

# CONVERSATIONS IN ORTHOPEDICS

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Athletic Injuries of the  
**WRIST AND HAND**

Page 8

Meet Eisenhower Desert  
Orthopedic Center's  
**Sports Medicine  
Specialists**

Page 10





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CONVERSATIONS IN  
ORTHOPEDICS

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Eisenhower Desert Orthopedic Center is committed to helping people lead active lives, whether it's through treating a sports or work-related injury, detecting osteoporosis, replacing a joint, or relieving chronic or acute pain. Our mission is to continually develop and maintain comprehensive programs in all areas of orthopedics, addressing each aspect of patient care from initial consultation, diagnosis and treatment through recovery. Our focus is on quality care, investing in the technology and personnel necessary to deliver our services efficiently and to achieve the desired results for each patient.

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**On the cover:** Eisenhower Desert Orthopedic Center's sports medicine specialists: Matthew V. Diltz, MD; Stephen J. O'Connell, MD; Patrick St. Pierre, MD; and James A. Bell, MD, PhD

DIRECTOR'S LETTER

Commitment to Athletics:  
In Our Community and Worldwide



Welcome to the second edition of the Eisenhower Desert Orthopedic Center's *Conversations in Orthopedics*. The inaugural issue focused on our Comprehensive Spine Center and laid out the outstanding care it provides for very complicated spine and pain problems. As director of the Eisenhower and Desert Orthopedic Center sports medicine programs, it is my pleasure to share the efforts of my colleagues in providing care to athletes not only here in the Coachella Valley but throughout the world.

In this issue, we share with you our commitment to community by providing world-class care to our high school and junior college athletes; baseball players aspiring to make it to the professional level; and, of course, the world's best tennis players who grace the Indian Wells Tennis Garden every year. Additionally, our Eisenhower Desert Orthopedic research coordinator, Charlie Cyr, who is also the director of U.S. Figure Skating judges, shares with you his experiences judging the Olympics, as well as the recent involvement by Dr. Bell, Dr. Diltz and myself as U.S. Figure Skating team physicians for international competitions.

Dr. Stephen Steele shares his perspective as a primary care sports medicine physician and how the commitment we all share to the integration of primary care and orthopedic surgeons helps all of our patient-athletes. Having the opportunity to work with Dr. Steele at College of the Desert and the BNP Paribas Tennis Open at Indian Wells, I have developed an incredible respect for his compassion, professionalism and expertise in primary care sports medicine.

Paige Larson focuses on the role of physical therapy in keeping our athletes healthy and participating not only here at home but also with her travels with U.S. Figure Skating. Deidre Braun, L.Ac., discusses the benefits of acupuncture not only in treating injuries but also in reducing pain and improving performance.

As you can see, we take care of a lot of teams in the area. However, we are well aware that most of our athletes are playing recreational sports and range in age from 20 to 90-plus years old. In addition to detailing our high school responsibilities, Dr. Diltz also shares recent advances in arthroscopy that help us care for everyone. Dr. O'Connell, chairman of Desert Orthopedic Center, and Andrew C. Allen, PA-C, cover sports injuries of the hand and wrist and describe how to treat those injuries and get athletes back to all levels of activity.

Finally, I share how being medical director of the Indian Wells Tennis tournament and the California Winter League opens up opportunities to interact with sports medicine professionals throughout the world and helps bring the newest technology and techniques to all of our patients in the valley.

I hope you find the magazine fun and educational. Please enjoy the articles, and feel free to follow up with any one of us if you have any questions. We hope you see our dedication and passion for all of our patients and realize that we are here to help you with your orthopedic needs.

Patrick St. Pierre, MD





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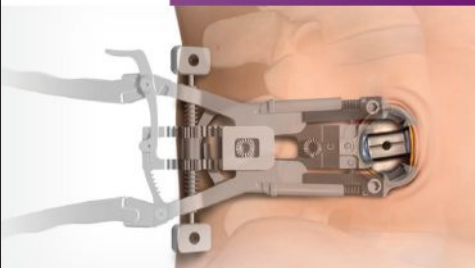


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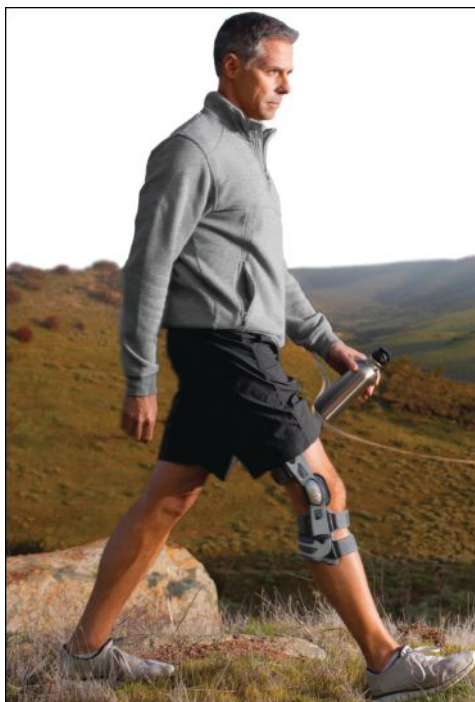


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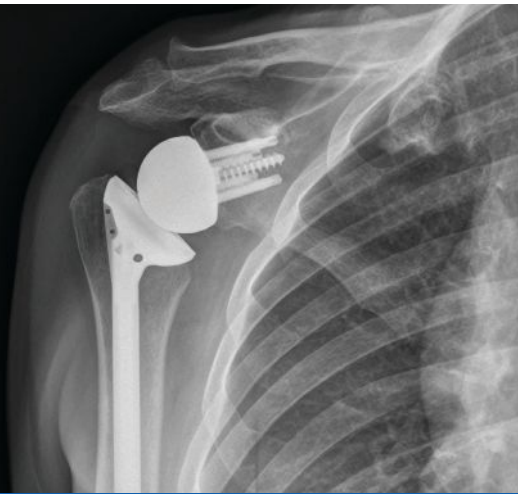
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## Contents

