LOCAL MOTION
keeping you in motion
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A HINSDALE ORTHOPAEDIC ASSOCIATES PUBLICATION

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IN THIS ISSUE

Feeling the Heat

Ketan Mody, MD and Rob Neighbors, MS, ATC

Individuals participating in activities under hot and humid weather conditions need to be aware of the dangers of heat-related illness. Heat-related illnesses such as heat cramps, heat exhaustion, and heat stroke are very serious conditions that can be potentially life threatening (see chart on page 2).

The management of heat-related illness begins with awareness and recognition. Heat cramps are marked by muscle spasms that result from an excessive loss of electrolytes such as potassium and sodium through sweating. Heat exhaustion; characterized by headaches, confusion, irritability, decrease in performance, nausea/vomiting; is caused by a loss of circulatory volume through excessive sweating. Untreated, heat exhaustion can quickly progress to heat stroke, the most dangerous and life-threatening form of heat illness. Heat stroke involves a failure of the body's ability to regulate heat and is marked by mental status changes and an elevated core temperature above 104 degrees F (40 degrees C). Without emergent cooling, cells die and organs fail, causing permanent damage and possibly death.

(continued on page 2)

Hinsdale Orthopaedic Associates Sports Performance Institute

Hinsdale Orthopaedic
Sports Performance Institute

Hinsdale Orthopaedic Associates is proud to announce the opening of the Orthopaedic Sports Performance Institute (OSPI), a new 12,000 square foot sports medicine facility just down the road in Westmont, Illinois.

The Orthopaedic Sports Performance Institute (OSPI) has been designed to provide comprehensive state-of-the-art sports medicine care. OSPI houses expert physicians fellowship-trained in orthopaedic surgery and sports medicine; x-ray; physical therapy; dedicated space for dance medicine, sports performance and injury prevention; as well as an educational conference center, all to help keep you at the top of your game.

The physicians and staff at OSPI are recognized for their leadership in education, state-of-the-art technology and research. Whether you are an athlete, injured worker, weekend warrior, or someone who just enjoys an active lifestyle, the physicians at OSPI treat everyone like a champion and are committed to keeping you healthy, active and going strong.

OSPI also hosts the Hinsdale Orthopaedic SPORTS MEDICINE INJURY CLINIC (urgent hotline: 1-877-4HO-SMIC) with available same day-next day physician visits with evening and Saturday hours to help get you healthy and back in the game as quickly as possible.

At OSPI, with a sports performance and physical therapy area just a few steps from the physician exam area, physicians can bridge the gap between in-the-office care and on-the-field care and evaluate athletes in action. This allows an entire sports medicine team including physicians, physical therapists, athletic trainers, and strength coaches to work together and meet your every care need.

OSPI offers much more than just physical therapy. Under the direction of your sports medicine physician, physical therapists and athletic trainers are available to help you naturally enhance your athletic performance and prevent injury with specific programs focused on general fitness, balance, core stability, vertical leap, speed, agility, power, overhead throwing, hitting, or other sport-specific goals.

OSPI also has a conference center to provide lectures and seminars to other physicians, coaches, athletic trainers, athletes, and parents in our community on sports performance (steroids, nutrition, performance training, psychology, etc), injury prevention and safety (ACL, pitching, skiing, etc), innovations and technology in orthopaedic surgery, and research related to sports injuries and their management.

(continued on page 2)

Hinsdale Orthopaedic
Sports Performance Institute

For map and directions, visit:
www.hoasc.com

Whether you are an athlete, injured worker, weekend warrior, or someone who just enjoys an active lifestyle, OSPI is geared to today's athlete and focused on keeping you healthy, active, and going strong.

OSPI opened in January of 2008 and is located at 1010 Executive Court, Suite 250, in Westmont. It is just west of Route 83, north of Ogden Avenue.

- **Fellowship-trained Orthopaedic surgeons and non-operative physicians specializing sports medicine**
- **Physical Therapy**
- **Sports Performance (general fitness, balance, core stability, vertical jump, speed, agility, power, throwing, overhead hitting, or other sport specific goals)**
- **Injury Prevention (ACL, throwing, long distance training, etc)**
- **Dance Medicine**
- **Sports Medicine Injury Clinics 1-877-4HO-SMIC (877-446-7642)**
- **Newsletter**
- **Educational conference center to provide lectures and seminars to other community physicians, coaches, athletic trainers, athletes, and parents on sports performance enhancement (steroids, nutrition, performance training, psychology, etc), injury prevention and safety (ACL, pitching, skiing, etc), innovations and technology in orthopaedic surgery, and research related to sports injuries and their management research**
- **Injury surveillance and prevention research**
- **Clinical outcomes and basic science research in orthopaedic surgery and sports medicine**

