list of usual temperature ranges: very hot (104–110°F); hot (99–104°F); warm (96–99°F); neutral (92–96°F); and tepid (80–92°F).

One common use of whirlpool in sports medicine settings is for wound lavage. The addition of solutions such as povidine iodine or a bleach solution to the water will help reduce the bacterial load in addition to the agitation, which acts as a means of mechanical debridement. Immobilized joints are also frequently treated in a whirlpool by taking advantage of the water's buoyancy properties that facilitate regaining range of motion while using the heating properties to increase tissue extensibility. Warm to hot whirlpools, as is the case with any other heating modalities, should not be used when edema is present. The effects of heat on the edematous area may increase blood supply resulting in increased swelling.

Whirlpools can also be utilized for intermittent contrast (hot/cold) therapy. Often contrast baths are utilized by submerging the injured area into a warm whirlpool then a cold whirlpool, resulting in vasodilation/vasoconstriction. This may be beneficial to reduce chronic types of swelling or edema. It is recommend

**Ultrasound increases tissue temperature by vasodilation and increased blood flow to the area. Other effects of ultrasound are increased collagen extensibility, change in nerve conduction velocities, inhibition of muscle spindles and increased pain thresholds.**



that the warm bath be about 100–110°F and the cold bath be about 55–65°F. The time sequence can vary but a 3:1 or 5:1 ratio of hot to cold is usually recommended.

### **Ultrasound**

Therapeutic ultrasound is a deep-heating modality which penetrates tissue deeper than superficial hot packs or warm whirlpools. Heat is generated by the molecular motion transmitted by a continuous sound wave of .8 to 3.0 MHz that penetrates to depths of 5 cm or more. Continuous ultrasound intensities of 1.0 to 2.0 watts/cm<sup>2</sup> for 5–10 minutes are necessary to achieve tissue temperatures that range from 40–45°C.<sup>14</sup> Sound waves are absorbed by various tissues, causing the production of heat. The greatest rise in temperature occurs in tissues with high protein content such as muscle, tendon and nerve.

Relatively little increase in adipose tissue temperature occurs with ultrasound treatment. In order for the sound waves to travel from the sound head to the skin, a coupling agent such as commercially prepared gels or water is required. The sound head is constantly moved in a circular motion with overlapping strokes and should not be held stationary over one area for a prolonged period of time. This will cause a rapid rise in temperature and will create a hot spot and burning sensation for the patient.

Ultrasound increases tissue temperature by vasodilation and increased blood flow to the area. Other effects of ultrasound are increased collagen extensibility, change

in nerve conduction velocities, inhibition of muscle spindles and increased pain thresholds. Ultrasound assists in increasing tissue extensibility that can aid in regaining soft tissue flexibility due to immobilization or scar formation. Ultrasound should not be used if an athlete has poor sensation, bleeding disorders, cancer or a cardiac pacemaker. It is also contraindicated for acute injuries with edematous or necrotic tissue. Ultrasound can be utilized with an anti-inflammatory agent such as hydrocortisone to drive medication into the tissues. This type of ultrasound is referred to as phonophoresis.

### **Iontophoresis**

The concept of iontophoresis involves the delivery of a charged medication through the skin and into underlying tissue via direct current electrical stimulation. This results in a transdermal form of medicine delivery. The charged molecules are placed under an electrode of the same polarity and repelled into the area to be treated. Many ionic drugs are available, including dexamethasone, lidocaine and acetate. Dexamethasone is the most commonly used medication for treating locally inflamed tissues due to tendinitis, bursitis or arthritis.

An advantage of iontophoresis is the reduction of systemic side effects that may occur when taking a medication orally or by injection. A disadvantage is the inability to treat tissues at deeper depths. Currently, iontophoresis is used in the medical management of inflamed superficial tissues such as lateral epicondylitis, shoulder tendinitis, patella tendinitis, etc. Iontophoresis can also be utilized through disposable patches. This allows the patient to resume normal daily activities while the patch is worn, usually for 20–22 hours.<sup>3</sup>

Iontophoresis is contraindicated in patients with possible allergies or sensitivities to the substance and in patients who have diminished sensation. It is also contraindicated in those who have metal implants, wires or staples in the vicinity of the treated area. Patients with pacemakers should never receive any electrical stimulation modality of any kind. Numerous studies are currently being performed to determine the optimal dosage, frequency and efficacy of iontophoresis as a modality to treat common athletic injuries.