- 3** Director's Letter
- 6** The Season
- 7** Local Sports Coverage in the Coachella Valley
- 8** Athletic Injuries of the Wrist and Hand
- 10** Eisenhower Desert Orthopedic Center Sports Medicine Specialists
- 12** Primary Care Sports Medicine
- 13** Taking It One Step Further
- 14** Acupuncture and Sports Injuries
- 16** Shoulder Solutions
- 17** Innovations in Arthroscopy
- 18** Ankle Sprains

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# THE SEASON



by Patrick  
St. Pierre, MD

“The Season” is here — good weather, outdoor activities and entertainment everywhere you turn. Is tennis part of your game? If it is, then the BNP Paribas Tennis Open at Indian Wells is probably a part of your Coachella Valley experience. This event brings in tennis players from around the world and many from outside the valley to see this Masters event every year. Touted by many as the “fifth major,” only the four Grand Slam events draw more spectators, and in 2015, Indian Wells is anticipated to surpass at least one of those events. Who takes care of these athletes and spectators? The short answer: We do!

In 2009, Eisenhower Medical Center and Desert Orthopedic Center entered into an agreement with the tournament as well as the Tennis Gardens to provide coverage for the tournament, not only to care for the players but also to provide emergency care for the hundreds of thousands of spectators who attend. I serve as medical director for the tournament and director of orthopedic services. Dr. Steele directs primary care services, and Dr. Euthym Kontaxis, director of the emergency department at EMC, coordinates the emergency services for the grounds. A completely volunteer effort, the demands on our practices are

certainly felt, but the rewards personally and to our patients are numerous. All of us utilize partners to help out with the event, and Dr. Diltz and Dr. Bell assist with the orthopedic care of the players, making this truly an Eisenhower Desert Orthopedic Center endeavor.

Is tennis not your game? How about baseball? Did you know that we have two baseball leagues in Palm Springs that play each year? Directed by Andrew Starke, the California Winter League (CWL) has grown into the premier event to showcase independent professional baseball players heading into Major League Baseball spring training. The Palm Springs Power, also owned and directed by Starke, competes in the Southern California Collegiate League, showcasing college baseball players being scouted for major league contracts. As medical director of the CWL and the Power, I care for sports injuries related to baseball, as well as advising the league about return-to-play issues and player medical decisions related to their professional careers.

All of this may sound like fun for those of us in this magazine, but what about you — our patients? How does this help you? By being at the forefront of sports medicine and caring for these high-caliber athletes in a variety of sports,

*In many ways, I think keeping our patients involved in exercise has a much more profound effect on the quality of their lives, both physically and mentally.*

including tennis, baseball, football and ice skating, we are constantly learning and using state-of-the-art philosophy and techniques when caring for you on a daily basis. Dr. Steele and I attended the ATP physician conference this past year and lectured and discussed sports injuries with other physicians taking care of athletes at Wimbledon, the US Open and other events. All of us are members of sports medicine and arthroscopy associations that are spearheading innovations in operative and nonoperative care of our athletes. Of course, the majority of our athletes are recreational athletes and use sports to have fun, stay fit and enjoy the company of others. In many ways, I think keeping our patients involved in exercise has a much more profound effect on the quality of their lives, both physically and mentally. When I return any athlete to the playing field, no matter what level of competition, I consider it a great day.

So no matter what your sport, your level of competition or your desired activity, if an injury gets in your way, let EDOC sports medicine help you recover and return to that active lifestyle and sport that you enjoy! ■



# Local Sports Coverage

## in the Coachella Valley



Matthew V. Diltz, MD

If you have recently supported a high school or junior college football team in the Coachella Valley, there is a good chance there was an Eisenhower Desert Orthopedic Center physician pacing the field. For the last decade, EDOC has provided athletic coverage for local high school football teams that include Palm Springs, Palm Desert, Desert Hot Springs, Rancho Mirage, Xavier College Prep, Desert Christian Academy and College of the Desert Junior College. Dr. Matthew Diltz commented, "We feel that it is important to ensure the safety of the student-athletes and make sure they are able to compete to their full potential. We work closely with the athletic trainers at the schools to coordinate care of athletes on and off the field."

Event coverage is an important component of sports medicine. Common injuries managed on the football field include dislocated shoulders, knee injuries, ankle sprains and broken bones. Often, the trainer is the first one to evaluate the player on the field with the confidence that the physician is there to help manage the athlete. There is correspondence between the trainer and the physician to continue to follow the injured student and provide appropriate management. Acute injuries are managed on the field. There is also a focus on injury prevention. Particularly in the Coachella Valley, it is important to recognize the symptoms and treatment of heat illness. A hydration plan is implemented prior to competition.

*Common injuries managed on the football field include dislocated shoulders, knee injuries, ankle sprains and broken bones.*

Another condition that has gained increased focus is the treatment of concussions. In the past, the goal was to get the athlete back to play. We now realize the importance of a thorough evaluation to determine if a concussion

has occurred. Symptoms of concussion include amnesia of prior events, decreased ability to create memory and difficulty with concentration. If the player has these symptoms, he is withheld from return-to-play and followed until the symptoms resolve. Many of the schools have adopted an objective test to determine when the symptoms of concussion have resolved. A baseline is obtained prior to competition and then is used after a concussion has occurred to determine when the student-athlete is able to compete again.

In addition to donating time covering sports, the physicians at Eisenhower Desert Orthopedic Center and Eisenhower hospital also provide pre-participation physical exams for the student-athletes. Any funds received for these exams are donated back to the school sports program. It is a beneficial program for both the schools and the doctors involved in athletics. The doctors are able to develop a rapport with the student-athletes and document prior injuries that may affect performance.