Sports Medicine Injury Clinics
1-877-4HO-SMIC
(877-446-7642)

Saturday hours available during the Football Season starting August 30th

(Heat continued from page 1)

Because adequate cooling means are not always readily available and heat-related illness can progress quickly, prevention is critical and all efforts should be made to minimize risk. The intensity and duration of workouts should be limited and progressed gradually, typically over 14 days, until the body has acclimated (adapted) to exercising under hot and humid conditions. Proper hydration and nutrition before, during and after activity is crucial to prevent excessive losses of electrolytes and water. Avoiding environmental extremes of the mid-day with early morning and late evening workouts when temperatures are at their lowest will reduce the risk. In extreme heat, workouts should be modified to eliminate the need for heavy equipment such as helmet-only practices for football. Regular rest periods to allow the body to cool and rehydrate can also prevent heat-related illness.

Risk factors for heat-related illness also include obesity, extremes of age (<15 or >65 years of age), poor cardiovascular fitness, dehydration, lack of sleep, intense activity, excessive clothing, history of heat illness, recent illness with fever, other medical conditions (heart, lung, blood) and the use of certain drugs and medications including alcohol, dietary supplements (ephedra), anti-anxiety medications (valium) and high blood pressure medications (beta blockers and diuretics).

If heat-related illness is suspected, immediate treatment is required. Individuals suffering from heat cramps should drink electrolyte-replacement fluids and rest in a cool environment to prevent the progression to more severe heat-related illness. Those with early signs of heat exhaustion including headache, nausea, or dizziness should do the same and closely monitor their core temperature (rectal thermometer is most reliable and the standard). Individuals demonstrating mental status changes, even without core temperatures greater than 104 degrees F (40 degrees C) should be treated as early heat stroke. They must be immediately cooled with water and fans; ice packs to the neck, axillae, and groin; and/or immersion in an ice water bath (if the individual can be properly monitored) and transported to an emergency medical facility where they can be more appropriately monitored and resuscitated.

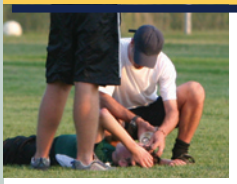
When working out in hot and humid weather, it is important to be aware of the risks for heat-related illness, take preventive measures, recognize the early signs and be prepared to act quickly and appropriately when heat-related illness is suspected.

Signs and Symptoms of Heat-related Illnesses

Heat Cramps
Possible Elevated Body Temps
Muscle Cramps
Thirst
Sweating

Heat Exhaustion
Elevated Body Temps (98.6˚ - 104˚)
Nausea/vomiting
Headache
Dizziness
Light Headedness
Excessive Sweating
Cold and Clammy Skin

Heatstroke
Elevated Body Temps (>104˚)
Confusion
Irritability
Incoordination
Hyperventilation
Heart Palpitation
Shock
Coma

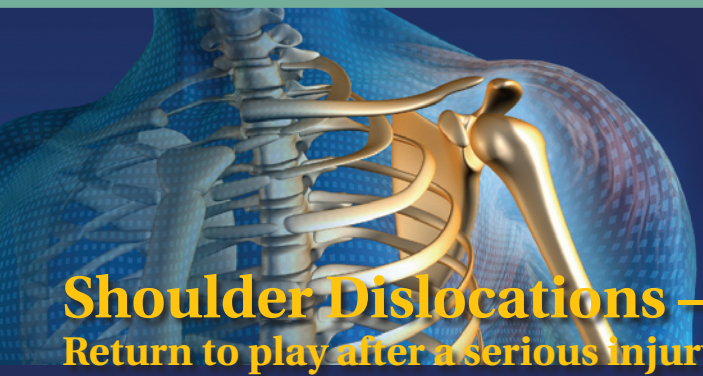


What is an Athletic Trainer?

Geoffrey S. Kuhlman, MD and Lark Welch, MS, ATC, CSCS

When covering stories about athletes and steroid abuse, the media have made the word "trainer" a household term. When the media says a "trainer" gave the substance to an athlete, who is "the trainer?" There are many different types of trainers and one should be careful not to confuse this general term of "trainers" with certified athletic trainers.

An athletic trainer is a board-certified health care professional who provides sideline care for professional, collegiate, high school and club sport athletes during practices and competitions. Most athletic teams, from professional to high school, employ athletic trainers to supervise their athletic training rooms and provide care for their in-season athletes.