### **Electrical Muscle Stimulation**

Electrotherapy or electrical muscle stimulation (EMS) is often used as an adjunct to treat many sports-related muscular injuries. It was first documented in 48 A.D. by Roman physician Scribonius Largus by using torpedo fish to treat headache and gout.<sup>21</sup> Electrical stimulation has evolved into a common modality used by clinicians today although the exact benefits continue to be researched.

The most common use for Electrical Stimulation in the athletic training room involves the maintenance or gain of strength following an acute injury. The addition of an electrical current will assist in recruiting the necessary motor units to allow for an improved muscle contraction, which otherwise may not have been compromised due to excessive pain, weakness, swelling or fatigue. Electrical stimulation may be beneficial early in the rehabilitation phase when swelling is persistent and reflexively inhibiting muscle activation.<sup>21</sup> Several studies have documented the clinical use of EMS to improve strength and function particularly following reconstruction of the anterior cruciate ligament.<sup>5, 15, 20, 22</sup> EMS has been successfully employed to improve neuromuscular response when applied to the quadriceps, rotator cuff or scapular muscles. Electrical stimulation is an excellent modality to train muscle to recruit more motor units when the patients are unable to voluntarily activate the muscle themselves.

Contraindications to the use of electrical stimulation include patients with a demand-type pacemaker. Stimulation over the carotid sinus, across the heart or over the abdomen of a pregnant woman is also contraindicated. Portable EMS may be utilized for home use as well as in the clinic or training room.

### High Voltage Stimulation

High voltage stimulation (HVS) involves delivering a short monophasic pulse of short duration with known charge across the skin and into acutely edematous tissue. Edema is comprised of negatively charged plasma proteins, which leak into interstitial space. By placing a negative electrode over the edematous site and a positive electrode at a distant site, the monophasic high voltage stimulus applies an electrical potential, which disperses the negatively charged proteins away from the edematous site, thereby helping to reduce edema.<sup>18</sup> Early studies pertaining to the efficacy of HVS involve edema reduction in rats and frogs.<sup>24,25</sup>

Injuries commonly treated with high voltage stimulation are acute ankle and knee sprains as well as post-operative joint effusions. Concomitant application of ice, elevation and compression may be recommended to further inhibit joint effusion. Contraindications to the use of HVS are similar to electrical stimulation.

### Biofeedback

Biofeedback in the training room involves the objective or subjective monitoring of some physiologic event which can be used to alter or enhance performance. Many different instruments are utilized, however the most common one is electromyographic (EMG) biofeedback, in which skeletal muscle electrical activity is detected by surface electrodes and converted into a visual or audible signal. For example, if the goal is to re-educate a post-operative atrophied muscle, the biofeedback unit may be used to indicate electrical activity associated with that muscle contraction. Further intensification of the feedback signal would indicate a stronger relative contraction. Research has demonstrated positive effects through the use of EMG biofeedback versus exercise alone<sup>12</sup> especially following ACL reconstruction.<sup>4</sup> Biofeedback may be contraindicated if a muscular contraction exacerbates a pathological condition or further damages the tissues.

### Other Modalities

There are several less common forms of modalities available. Examples include laser therapy and extracorporeal shock wave therapy. While relatively new in the United States, cold laser (low power) therapy has been utilized in Europe and Canada for 20–30 years.<sup>2</sup> Cold lasers are less powerful than hot lasers, which may be used for surgery. Cold laser therapy reduces pain and inflammation, while the influence on cell metabolic activity increases healing. The laser beam is neurochromatic and is usually concentrated into a microscopic beam width. It is noninvasive and is generally utilized for localized lesions. There is limited objective documentation of the effectiveness of cold laser therapy. Extra corporeal shock wave therapy (orthotripsy) has gained increased popularity recently in the treatment of chronic musculoskeletal conditions. Schaden et al<sup>19</sup> determined improved bony consolidation of nonunion or delayed osseous union fractures after one treatment of shock wave therapy. Shock wave therapy has also been associated with symptomatic improvements in patients with chronic plantar fasciitis and lateral epicondylitis.<sup>16</sup>

These therapeutic modalities are a sampling of the primary tools that sports medicine professionals have at their disposal. The availability of such a wide range of modalities provides a variety of treatment solutions for the needs of patients with sports-related injuries.