It is not just football. Whatever the playing field, whatever the injury, athletes can trust the physicians at Eisenhower Desert Orthopedic Center to get them back in the game. We work with the athletic trainers at the schools to keep track of the injured players in all sports and make sure they maintain the path to recovery. There are primary care doctors



and orthopedic surgeons who specialize in sports medicine. They use evidence-based medicine to diagnose and treat common sports injuries. It is important to recognize that less than 10 percent of injuries will go on to need surgery. The vast majority of injuries are diagnosed and treated with nonoperative modalities. The goal of the sports program is to keep the athlete playing at an optimal level. ■



# Athletic Injuries<sup>of the</sup> Wrist and Hand

by Andrew C. Allen, PA-C; and Stephen J. O'Connell, MD



**T**he human hand consists of 29 bones, 29 joints, 123 ligaments, 34 muscles and 48 nerves. Combine this fact with the desert lifestyle, synonymous with golf and tennis, and it is easy to understand why approximately 25 percent of all athletic injuries involve the wrist and hand. While fractures of the wrist and hand bones are relatively common, they make up a smaller percentage of "athletic injuries." More ubiquitous are problems we attribute to overuse. These problems typically involve tendons, the structures that attach muscle to bone; and, to a lesser degree, ligaments, the framework that connects bone to bone.



Inflammation of a tendon (tendinitis) and stretching or partial tearing of a ligament (sprain) can be quite painful and debilitating, leading to time away from the golf course or tennis court, thus impacting the quality of life. The good news is that the majority of these problems are amenable to minimally invasive treatment regimens, hence limiting athletic downtime. The key is recognizing the symptoms of some of these more common maladies so as to intervene in a timely manner and restore function as soon as possible.

### **DeQuervain's Tenosynovitis**

DeQuervain's syndrome, or disease, is the most common tendon problem of the wrist in athletes. Patients present with pain over the thumb side of the wrist, usually one to two inches above the base of the thumb. Pain with motion of the thumb and/or wrist is typical. Swelling in this area is not uncommon, and in some cases, painful catching or popping in this area may be present. The pain results from two tendons rubbing against a tunnel that usually acts as a frictionless stabilizer.

### **Flexor Tenosynovitis**

More commonly known as "trigger finger," this tendon problem usually results in one or more fingers painfully catching, or triggering, with flexion and extension. Swelling in the involved finger(s) is typical, and a painful palpable nodule in the palmar flexion crease is considered diagnostic. Like DeQuervain's syndrome, the culprit is a size disproportion between the tendon and its respective tunnel.

### **Intersection Syndrome**

Common in racquet sports, intersection syndrome usually develops over the back of the wrist, about three to four inches before the wrist joint. It is attributable to the forceful, repetitive wrist flexion and extension that sports such as tennis require. It is these same movements that will produce pain. People will often feel a crunching or what is described as a squeaking sensation in this area. Impingement of two tendons at their intersection is thought to be the causative factor.

### **Extensor Carpi Ulnaris (ECU) Tenosynovitis**

This is the second most common sports-related injury of the wrist. Pain with this

particular problem is localized to the small-finger side of the wrist. The pain is often exacerbated by extending and moving the wrist in the direction of the small finger. Pain over the ulna head, the bump on the left side of the wrist, is typical. Inflammation in the tunnel, where the tendon is stabilized over bone, is the source of the pain.

### **TFCC Injuries**

The triangular fibrocartilage complex (TFCC) is made up of several structures in the wrist, designed primarily to stabilize the wrist while it rotates from palm up to palm down or vice versa. A common mechanism of injury is a "fat" golf shot. The pain is again located over the small-finger side of the wrist. Pain with rotation of the wrist and/or with moving the wrist in the direction of the small finger is common. This particular ligament is prone to wear and tear over time and

The hamate is one of eight carpal bones in the wrist and is unique in that it has a prominence, known as the hook or hamulus, that rises from the body of the bone. This hook is located at the base of the palm on the small-finger side of the hand and coincides with the butt of a golf club or tennis racquet when gripped. This predisposes the hook to fracture with a forceful swing of the club or racquet. Patients may feel a pop or exquisite pain in the area of the hook with the initial insult. Subsequent activity on the course or court often produces recurrent episodes of pain and limitation. Delayed diagnosis and treatment are common, averaging eight months from the initial injury, as individuals attribute the pain to a sprain or muscle pull.

### **Treatment**

There is a popular misconception that as we age, aches and pains are to be

*While it is true that overuse injuries are more prevalent as we age, aging, in and of itself, is not the cause nor the diagnosis.*

thus is predisposed to a sprain with an acute injury.

### **Carpal Tunnel Syndrome**

Although not typically considered a sports injury, the pervasive nature of carpal tunnel syndrome warrants a brief discussion. Classically, patients experience numbness, tingling and/or pain in one or both hands. Pain is often worse at night and will frequently disrupt sleep. Positional symptoms are also common and may occur with activities such as driving, holding a book or newspaper, and talking on the phone. The source of this problem is a compressed or "squeezed" nerve in the carpal tunnel located in the wrist. Incidentally, the most common cause of this problem is inflammation of the tendons in the tunnel, thus increasing the pressure on the nerve.

### **Hamate Fractures**

Fractures of the wrist and hand with contact sports are commonplace. However, one particular fracture of the wrist is worthy of discussion given the significance of golf and tennis here in the desert.

expected, and when they occur, tolerated. While it is true that overuse injuries are more prevalent as we age, aging, in and of itself, is not the cause nor the diagnosis. Many times, individuals will not seek medical attention for an overuse injury because they fear the treatment. Concerns over lengthy and perhaps painful treatments, coupled with the fear that they may have to give up the activities they enjoy, impede early diagnosis, treatment and restoration of full function. However, the majority of the conditions we discussed here can be treated with simple modalities. These include rest, modification, therapy and anti-inflammatories — oral, topical and injectable. In cases that are not amenable to these conservative therapies, a minimally invasive surgical procedure may be recommended. These procedures are typically done in an outpatient surgical center, rarely requiring general anesthesia. Comprehensive follow-up ensures a speedy recovery and an optimal outcome, guaranteeing a quick return to the golf course or the tennis court. ■



## EISENHOWER DESERT ORTHOPEDIC CENTER

# Sports Medicine Specialists

**James A. Bell,**  
**MD, PhD**  
**Orthopedic Surgeon**



James A. Bell, MD, PhD, is a board-certified orthopedic surgeon specializing in orthopedic trauma, sports medicine and joint replacement. He is also certified in sports medicine. He joined Desert Orthopedic Center in 1996.