Shoulder Dislocations –
Return to play after a serious injury

Anthony Placik, MPT, COMT and Steven C. Chudik, MD

Most are familiar with the thrilling story of Duane Wade, the professional basketball player for the Miami Heat who sustained a shoulder dislocation and continued to play until it could be repaired in the off-season. Shoulder dislocations are serious injuries that can occur with most contact sports like football, wrestling and hockey. In many cases shoulder dislocations can be treated non-operatively and surgical repair can be delayed until after the season.

Most shoulder dislocations occur when the athlete's arm is forced upward and outward behind the athlete's body, dislocating the humeral head (ball of the upper arm bone) out the front of the glenoid (shoulder socket) (Figure 1a). When a shoulder dislocates, the ligaments that connect the humeral head (ball) and glenoid (socket) and keep the shoulder stable are typically torn off the front of the glenoid with its labrum (tissue thickening surrounding the glenoid) (Figure 1b). This tear of the labrum with the ligaments from the glenoid is referred to as a "Bankart Lesion" (Figure 2). Fractures to the bone of the humeral head ("Hill Sachs Lesion") and glenoid, tears of the rotator cuff, and stretch injuries to nerves to the arm can also occur during a dislocation.

When a shoulder dislocation occurs on the field, team athletic trainers are usually the first ones on the scene. The athletic trainers, often with the assistance of the team physician, act quickly to take a brief history of the injury, examine the athlete, insure no other injuries have occurred, and reduce ("pop") the shoulder back in place. The reduction is usually performed by placing a significant traction force on the arm to unlock the dislocation while pushing the humeral head, which is typically down in the front of the armpit, back into place. Often, another person is needed to provide counter-traction by holding the torso down with their body or a sheet. This quick response from the medical team is important to restore blood flow to the dislocated humeral head and to reduce the shoulder atraumatically (without further injury) before the shoulder muscles start to spasm and tense up.

Following the reduction, early evaluation by a sports medicine physician is important to determine the extent of the injury. Physical examination, x-rays, and an MRI are performed to rule-out neurovascular (nerves and blood vessels) injuries, fractures, and ligament or rotator cuff tears. Some fractures and tears to the rotator cuff require early surgery. Fortunately, in younger athletes (<40 years of age), most dislocations only result in tears to the ligaments and surgery can be delayed.

Typically, the sports medicine physician will refer the athlete to a physical therapist to restore the motion, strength, proprioception (position sense) and function of the shoulder. Following several weeks in an appropriate rehabilitation program, some in-season athletes may return to play; however, most contact sports require bracing to help prevent further dislocations. Braces restrict motion and may hinder performance and preclude return to certain positions and sports (throwing arm in Quarterbacks and wrestling).

Without surgery to repair (re-attach) the ligaments in the shoulder, athletes less than 25 years of age have an 80 to 100% chance of repeat dislocation. More recent studies also suggest that early surgery to repair the ligaments may result in a better outcome as related to recurrent dislocations, development of later arthritis, and patient satisfaction. Surgery to repair the labrum and ligaments can be performed with specialized arthroscopic instruments through two small, less than ½ to 1 cm incisions (Figure 3). Surgery is followed by six weeks of immobilization in sling and a specific rehabilitation program with a physical therapist. Return to activities and contact sports is typically allowed after 4 months. Success rate and patient satisfaction are high with less than a 5% chance of repeat dislocation.

Shoulder dislocations are serious injuries to the shoulder which can result in injury to the cartilage, bone, ligaments, and rotator cuff of the shoulder. Fortunately, if treated properly with an expert medical team of athletic trainers, physical therapists, and primary care and orthopaedic sports medicine physicians, athletes with shoulder dislocations can return to play.