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# Annual Meeting 2004



Presidential Guest Speaker Steven N. Blair, PED

A new addition to the Meeting's lineup was the Fred Friendly Seminar, Ethical and Legal Issues in Treating Athletes in a Competitive Environment. A 14-person panel was led through a dynamic, entertaining and thought-provoking discussion by moderator Charles J. Ogletree Jr. of Harvard University. The event's enthusiastic reception will certainly be rewarded with similar types of creative debates and forums at future Annual Meetings.

## annual meeting recap

AOSSM's 2004 annual meeting in Quebec City, Canada, was prefaced on June 24th by the second annual staging of the AOSSM Research Day Workshop, sponsored by Wyeth. The day-long forum included both didactic presentations on strategies to begin and execute research projects as well as informal consultations with faculty regarding attendees' research ideas. The Society expresses its gratitude to Wyeth for its continued support of this event and looks forward to hosting similar opportunities at future annual meetings.

Thursday introduced the packed slate of diverse educational programs that have become the hallmark of AOSSM's Annual Meeting. The lineup of topics included timely issues such as the use of allografts in sports medicine and advances in imaging.

Also on Thursday, the 2004 Mr. Sports Medicine Award was presented to Dr. William Allen. The annual honor recognizes a Society member for outstanding service to sports medicine throughout the world. The recipient is selected by members of the AOSSM Awards Committee. Dr. Allen is a founding member of AOSSM and also served as president from 1984-1985. In addition, he served as the Godparent to the AOSSM Traveling Fellowship in 1997.

Steven N. Blair, PED, the President and CEO of the Cooper Institute, served as the Presidential Guest Speaker for this year's event. Dr. Blair, a recipient of the Surgeon General's Medallion, addressed attendees

about the long-term benefits of exercise and the pitfalls of inactivity, including hypertension, Type 2 diabetes and obesity.

Keeping with the Annual Meeting's identity as a family-friendly affair, each afternoon and evening had ample time for attendees to visit the culture-rich surroundings of Quebec City. With the walled streets of Old Quebec and the historic Plains of Abraham just steps from the convention center, participants did not have to wander far to explore the historic monuments and indulge in the outstanding local cuisine.

Attendees enjoyed a welcome reception, sponsored by Breg, on Thursday evening in the ballroom of the Quebec Hilton. Friday featured the 15th Annual Golf Tournament, supported by dj Ortho, which raised over \$10,000 for AOSSM research and education, as well as tours of the Beupre Coast and Montmorency Falls. A Dine-Around event capped Friday's activities. Saturday evening was highlighted by the International Summer Festival and Cirque, supported by Smith&Nephew. Quebec City's historic Drill Hall was transformed into a blur of color and sound, as hundreds of attendees and their families enjoyed live music and a tribute to Cirque de Soleil.

AOSSM thanks the Program Chair, Louis C. Almekinders, MD, the Program Committee and the Instructional Course Chair, W. Ben Kibler, MD for coordinating another successful Annual Meeting.

# awards

A full listing of award recipients appears on page 12.



Michael E. Shepard, MD (left) is congratulated by Louis C. Almekinders, MD for capturing the 2004 AOSSM Poster Award. Poster No. 45, Differences in the Ultimate Strength of the Biceps Anchor and the Generation of Type II Slap Lesions in a Cadaveric Model, is featured in the background.



David B. Cohen, MD, is presented with the Excellence in Research Award by Jo A. Hannafin, MD.



Walton W. Curl, MD (left) is presented with the George D. Rovere Award by Mark Miller, MD.



William C. Allen, MD (left) receives the 2004 Mr. Sports Medicine Award from William A. Grana, MD.



Matt Crawford, MD (left) accepts the 2004 Cabaud Memorial Award from Louis C. Almekinders, MD.



Climbing Wall

## International Summer Festival and Cirque



More pictures from the 2004 Annual Meeting will soon be available on the AOSSM website.

# Annual Meeting 2004 (continued)

## Annual Meeting Awards

### Thomas A. Brady, MD Community Service Award

This annual award is given to an individual who has dedicated himself to community service. This year's recipient was:  
**John E. Leach, MD**

### George D. Rovere Award

This annual award is presented to members who have made a significant contribution to orthopaedic sports medicine education. This year's recipient was:  
**Walton W. Curl, MD**

## Award Winning Papers

### Cabaud Memorial Award

This award is given to the best paper concerning hard or soft tissue biology, in-vitro research, laboratory or "bench-type" research, in-vivo animal research. This year's recipient was:

**Lyophilization Does Not Inactivate Infections Retrovirus in Systemically Infected Bone and Tendon Allografts**

*Matthew J. Crawford, DO, PhD  
Cheryl Swenson, DVM, PhD  
Steven Arnoczky, DVM  
Jeremy O'Shea, Herbert Ross, DO*

### Excellence in Research Award

This award is presented annually to the best paper submitted in any category with a primary author under the age of 40 at the Annual Meeting. This year's recipient was:

**Traditional Non-Steroidal Anti-Inflammatory Medications and Cyclooxygenase-2 Inhibitors Impair Rotator Cuff Tendon-to-Bone Healing**

*David B. Cohen, MD  
Sumito Kawamura, MD  
John R. Ehteshami, MD  
Scott A. Rodeo, MD*

### Herodicus Award Presentation

This award is given to the best paper submitted whose primary author is a resident. This year's recipient was:

**Topical Glyceryl Trinitrate Treatment of Chronic Supraspinatus Tendinopathy: A Randomized, Double-Blind, Placebo Controlled Clinical Trial**

*Justin Alan Paoloni, MBBS  
Janis Nelson, BPharm  
George A.C. Murrell, MD, PhD*

### O'Donoghue Sports Injury Research Award

This award is given to the best overall paper that deals with clinical based research or human in-vivo research. This year's recipient was:

**Biomechanical Measures of Neuromuscular Control and Valgus Loading of the Knee Predict ACL Injury Risk in Female Athletes: A Prospective Study**

*Timothy E. Hewett, PhD  
Gregory D. Meyer, MS CSCS  
Kevin R. Ford, MS  
Robert S. Heidt Jr., MD  
Angelo J. Colosimo, MD  
Scott G. McLean, PhD  
Antoine van den Bogert, PhD  
Mark V. Paterno, MS, PT, ATC  
Paul Succop, PhD*

### Hughston Award

This award is presented annually for the most outstanding paper that has appeared in *The American Journal of Sports Medicine* in the previous year. This year's recipient was:

**Risk Factors Associated with Noncontact Injury of the Anterior Cruciate Ligament: A Prospective Four-Year Evaluation of 859 West Point Cadets**

*COL John M. Uhorchak, MD  
COL Charles R. Scoville, MPT  
Glenn N. Williams, PT, SCS  
COL (Ret.) Robert A. Arciero, MD  
LTC Patrick St. Pierre, MD  
LTC Dean C. Taylor, MD*

### 2004 Aircast Award for Clinical Science

This award is given to the best clinical science paper submitted whose primary author is a fellow.

This year's recipient was:

**Validation of Near Infra Red Spectroscopy and Magnetic Resonance Imaging as Diagnostic Modalities in Chronic Exertional Compartment Syndrome**

*Johan G.H. van den Brand, MD  
Teresa Nelson, MS  
Egbert J.M.M. Verleisdonk, MD, PhD  
Christian van der Werken, MD, PhD*

### 2004 Aircast Award for Basic Science

This award is given to the best basic science paper submitted whose primary author is a fellow. This year's recipient was:

**Comparison of Pre-season, Mid-season and Post-season IMPACT and SAC Concussion Management Scores in Uninjured Collegiate Football Players**

*Jennifer R. Miller, MD  
John C. Sweet, MA, ATC  
Selina Shah, MD  
Gregory J. Adamson, MD*

## 2004 Hall of Fame Inductees

**Bernard R. Cahill, MD  
Frank C. McCue, III, MD  
Robert R. Oden, MD**

**2004 Mr. Sports  
Medicine  
William Allen, MD**



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Welcome to the website of the American Orthopaedic Society for Sports Medicine (AOSSM), a world leader in sports medicine education, research, communication, and fellowship. Founded in 1972, AOSSM is a national organization of orthopaedic surgeons dedicated to sports medicine. Who are our members? They are physicians helping weekend warriors cope with the effects of aging . . . team doctors ensuring health and safety at all levels of sport . . . researchers working to help athletes prevent and manage injury. In short, sports medicine is more than their job - it is their passion.

Monday, August 18, 2004

### Quick Links



**As Society members returned from a successful AOSSM Annual Meeting at the end of June, they were greeted by a shining example of the organization's constant efforts to better serve its constituents.**

### The Fresh Face of Sportsmed.org

A completely redesigned AOSSM website, [www.sportsmed.org](http://www.sportsmed.org), was unveiled to the Society's members, affiliates and to the general public on June 28. While the address remains the same, the new AOSSM website has moved well beyond its predecessor in a variety of aspects.