A native of New York, Dr. Bell knew at a young age that he wanted to be a doctor. With anatomy as his favorite school subject, it was only natural for him to pursue medicine.

Commenting on his specialty, Dr. Bell says, "Orthopedic trauma is like a puzzle. You have to determine your plan of action and treat the injuries with the most serious consequences first."

Dr. Bell received his Bachelor of Arts in biology from the University of Rochester, New York, and his master's and PhD in physiology from Pennsylvania State University. He earned his medical degree and served his orthopedic surgery residency at the University of Southern California.

Following graduation at USC, Dr. Bell spent four years in the U.S. Army as an orthopedic surgeon serving at U.S. hospitals and traveling around the world. Prior to joining DOC, he was chief of the Department of Orthopedics and lieutenant colonel for the 67th Combat Support Hospital in Wuerzberg, Germany. He is a fellow of the American Academy of Orthopaedic Surgeons and a member of the American Medical Association, the California Medical Association and the Riverside County Medical Association.

Dr. Bell serves as the team physician for Palm Springs High School football games and is also a team physician with the U.S. Figure Skating Association.

*"What I like most about this profession is helping people recover from traumatic situations or get back to their favorite sport."*

**Matthew V.**  
**Diltz, MD**  
**Orthopedic Surgeon**



Matthew V. Diltz, MD, is a board-certified and fellowship-trained orthopedic surgeon specializing in sports medicine. He is a native of Southern California. After graduating from the University of Southern California with a major in sports medicine and exercise physiology, he traveled to New Orleans to attend medical school at Tulane University. He returned for his residency at the University of California, Irvine. He completed his training at Boston Children's Hospital – Harvard with a fellowship in adult and pediatric sports medicine.

Dr. Diltz has worked with athletes of all levels. He has served as team physician for Desert Hot Springs High School, Cathedral City High School, Xavier College Preparatory High School, College of the Desert, Northeastern University and the Boston Ballet. He has received special training in hip arthroscopy and the treatment of complex anterior cruciate ligament (ACL) injuries. Dr. Diltz believes in an integrated approach to the treat-

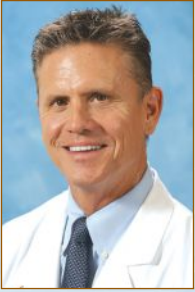
ment of sports injuries, with the involvement of physical therapy and trainers. He is committed to providing the highest level of care to each and every individual that comes to his practice. Dr. Diltz remains involved in clinical research and has multiple articles in preparation as well as book chapters for *Operative Techniques in Pediatric Orthopaedics*. He continues to provide education to the community with lectures.

Memberships include the American Board of Orthopaedic Surgery, the American Academy of Orthopaedic Surgeons, the American Orthopaedic Society for Sports Medicine, the Arthroscopy Association of North America, the California Orthopaedic Association and the California Medical Association.

*"It is important to sit down with the patient and determine their goals, then use the resources available to achieve an optimal result."*



**Stephen J. O'Connell, MD**  
**Director of Hand & Upper Extremity Surgery**



Stephen J. O'Connell, MD, is a fellowship-trained, board-certified orthopedic surgeon specializing in surgery of the hand, wrist and shoulder. He joined Desert Orthopedic Center in 1988 to establish and direct the center's hand and upper extremity program. A native of our nation's capital, Dr. O'Connell grew up in the Maryland suburbs. He graduated *magna cum laude* from the University of Notre Dame. He returned to Maryland for medical school and earned his medical degree from the University of Maryland School of Medicine in Baltimore, where he also served his internship and residency. Dr. O'Connell then completed a fellowship at the renowned Indiana Center for Surgery and Rehabilitation of the Hand and Upper Extremity in Indianapolis. He also received an added qualification in hand surgery from the American Society for Surgery of the Hand.

Dr. O'Connell is a fellow of the American Academy of Orthopaedic Surgeons and a member of the American Society for Surgery of the Hand, the American Medical Association, the California Medical Association, the Riverside County Medical Association, the Indiana Hand Society and the University of Maryland Surgical Society.

Dr. O'Connell actively lectures to the medical community on surgical techniques and to the public on topics of interest in orthopedics. He has a particular interest in arthroscopic rotator cuff and stabilization surgery of the shoulder, fracture of the wrist and hand, and soft-tissue reconstruction of the hand and wrist.

*"Helping people regain function or relieve pain so they can get back to their work or favorite activity is what I enjoy about surgery of the hand and shoulder."*

**Patrick St. Pierre, MD**  
**Director of Sports Medicine**



Patrick St. Pierre, MD, is committed to the care of athletes of all ages and serves as the team physician for College of the Desert, Palm Desert High School and Palm Springs Power Baseball. As medical director for the BNP Paribas Tennis Open, he cares for the world's best tennis players on a yearly basis. He has also served as team physician for the Army Athletics (West Point), the Tacoma Sabercats West Coast Hockey League (AA professional hockey), the Tacoma Rainiers Pacific Coast Baseball League (AAA professional baseball) and Marymount University. He is a nationally recognized shoulder expert and, as such, is the only Coachella Valley member of the prestigious American Shoulder and Elbow Surgeons and one of only 200 members nationwide.

Center, he completed fellowships in medical research at the Walter Reed Army Institute of Research and in orthopedic sports medicine at West Point. He is certified by the American Board of Orthopaedic Surgery and is an active member of the American Academy of Orthopaedic Surgery, the Arthroscopy Association of North America, the American Orthopaedic Society for Sports Medicine and the American Shoulder and Elbow Surgeons.