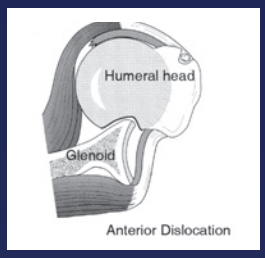


Figure 1A

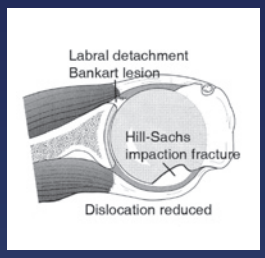


Figure 1B

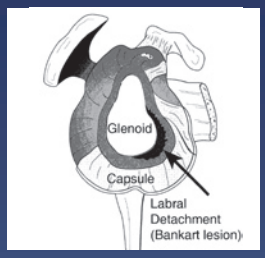


Figure 2

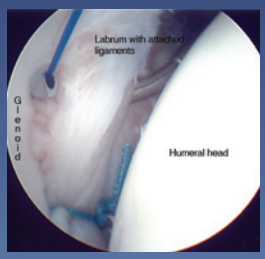


Figure 3A

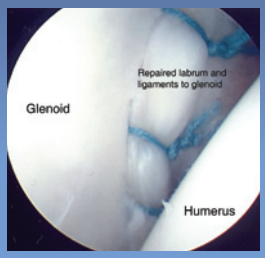


Figure 3B

The practice of athletic trainers is governed by stringent qualifications set by their national organization, the National Athletic Trainers' Association, and each certified athletic trainer must graduate with a bachelors degree from an accredited program, maintain current certification and a state license. Athletic trainers often practice under the supervision of a team physician, providing prevention, diagnosis, treatment, and rehabilitation of acute and chronic sports-related injuries. You will often see one or more athletic trainers on the sidelines at practices and games where their duties will range from lifesaving such as managing heat illness, concussions, and neck injuries to more the routine such as providing taping, care for sprains and strains and post-surgical rehabilitation.

Many athletes and their parents are often unaware of the presence and availability of athletic trainers and athletic training facilities in their own athletic programs. Fortunately, most collegiate and high school athletic programs offer a seasonal orientation program that provides a great opportunity for student-athletes and their parents to ask questions about the availability of the athletic trainers and the hours of operation for the athletic training room. Athletic trainers are board-certified and licensed medical professionals who have the athletes and their athletic programs best interest in mind. They do not provide steroids or other banned substances and can be an invaluable resource with regards to sports medicine information (nutrition, hydration, care for injuries, physician referrals) and hands-on diagnostic and therapeutic care.

Dance

Robin Vargo, MD and Jana Rojas, MPT, OCS, CSCS

Anyone flipping through the TV channels is likely to encounter a reality show with a variation on the dance competition theme. From "Dancing with the Stars" to "So You Think You Can Dance," people are intrigued by this ancient combination of art and athleticism and are enrolling in dance studios all across the country.

Success in dance does not come without cost. The necessary balance of extreme flexibility, solid core strength, and graceful muscular control is often gained at the expense of many aches and pains and long hours of practice. Unfortunately, the simple aches or pains associated with intense training too often become a chronic injury with permanence.

Studies show that anywhere between 5 and 11 injuries occur per every 1000 hours of dance practice. Common injuries include low back strain, painful snapping hip, knee pain, ankle/foot sprains, stress fractures, and tendinitis. These overuse injuries often result from repetitive movements, lack of flexibility and core strength, poor technique, and practice on improper surfaces.

For example, ballet dancers are often encouraged to increase "turnout" (pointing of the feet and lower legs outwards). If turnout is forced incorrectly from the knees and/or feet, dancers may place inappropriate amounts of stress on their ligaments, tendons, bones, and joint cartilage of the lower extremity. If continued, simple aches and pains can progress over time into joint instability, chronic tendonitis/tendinosis, stress fractures, and/or injuries to the dancer's growth plate or joint cartilage. In this case, teaching proper technique, stretching to increase flexibility of the hip rotators, and exercising to enhance core muscle strength are simple ways to allow a ballet dancer to "turnout" more appropriately and help prevent these injuries.

For all types of dance, there are some general tips that can keep you out of trouble. Always increase your practice frequency, duration and intensity gradually. As a general rule, an increase in 10% of your activity level each week is considered safe. Dancers should always wear properly-fitted shoes and include a gradual warm up and cool down into their exercise routine. Gentle stretching of the hip rotators and flexors, quadriceps, hamstrings, and calves, as well as core strengthening and hip stabilization exercises will also help to prevent injuries.

Many dancers also perform a Pilates, yoga, or a core strengthening routine 2-3 days per week in addition to their dance schedules to help build strength and safely improve their flexibility. Watch out for warning signs that indicate an injury may be developing such as:

- Aches and pains that persist for greater than two weeks or seem to worsen over time
- Painful "snapping" in the hip or lower back
- Warmth, redness or swelling in or near a joint
- Pain after acute trauma, such as rolling an ankle or buckling a knee
- Pain that alters the way you are able to walk or dance

If you notice any of these warning signs, it is important to consult a physician familiar with dance injuries.

Dancing is a beautiful expression of grace and athleticism, but also a physically demanding sport that, if overdone, can result in serious and permanent injury. Proper technique, sound training regimens, and a watchful eye for warning signs of injury are crucial to ensure that dancers can remain healthy and keep dancing for a lifetime.

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