Starting with the opening screen, visitors to the AOSSM homepage will immediately experience a more vibrant and organized appearance. A white background is bordered by a deep blue and highlighted by images of athletes in motion. The aesthetic enhancements also make the text on each page easier to dissect.

Enhanced organization and ease of navigation are the hallmarks of the new website. The front page of [www.sportsmed.org](http://www.sportsmed.org) provides users with immediate access to upcoming AOSSM events, important deadlines, current news and available downloads. The main 'table of contents' menu bar – located across the top of the page – directs visitors to the main areas of the site: Membership, Education, Research, Fellowships, the AOSSM Library, Exhibiting and the new Online Store. A menu bar that descends the left side of the introduction page provides fast access to popular areas of the site, including the News Room, Sponsorship and information about the Society.

### New Tools for the Trade

The new website has not simply been improved visually. The upgrades to [www.sportsmed.org](http://www.sportsmed.org) include an array of new features that will be of immediate use to society members. The [AOSSM online store](#) is open for business, with shelves full

of valuable resources such as *Orthopaedic Knowledge Update 3* and a new series of the popular *Sports Tips*.

[AOSSM meetings and courses](#) will benefit from a lineup of tools that includes online registration, downloadable prospectuses, exhibitor information and informational features. For future events, interactive floor plans and interactive surveys will enhance the meeting experience for both attendees and exhibitors.

Society members are also now able to [pay their annual dues](#) and [update their member profile online](#). Once logged in, members have access to a link that will display outstanding dues and present the option to pay them with a credit card via a secure online transaction. When logged in, members will also be able to update their name, address and contact information and instantly submit changes directly to the AOSSM office.

### Future Features

A multitude of additional features lie on the horizon for [sportsmed.org](http://sportsmed.org). A forum for society members to trade insights and an improved 'Ask the Sports Doc' tool for the general public are among the upcoming additions. Also being considered is an online bank for community-based PowerPoint presentations for use by members.

AOSSM believes that the new website will serve as your primary portal to online sports information. The improved functionality of the site has increased the capacity of the AOSSM staff to create new solutions for meeting the needs of the Society. If you have any questions or suggestions on how to improve [sportsmed.org](http://sportsmed.org), contact the Society office at [eric@aossm.org](mailto:eric@aossm.org).

# Remembering Twenty Years of Fellowship: The AOSSM/APOA (Formerly WPOA) Traveling Fellowship Exchange

This article is part of a series exploring the history of the Traveling Fellowship program, which was proposed in 1984, and founded in 1985. At the 1984 AOSSM Annual Meeting in Anaheim, Dr. George Snook brought up the possibility with John Feagin, then president of AOSSM. Dr. Snook, already planning a trip to Japan that summer with his wife, volunteered to meet with officials there. His primary contact was Dr. Sempo Takatsuki, now deceased, as well as Takaki Ikata, MD and Haruo Takazawa, MD. It took another two years before the first exchange occurred, in 1986. For the first two years of the program, the participants were from the Japanese Orthopaedic Association and AOSSM. Dr. Hirohita suggested expanding the program to include other Pacific Rim countries. Dr. Bernard Cahill, of Peoria, Illinois, had many contacts in the Pacific Rim. He worked with K.M. Chang of Hong Kong, Brian Casey of Australia, and others to evolve the tour to its current state.

*The following interview with Dr. Snook was conducted shortly before the 2004 Annual Meeting.*

**What challenges did the Pacific Rim Program face during its inception?**

**Dr. Snook:** The biggest challenge to the Pacific Rim Program was the apathy in the organization. There appeared to be little interest in the Pacific Rim at the time. The absence of a sponsor by the second year was an additional factor and there were many members who suggested that we drop it. From my contacts and experiences in Japan I still had hopes, and the enthusiasm of the early Fellows especially Edward Wojtys, Allen Anderson and Wayne Leadbetter, as well as those in the following group, were of enormous assistance. When Aircast came to the rescue as a sponsor, the program took off and has been successful.

**In what way do you think the program helps prepare participants for leadership roles?**

**Dr. Snook:** Only the individuals that aspire to leadership positions would apply for this program. As a general rule, the program opens new experiences and enables the participants to start an international aspect to their career. This helps to develop a wider appreciation for sports medicine and allows one to help the specialty both at home and abroad. This is a basic tenet in the practice of medicine.