Dr. St. Pierre is very involved in sports medicine and shoulder research and has been recognized with several international and national awards. He has written numerous articles and book chapters and has edited four books on sports medicine. He frequently lectures around the world on sports medicine, shoulder and arthroscopy topics.

*"My goal each day is to help patients alleviate pain, restore function and to stay active and healthy so they can stay fit for life."*



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# PRIMARY CARE SPORTS MEDICINE



by Stephen R. Steele, DO

Eisenhower's sports medicine team is specialty trained to care for athletes. One key element of Eisenhower's sports medicine team is the primary care physician. I, like the others, do not limit my care to just athletes. I am an expert in the field of preventing injuries, caring for the injured and rehabilitating the athlete. In addition, another major focus of my patient care is educating patients about the benefits of an active lifestyle and how best that should be initiated or continued. Therefore, we sports medicine physicians care for all ages and all walks of life.

Eisenhower has a full team of experts aligned and communicating to assure the proper care and rehabilitation of our patients. The orthopedists and primary care physicians work side by side in many of these situations. On the sidelines of the College of the Desert football field, at the Humana Challenge and at the BNP Paribas Tennis Open, we stand together focused on immediate world-class care of the athletes. From our many years of experience in these settings and others, we care for the sedentary person, the weekend warrior and the young athlete with the same top-notch care.

Primary care physicians are an integral component of the sports medicine team. We are not only trained to care for the basic nonsurgical injuries, but we are also trained to address issues such as illnesses, nutrition, sports psychology, substance

*Primary care physicians are an integral component of the sports medicine team.*

abuse and, most importantly, injury prevention. One particular area of great need is working with special populations such as young children, the chronically ill, the disabled and older adults. Exercise prescription is one aspect of primary care sports medicine physicians' training. Each one of these special populations has specific concerns to be considered when prescribing a fitness program.

As military physicians, Dr. St. Pierre and I have learned that clear and open lines of communication are critical. Good communication is a core skill used to lead a sports medicine team to world-class care. We are trained to evaluate, diagnose and rehabilitate sports-related injuries. We are also trained to lead a team of other professionals like athletic trainers, physical therapists, nutritionists and psychologists. In addition, we must communicate with players (perhaps their parents), coaches, ath-



letic directors and, at times, the media. Good communication often prevents mistakes or delays and is the key to our success.

Primary care sports medicine specialists play on a team just like an athlete plays on a team — we work together for the best outcome. We care for every type of person imaginable, so don't think that you are not the type of person that should be seen by a sports medicine specialist. All patients can benefit from our expertise. We will care for you just like we care for a professional golfer or tennis player. We want to be on your team! ■





by Charlie Cyr

# Taking It One Step Further

Edmundston, New Brunswick, Canada, sometime in January 1974. It's 5:30 in the morning, and lacing my skates for another morning of patch has become commonplace in my life as an athlete. I step on the ice and head toward my little corner of the ice rink to commence my 45 minutes of executing compulsory figures.

There are other skaters on the ice, and there is no talking. The only sound is that of the compressors in the arena working to keep the ice at a constant temperature. I assume my position and mentally picture the compulsory figure 8 that is about to be etched on the ice surface. I etch the first tracing and then repeat it two more times on each foot. I repeat the task on other figure 8s for the rest of the time, continuously looking at the etchings and scrutinizing the shape of the turns, circle size and symmetry required, always wanting the ultimate goal of duplicating the first etching. Varying more than a quarter-inch will definitely be considered a failed attempt.

I would later be known for my precise execution of compulsory figures but never enough to make an Olympic team. Other avenues involving skating would later prove to be the passion that would provide a world stage.

Fast-forward to 2014, Eisenhower Medical Center (EMC) and Eisenhower Desert Orthopedic Center (EDOC). I never thought that moving to Southern California — and even less the desert — would still keep me involved in the sport I loved. I have been on EMC's campus for 34 years, first starting in the Radiology Department and then moving on to Eisenhower Desert Orthopedic Center (then Desert Orthopedic Center). It was here in the desert that I would not only be given opportunities professionally but also allowed to pursue my passion. And with that pursuit, involving EMC and EDOC as formidable allies and supporters was key.

Through the years, EDOC has always been involved in sporting activities, from accommodating visiting golfers for high-profile tournaments to being the physicians of record for the California



lurii Osadchi/Shutterstock.com

Angels when they wintered in Palm Springs. EDOC expanded its involvement with sporting activities by accommodating tennis in the early '90s and expanding to its elite status in today's International Tournament. EDOC not only provided orthopedic expertise to the international elite athletes, but it also provided a visible presence to all area high school football games by having EDOC physicians provide free coverage during the games.

When Ice Castles of the Desert was built, it seemed to be a perfect fit for EDOC physicians to become part of the skating scene. I was now working as a research coordinator for both EMC and EDOC and felt very confident that the elite athletes who would be training in the desert would do well with the expertise that EDOC's sports medicine physicians and EMC's facilities could offer. With the help of EMC and EDOC, an elite/international program for ease of access was rolled out and is in operation today.

EDOC's sports medicine arm has taken it one step further. Dr. Bell, Dr. Diltz and Dr. St. Pierre are also members of the U.S. Figure Skating Sports Sciences and Medicine Committee. Paige Larson,

director of the Physical Therapy Clinic at EDOC and the Argyros Outpatient Clinic, is also a member of the committee. All travel internationally with the U.S. Figure Skating Junior and Senior teams, many of which were part of the 2014 Winter Olympic Games held in Sochi, Russia.

Through my time on EMC's campus and being part of EDOC, my involvement with skating also grew. However, it was not without the support of both organizations. Though I have not skated in an Olympic Games, I have participated in four of them — from heading the U.S. delegation in skating in the 2002 Games in Salt Lake City to judging the ice dance event in 2010 in Vancouver, Canada, to providing consulting services for the 2006 Games in Torino, Italy, and the 2014 Games in Sochi, Russia.

Who would have thought that going around in circles for hours on end would have eventually developed into a lifelong passion? Hearing my name announced on the Olympic ice at the 2010 Winter Olympic Games was definitely a high, but seeing the enthusiasm displayed by my colleagues as they play an active role with elite athletes is the best. ■

# ACUPUNCTURE AND SPORTS INJURIES



by Deidre Braun,  
M.S., L.Ac.

Are you a weekend warrior or an elite athlete? Acupuncture can help you recover faster from injuries and improve your performance. As noted in an article in *Men's Health*, many athletes use acupuncture for pain relief, such as former New York Giants running back Tiki Barber, who frequently used acupuncture for relief from muscle strains during his NFL career. As quoted in the same article, "It helps your body recover

from injury faster," according to Marianne Fuenmayor, MSLAc, chairwoman of the acupuncture department of Pacific College of Oriental Medicine in New York City. The article cites a theory by Kwokming James Cheng, MD, that the body may increase the flow of oxygenated blood to injured areas as a response to acupuncture needles, thereby helping to speed the healing process.

Acupuncture has a very successful record with sports injuries. Many professional sports teams have acupuncturists on staff to decrease healing times and resolve stubborn ailments. The use of acupuncture to treat acute injuries from intense or repetitive physical activity began centuries ago. It was, and still is, one of the prime means of quick healing for the martial arts. Pain is one of the most common complaints in sports injuries, followed by reduced function. The treatment is geared toward rectifying the disorder and restoring internal harmony.

Recent studies show that acupuncture effectively treats sports injuries such as strains; sprains; neck, shoulder, elbow, wrist, knee, hip and ankle pain; swollen muscles; and shin splints. In addition to treating the injury, acupuncture can also improve performance and give athletes a competitive edge.

## Here are some of the ways acupuncture can help:

**1. Pain relief:** Acupuncture is well known for its powerful ability to reduce and often eliminate pain. This is a huge attraction for athletes who are plagued by strain and injury. Using acupuncture to relieve pain, the athletes never have to worry about experiencing side effects from pharmaceutical drugs or failing a drug test. How does acupuncture alleviate pain?

Several studies have shown that when needles are inserted, they stimulate points that boost our natural painkillers. In one study, researchers at the University of Michigan (published by University of Michigan Health System in *Journal of NeuroImage*. Vol. 5, No. 83, 2009) found that acupuncture affected the brain's long-term ability to regulate pain.

**2. Muscle relaxation:** Athletes train for thousands of hours, which is punishing to their bodies. Acupuncture reduces soreness from workouts and increases blood flow throughout the body. This helps athletes get ready for another day by relaxing their tight muscles and reducing inflammation.

**3. Fast healing:** When an athlete has to skip training or miss a competition, precious time is lost. Acupuncture helps injuries to heal faster so athletes do not miss valuable training time.

**4. Energy enhancement and better sleep:** Acupuncture boosts the athlete's energy when he or she is awake and helps the athlete to sleep at night. The body repairs itself at night, so sleeping well is vital to a good performance.

**5. Improved blood flow:** Acupuncture increases the amount of nitric oxide in the body. A study from UCLA Medical Center (Responses of Nitric Oxide-cGMP Release in Acupuncture Point to Electroacupuncture in Human Skin in Vivo Using Dermal Microdialysis, *Microcirculation*, 2009 May, 26:1-10) concludes that one reason acupuncture is effective is because the needles



increase the release of nitric oxide throughout the body. Nitric oxide causes the blood vessels to relax and widen, thereby opening up the arteries. This allows better blood flow to the heart and to other important organs.

The length of time and the number of treatments for recovery is variable, but oftentimes, the longer a problem exists, the longer it takes to recover and heal from it. In general, an acupuncturist will seek to resolve the acute injury while also addressing the underlying cause, with the goal of preventing the tissue from occurring in the future. So whether you are a weekend warrior or an elite athlete, acupuncture can speed your healing time.

**Some common sports injuries treated with acupuncture include:**

- Muscle sprain/strain/pull
- Hamstring strain
- Neck pain
- Lower back pain/strain/sprain
- Runner’s knee
- Shoulder pain
- Shin splints
- Tennis/golfer elbow
- Ankle sprain
- Achilles tendinitis
- Groin pull
- Plantar fasciitis ■

**Resources**

Men’s Health Magazine, Pacific College, Emperors College



“Thank you, Deidre.”

*“I had Achilles tendinitis, and I tried everything from physical therapy, hot and cold laser, injections and, finally, acupuncture. No doubt the acupuncture was the most effective treatment and after a few treatments brought me back to the pickleball courts. Thank you, Deidre.”*

Werner Z.



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# Shoulder Solutions

The shoulder is a ball-and-socket joint and functions to allow a person to use his or her arm and place the hand where desired. Because the socket is very shallow, it relies on the rotator cuff muscles to stabilize the joint and allow it to move and perform very complex functions.



Patrick  
St. Pierre, MD

Injury to the rotator cuff is very common, especially in patients who continue to be active in sports such as golf, tennis and weightlifting. In most cases, it involves bursitis or small partial tears that can be managed with rest, anti-inflammatory medication, injections and rehabilitation. Even when the injury develops into a more severe full-thickness tear, the rotator cuff can be repaired with same-day arthroscopic surgery. The recovery may take some time because it takes