*Traveling Fellowship participants pose in front of a traditional torii gate in Japan.*



*Left to right:  
Allen F. Anderson MD,  
Wayne B. Leadbetter MD,  
Edward M. Wojtys MD,  
George A. Snook MD,  
Takaaki Ikata MD (Japan),  
K.M. Change MD  
(Hong Kong)*



Left to right: Allen F. Anderson MD, George A. Snook MD, Edward M. Wojtys MD, Wyane B. Leadbetter MD

**How did your participation in the program affect your view of medicine?**

**Dr. Snook:** My participation was as Godfather and I was already aware of the practice of Orthopedics in Japan and Hong Kong. The program improved my knowledge and awareness of the practice. This was especially true of Hong Kong in that I was not as knowledgeable as I thought I was.

**What one memory from your participation stands out the most for you?**

**Dr. Snook:** The memories of traveling with three companions who were interesting and enthusiastic participants in both the cultural and scientific parts of the program. Specifically on a scientific level, I was greatly impressed with the attention given to rehabilitation in the countries. They were way ahead of anything I had observed in the United States. The emphasis on children in Hong Kong and on the handicapped in Japan was impressive. For example when one sees volleyball for the blind, one becomes aware of new frontiers.

**AOSSM/APOA (Formerly WPOA) TRAVELING FELLOWS (2002-1988)**

**North American Participants in the AOSSM — APOA Traveling Fellowship Exchange**

**2004**  
*Carol C. Teitz, MD*  
 Paul H. Marks, MD  
 James R. Slauterbeck, MD

**2001**  
*Arthur L. Boland, MD*  
 Jefferson C. Brand, Jr., MD  
 Mark R. Hutchinson, MD  
 David M. Lintner, MD

**1999**  
*Freddie H. Fu, MD*  
 Frederick M. Azar, MD  
 Christian A. Guier, MD  
 Daniel C. Wascher, MD

**1997**  
*William C. Allen, MD*  
 Kevin D. Plancher, MD  
 (Lt. Col) Mark D. Miller, MD  
 Robert F. LaPrade, MD

**1995**  
*Jay S. Cox, M.D.*  
 Robert A. Arciero, M.D.  
 Eugene Berg, M.D.  
 Gregory C. Fanelli, M.D.

**1993**  
*Frank H. Bassett, III, M.D.*  
 David F. Martin, M.D.  
 Dean C. Taylor, M.D.  
 Carol C. Teitz, M.D.

**1991**  
*Bernard R. Cahill, M.D.*  
 Gregory T. Bigler, M.D., FAAOS  
 John R. Frankeny, II, M.D.  
 Robert C. Schenck, Jr., M.D.

**1989**  
*George A. Snook, M.D.*  
 Allen F. Anderson, M.D.  
 Wayne B. Leadbetter, M.D.  
 Edward M. Wojtys, M.D.

**Pacific Rim Participants in the AOSSM — APOA Traveling Fellowship Exchange**

**2004**  
*Patrick Timothy Keenan, MD FRACS*  
 David Parker, MD FRACS  
 Edward A. Sarrosa, MD FPCS FPOA  
 Andrew Vincent, MD FRACS

**2002**  
*Antonio Rivera, MD*  
 Dr. Seung-Ho Kim  
 Leou-Chyr Lin, MD Asc. Professor  
 Somsak Kuptniratsaikul, MD

**2000**  
*Moroe Beppu, MD*  
 Yue Sie Wong, MD  
 Mohamed Razif bin Mohamed Ali  
 James Lam, MD

**1998**  
*Shigeto Nakagawa, MD, PhD*  
 Dr. David Keith Martin  
 Respati Suryanto Drajat, MD  
 Bruce C. Twaddle, M.B.Ch.B., F.R.A.C.S.

**1996**  
*Robert Wen-Wei Hsu, M.D.*  
 Yong Girl Rhee, M.D.  
 Arturo C. Canete, M.D.  
 Wiroon Laupattarakasem, M.D.

**1994**  
*Amit Kanta Mitra, MBBS, FRCS*  
 Akito Handa, M.D.  
 Stephen Y.C. Hsu, MBBS, FRCS, FRACS  
 Mohd Ismail Maulut, M.D.