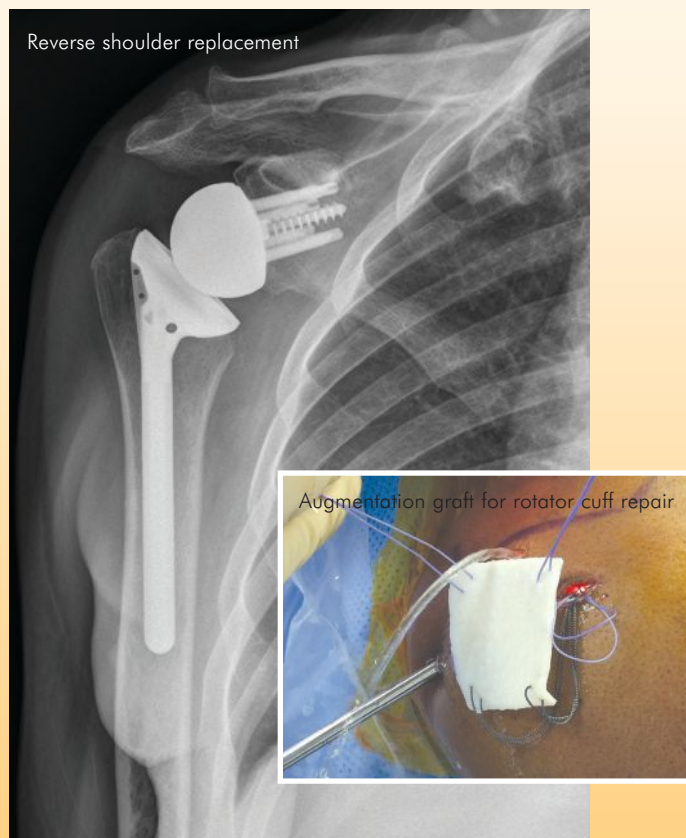
three months for a tendon to heal back to a bone and function, but most patients regain nearly full range of motion and function in time and return to their previous levels of activity. However, in some cases, there may be a very large tear, atrophy of the muscles or other factor such as smoking or diabetes that prevents optimal healing of the rotator cuff and leads to failure of a repair. In those instances, the shoulder will con-

tinue to be painful, and patients will lose strength, function and range of motion. Because current technology does not allow us to replace torn rotator cuff muscles with new ones, we are constantly searching for additional ways to enhance healing to improve our repairs and other methods to allow patients better function and pain relief.

One new technique that is still in its developing stages is the use of tissue patches to support the rotator cuff repair and potentially enhance healing. Early patches were developed out of allograft (processed cadaver tissue) or xenograft (processed grafts from animal tissue) and were very strong but did not enhance healing. Early techniques involved a larger incision to place the grafts, but newer arthroscopic techniques have been developed and used in revision rotator cuff repair cases in which standard repair techniques have previously failed. Remarkable results have been obtained in some cases, but results are inconsistent, often due to the body's reaction to the graft.

In an effort to improve these patches, a company has developed an absorbable collagen scaffold xenograft that is not as strong as the first generation of these grafts but enhances tissue healing and regeneration of tendon. The follow-up of a small number of these cases is very short, but early MRIs after repair show very promising results. Dr. St. Pierre has been involved with early study groups for the use of this tissue and is now authorized to use it in selective patients. With EDOC being involved in cutting-edge innovation such as this, patients in the Coachella Valley have access to advanced technologies that can improve their chance of full recovery.

When the rotator cuff is unreparable, or there has been a failed previous attempt at rotator cuff repair, the shoulder can be quite painful and weak. Up until a few years ago, orthopedic surgeons did not have a way of consistently helping these patients, as standard shoulder replacements would not work in patients without a functioning rotator cuff. In 2004, the Food and Drug Administration (FDA) approved use of the "reverse shoulder" replacement for patients with these conditions. It has also been used in the treatment of severe shoulder fractures, with great success. Dr. St. Pierre has been a leader in the use of the reverse shoulder replacement and serves as a consultant and design surgeon for one of the major implant companies, DJO Surgical. By performing over 100 reverse shoulder replacements a year, he is among the highest-volume surgeons in the world and teaches other orthopedic surgeons around the country on the indication and surgical technique for this shoulder replacement. A once-rare surgery is now a common shoulder solution in the Coachella Valley. ■





# Innovations in Arthroscopy



by Matthew V. Diltz, MD

As technology advances, there are developing innovations in surgery. A common tool for sports medicine procedures involves the use of a camera. An arthroscope is essentially an underwater camera. Sterile fluid is pumped into a joint to create space and provide a minimally invasive means to evaluate that portion of the body. We are able to assess the ligaments that hold the joint together, the smooth surfaces of the joint and the muscles that attach there.

Injuries that occur within the joint can become a constant source of discomfort and disability. These injuries often do not heal. When an injury occurs outside of the joint, the process of healing occurs. There is bleeding, followed by a blood clot, then scar tissue that is remodeled to the normal tissue. Within the joint, the same process does not occur. Part of the reason is evolutionary. If each time a joint was injured, it filled with blood, then scar tissue, we would quickly lose the ability to keep moving. The fluid within the joint prevents the formation of the blood clot and stops the process from starting. For this reason, we need to treat many injuries within joints with surgery. Some common procedures include rotator cuff tears in the shoulder, meniscus tears in the knee and, more recently, labral tears in the hip.

The hip is a ball-and-socket joint. The labrum is the rubbery “O” ring that surrounds the edge of the socket and works to hold fluid pressure in the hip. It can be torn with motions that cause the ball and socket to pinch or impinge the soft tissue between them. Some individuals have less motion of the hip due to the contour of the ball and socket. This is known as impingement and can predispose individuals to injuries to the labrum. We also commonly see labral tears with athletics. Individuals who place the hip in supra physiologic positions in dance and skating commonly have injuries. Traumatic injuries can occur in athletes as well. We can confirm the presence of impingement or a tear of the labrum with an MRI. This gives us the ability to look at the soft tissue and evaluate for an intra-articular injury.

Typically, patients will have pain that is referred to the groin region with activities.

Our knowledge and treatment options for intra-articular hip injuries have greatly expanded over the last 10 years. In the past, there were few minimally invasive options for soft-tissue injuries to the hip. The larger, open procedures required a large incision and the detachment of muscles, making recovery long and painful. We are now able to use the same minimally invasive arthroscopic procedures in the hip.