**1992**  
*Brian H. Casey, M.D.*  
 Mario B. Geronilla, M.D.  
 Peter T. Myers, M.D.  
 Bambang Tiksnadi, M.D.

**1990**  
*In-Ju Lee, M.D.*  
 Shen-Kai Chen, M.D.  
 Vatanachai Rojvanit, M.D.

**1988**  
*Professor Takaaki Ikata*  
 Kai-Ming Chan, M.D.  
 V. Prem Kumar, M.D.  
 Kandiah Raveendran, M.D.

*Italics denotes tour's Godparent.*

## New Sports Tips Debut

A pair of hot-off-the-presses AOSSM Sports Tips, the Society's popular patient-education handouts, were released at the 2004 Annual Meeting in Quebec City. The two new topics are Alpine Skiing and Snowboarding Injuries and Running and Jogging Injuries. Also unveiled were six updated Sports Tips topics from the original series, which have been revised with full-color graphics and current content.



### Alpine Skiing and Snowboarding Injuries

The popularity of skiing has increased dramatically in the past century and, since its inception in the 1960s, snowboarding has become increasingly popular as well. Alpine Skiing and Snowboarding Injuries reviews questions regarding on how to enjoy both of these activities safely. Topics covered include:

- How Do Skiers Get Hurt?
- What Injuries Are Related to Equipment? How do I prevent them?
- How common are ACL injuries in snow sports?
- What are the trends in snowboarding injuries?



### Running and Jogging Injuries

Running and Jogging Injuries includes a detailed, colorful, comprehensive chart that explores all of the major running and jogging injuries that can affect the foot, leg, knee, thigh/pelvis, and back, including information on the cause, symptoms, and treatment. This Sports Tip is a valuable addition to the AOSSM library, answering some of the most frequent questions about one of the most popular recreational sports, such as:

- What causes running injuries?
- How are running injuries treated?

### Other recently-updated Sports Tips topics include:

- Ankle Sprains
- Exercising for Bone Health
- The Injured ACL
- Plantar Fasciitis
- Stress Fractures
- Tennis Elbow

Sports tips are available in the AOSSM online store at [www.sportsmed.org](http://www.sportsmed.org) Orders may also be placed via phone (877) 321-3500 or fax (847) 292-4905.



# Upcoming Meetings & Courses

## 2004

**Sports Medicine & Hockey: 2004**  
August 27–29, 2004  
Hilton Toronto  
Toronto, Canada

**AOSSM SURGICAL SKILLS COURSE: Advanced Surgery for the Athlete's Shoulder**  
September 17–19, 2004  
Orthopaedic Learning Center  
Rosemont, Illinois

**Advanced Team Physicians Course**  
December 2–5, 2004  
Eden Roc Resort  
Miami Beach, Florida

## 2005

**AOSSM Soft Tissue Allograft Workshop**  
January 15–16, 2005  
Hilton Atlanta  
Atlanta, Georgia

**Specialty Day**  
February 26, 2005  
Washington, DC  
*(All registrations will be handled by AAOS)*

**AOSSM 31st Annual Meeting**  
July 14–17, 2005  
Keystone Resort  
Keystone, Colorado

**AOSSM SURGICAL SKILLS COURSE**  
August 26–28, 2005  
Orthopaedic Learning Center  
Rosemont, Illinois

**2006 Specialty Day**  
March 11, 2006  
New Orleans, Louisiana  
*(All registrations will be handled by AAOS)*

**AOSSM 32nd Annual Meeting**  
June 29–July 2, 2006  
Hershey Lodge & Convention Center  
Hershey, Pennsylvania

## 2007

**AOSSM 33rd Annual Meeting**  
July 12–15, 2007  
Telus Convention Centre  
Calgary, Alberta, Canada

For more information on upcoming meetings and courses or to view Preliminary Programs, please visit our website, [www.sportsmed.org](http://www.sportsmed.org), under CME Meetings and Courses or call 877/321-3500.

## In Memoriam:

### John Gregg, MD (1943 – 2004)

AOSSM member John Gregg, MD, passed away on June 22 at his home in Paoli, Pa., after succumbing to heart disease. A member of the Society since 1982, Dr. Gregg was 60 years old at the time of his passing. Over the course of his career, Dr. Gregg served as the team orthopaedist for the NHL's Philadelphia Flyers and provided consultation for the Philadelphia and Pennsylvania Ballet, as well as the University of Pennsylvania athletic programs. In addition to his private practice, Dr. Gregg instructed orthopedics and sports medicine at Children's Hospital of Philadelphia and the University of Pennsylvania School of Medicine. Gregg was a valuable contributor to AOSSM's Council of Delegates. Dr. Gregg is survived by his wife, JoAnn Luketich Gregg, daughters Molly Philipp, Lisa Gregg-Platt and Amy, as well as three grandchildren.