*Our knowledge and treatment options for intra-articular hip injuries have greatly expanded over the last 10 years.*

The concept of hip arthroscopy is not a new one. Michael S. Burman was the first to describe the procedure in 1931. At that time, he used a cadaver to demonstrate the technique but did not think it was applicable to healthy patients due to difficulty getting the camera into the limited space. The first tears of the labrum were documented in 1957 and 1959. These were identified through an open approach after a hip dislocation. It was not until 1986 that a labral tear was identified with an arthroscope. We now use a sophisticated table to distract the ball and socket and create room to

evaluate the joint arthroscopically. One or two additional small incisions are used to address the injury found in the joint. Often, we are able to place string or sutures around the injured “O” ring and tack it back to the rim of the socket using plastic tacks. When there is an abnormal contour to the ball and socket, a small bur is used to reshape the bone.

The results of hip arthroscopy to evaluate and treat labral tears and impingement are encouraging. We have expanded our knowledge of the types of injuries that occur within the joint. We have been able to reduce pain and return athletes back to competitive sport.

We are now looking at injuries that occur to the muscles outside of the hip joint. These muscles function to bring the leg out to the side, or abduct the leg. Tears of the muscles can cause pain that is referred to the outside, or lateral aspect, of the hip. Often, patients complain of difficulty with walking and a limp. We can use the camera, or arthroscope, to inspect the attachment of these muscles and, when necessary, reattach them back to bone.

The limitation of these sports medicine procedures relates to the condition of the cartilage or soft tissue cushioning of the joint. When there is a loss of the cartilage, this is referred to as arthritis. The results of sports medicine procedures are limited when there is a loss of cartilage. When patients present for evaluation, we get radiographs to evaluate the space between the bones at the joint. This can give us an estimation of the degree of arthritis. When there is little space between the bones and the joint has worn out, a joint replacement may be a better option. Just as advances have been made in arthroscopic options for injuries, there have been advances made in approaches to joint replacement. Now many joints are replaced by an approach from the front that spares the attachment of muscles and improves recovery. It is important to meet with your doctor to discuss the different options available. ■

# Ankle Sprains



by Paige Larson, MPT

There were only 10 seconds left in the basketball game, and we were down by one point. The crowd was roaring, and the fans were on their feet. If we won the game, we would be on our way to a national championship — the first time in our school's history! As I took my defensive stance, I knew this was it. Any hope of winning the game would be to steal the ball and break away for an easy layup. We would win the championship, and then the crowd would really go wild! I saw my opportunity and started to reach for the ball. I shifted all my weight onto my right leg and pivoted to the left as I reached to grab the ball. At that moment, I felt a sudden pain in my ankle and fell to the floor. I grabbed my ankle and writhed in pain. I knew something was wrong — I had just sprained my ankle. Three ... two ... one. Game over. We lose.

Ankle sprains are common injuries in many sports, and they are defined as a stretching or tearing of a ligament (a ligament connects one bone to another). A grade-1 sprain is when the ligament is stretched and the ankle is swollen, painful and stiff but still stable. A grade-2 sprain is when there is a partial tearing of the ligament, leaving the ankle to also be swollen, painful, bruised and stiff with some instability. Grade-3 sprains are when the ligament is torn completely with signs and symptoms similar to a grade-2 sprain but results in a greater loss of function and may require surgical intervention. A grade-3 sprain often is associated with a tearing sensation in the ankle or hearing a pop or snap. Ligaments do not have as good a blood supply as a tendon (which connects a muscle to a bone), thus warranting further medical attention.

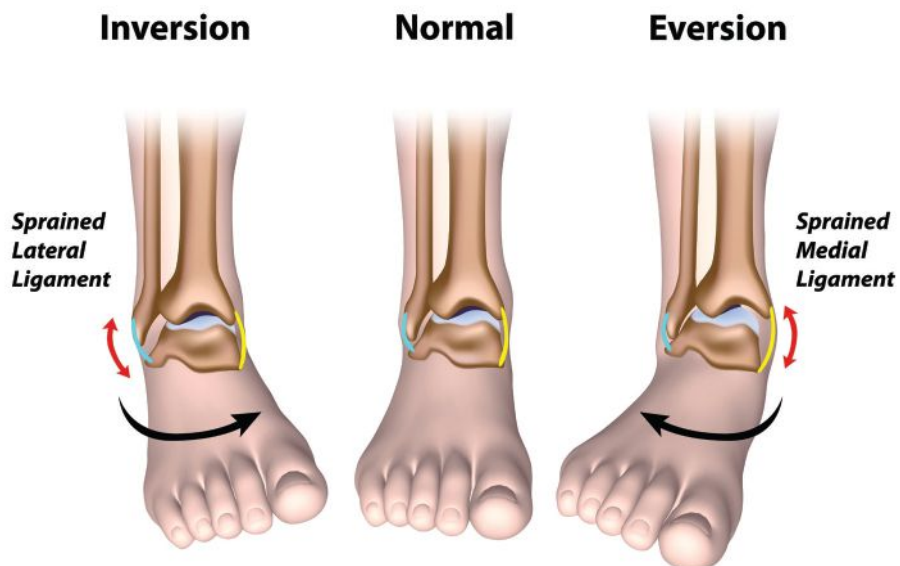
High ankle sprains also can occur but are much less common. In a high ankle sprain, the force translates up through the ankle and can cause a ligament stretch or tear at the base of your leg. These sprains often take much longer to heal and may even need surgery to stabilize the ankle.

Inversion ankle sprains are the most common and occur when the foot is pointed

down and moves inward while the ankle rolls outward. This most often causes a sprain to the anterior ankle ligament and may often include the inferior ligament as well. An eversion ankle sprain is just the opposite and can cause injury to the medial ligaments. Depending on the severity of the sprain, you may be able to continue walking on it, or you may need to use crutches because it hurts too much to put pressure on it. Ankle sprains are

often tender to touch and may hurt to move initially.

Immediate care is to elevate and ice the ankle. If the pain and swelling do not show improvement in 24 to 48 hours, you should contact your physician. Further care may include additional rest, icing and elevation, or even a more extensive workup such as an MRI or a referral to physical therapy. ■





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