## Other Announcements

### Membership Application Deadlines

Active, Associate, Affiliate	October 15, 2004
Upgrade to Active	November 1, 2004
Candidate	December 1, 2004

For more information or membership applications, go to [www.sportsmed.org](http://www.sportsmed.org) or call AOSSM Membership at 847/292-4900.

### Research Award and Grant Deadlines

**Cabaud Memorial Award** November 1  
Awarded to the best paper on hard or soft tissue biology, in vitro research, laboratory or bench-type research, or in vivo animal research.

**Excellence in Research Award** November 1  
Awarded to the best paper in any category with a primary author under age 40 at the Annual Meeting.

**O'Donoghue Sports Injury Research Award** November 1  
Awarded to the best overall paper that deals with clinical-based research or human in vivo research.

**Young Investigator Grant** December 1  
This grant is specifically designed to support researchers who have not received prior funding.

More information can be found on [www.sportsmed.org](http://www.sportsmed.org) under "Research" and "AOSSM Awards."

## Grant Recipients

### Kinematic Magnetic Resonance Imaging of the Anterior Cruciate Ligament Injured and Reconstructed Knee

**C. Benjamin Ma, MD**



*C. Benjamin Ma, MD*

Reconstructions of anterior cruciate ligament injuries are recommended to avoid early arthrosis and meniscal pathology. Although short-term outcomes are favorable, long-term outcomes of reconstructions are less encouraging with arthrosis. To date, objective evaluations of the ACL injured and reconstructed knees include laxity measurements, muscle strength and plain radiographic imaging. These examinations are useful but cannot identify intra-articular pathology directly. Magnetic resonance imaging is a non-invasive method for evaluating intra-articular pathology, however, these are static images and may not reveal pathology that are usually symptomatic during activities.

The basic tenet of this proposal is that a successful long-term outcome of the ACL injured or reconstructed knee must have restoration of normal in vivo biomechanics of the knee. Besides restoration of knee laxity and muscle strength, in vivo kinematics of the menisci and cruciate ligaments during passive and especially active knee motion must be restored.

To test these hypotheses, we will use an innovative experimental methodology that will enable us to study the in vivo biomechanics of intra-articular structures within the knee. We will employ dynamic magnetic resonance imaging, a non-invasive dynamic imaging method, to characterize shapes and positions of different knee structures during various simulated motions. From these dynamic images, we will extract information on knee kinematics, excursions and strain data of different intra-articular structures during various knee motions.

Our goal is to identify the significance of abnormal in vivo biomechanics following ACL injuries and the ability of current ACL reconstructions in restoring in vivo biomechanics. We believe that this methodology will enable critical evaluation of current surgical treatments, leading to better outcome following ACL injuries.

### A Randomized Clinical Trial Comparing the Effectiveness of a Subacromial Decompression to Subacromial Bursectomy for Rotator Cuff Tendinosis

**Kevin R. Willits, MD**



*Kevin R. Willits, MD*

The most commonly performed surgical procedure to treat rotator cuff tendinosis, when no full-thickness tear exists, is a subacromial decompression (acromioplasty). This procedure is based on the theory that primary acromial morphology is the initiating factor leading to the dysfunction and eventual tearing of the rotator cuff. Several studies have indicated that the vast majority of partial-thickness tears are found on the articular surface of the rotator cuff which is not in keeping with the theory that rotator cuff impingement is primarily a result of acromion morphology. Arthroscopic bursectomy with debridement of rotator cuff tears alone, without acromioplasty, addresses the primary anatomical pathology and may offer similar success rates to subacromial decompression, without the risk of future instability caused by resection of the acromion and release of the coracoacromial ligament.

Our hypothesis is that an arthroscopic subacromial decompression provides no clinically significant benefit as evaluated with disease specific quality of life measures over an arthroscopic subacromial bursectomy for patients with rotator cuff tendinosis. This is a double-blind randomized clinical trial of 114 patients, with rotator cuff tendinosis, who will be randomized to undergo either arthroscopic subacromial decompression (acromioplasty) or arthroscopic subacromial bursectomy (no acromioplasty). The Western Ontario Rotator Cuff Index (WORC) is the primary outcome measure. Follow-up evaluations will take place at 6 weeks, and 3, 6, 12, 18, and 24 months postoperative.

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# THANK YOU

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