



Louisiana High School Athletic Association Sports Medicine Advisory Board

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On-the-Field Injury Management

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“Talk to the athlete and find out what happened and what hurts.”

Athletic competition is a favorite pastime of many Americans. Sports are fun to play, they’re fun to watch, and it’s a great way to stay healthy and fit. Athletes are becoming more competitive at an earlier age; making sports a way of life for a lot of people. Along with the health benefits associated with athletics comes an inherent risk for injury. In the event that no Certified Athletic Trainer or qualified medical personnel is present, how will you, the coach, handle an emergency situation should one arise? Are you prepared to handle a life-threatening situation? Do you know what constitutes a full-blown emergency, or what type of situation can quickly deteriorate into one?

These are important questions that every coach needs to ask themselves. How do you react in an emergency situation? What type of treatment will you provide? The best thing a coach can do is have a systematic approach to emergency situations, and always remain calm. It is better to let trained medical personnel handle athletic injuries, but if none are present, there are some steps that coaches can take to make sure the situation is handled in the safest, most effective way possible.

When approaching the injured athlete, it is important to be keenly aware of the situation. While it is helpful to see how the injury occurred, that is not always possible, so you need to know what to immediately look for and rule out before removing the athlete from the field. For this reason, the on-the-field assessment consists of two parts, the primary and secondary surveys.

Primary Survey

The primary survey is done initially, as you approach the athlete, to rule out life threatening situations. Any injury that involves problems with level of consciousness, airway, breathing, circulation, severe bleeding, and shock would be considered a life-threatening situation. First take note whether the athlete is conscious. If so, then you know that he is also breathing and has a pulse. If the athlete is unconscious, direct someone to call 911 and proceed to check his ABC’s, or Airway, Breathing, and Circulation (pulse).

Putting your face close to the athlete’s mouth and watching for the rise and fall of the chest will help you detect whether or not he is breathing. Check the carotid artery on the athlete’s neck to determine if there is a pulse. Take note that you should always assume there is a cervical injury in the unconscious athlete, so you should never attempt to shake an unconscious athlete awake. If he is wearing a helmet and shoulder pads, it is important not to remove them, but to have some sort of tool handy that will allow you to remove the face mask in case CPR is required.

In the event that the unconscious athlete is breathing and has a pulse, you need only monitor his vital signs until EMTs arrive. If there is no breathing, but the athlete has a pulse, then you must administer rescue breathing. If no breathing or pulse is present, then it will be necessary to perform CPR. In the event that the unconscious athlete is lying face down, he will need to be carefully log-rolled onto his back in order to monitor his vital signs. It is very important that all coaches be CPR trained and certified so that they will be able to handle these situations, should they occur.

When approaching the athlete who is conscious, it is important to note the position of the body. Many times it is possible to detect or rule out certain injuries or fractures simply by looking at the position of the athlete. Has she moved since she fell? Is she holding one of her limbs, or cradling her arm against her body? Taking note of these things will help you when you conduct the next part of your assessment, or the secondary survey.

(On the Field injuries Continued)



Look at body position to help determine what is hurting the athlete.



“Concussions don’t just happen in football; they are seen in soccer, basketball, and other contact sports.”

Signs & Symptoms of a Concussion:

- Loss of Consciousness
- Irritability
- Amnesia
- Ringing in the ears
- Headaches
- Sensitivity to light
- Nausea or Vomiting
- Dizziness
- Blurred Vision
- Confusion
- Disorientation

Secondary Survey

You may begin the secondary survey once you have determined that the athlete is stable. Talk to the athlete and find out what happened and what hurts. During this part of your assessment you will evaluate the seriousness of the injury and whether or not the athlete requires referral to the emergency room or the team physician. It is best to refer fractures to the emergency room, but a sprain can usually wait to see the team MD. Whatever the injury may be, it is always a good idea to control initial swelling and inflammation by applying ice and having the athlete sit and rest. Doing so will significantly aid the healing process.

Injuries are inevitable in athletics. Careful preparation will allow you to feel comfortable handling these situations, and will help the athlete remain calm as well. The health and well-being of your athletes is your responsibility. Make it a habit to carefully document all injury information, not only for your own protection, but to also aid the treating physician. Trust your gut instinct, and never hesitate to refer to the emergency room if something just doesn’t seem right. Keeping athletes safe and healthy is merely one aspect of a coach’s job, but it may just be the most important.

Sport Related Concussion

Dr. Gregory Stewart

Team Physician, Tulane University

“Will’s Bill” in Texas, “Zackery Lystedt’s Law” in Washington state, “Max’s Law” in Oregon, the head of the NFL committee on concussion resigning under questionable circumstances, and Congressional Hearings all show how hot the topic of sports-related concussion currently is. There is not enough space to go into the science of sport-related concussion, but it is still evolving. At the Congressional Hearing of the Judiciary Committee in Houston on February 1, 2010, the Committee Members heard testimony that high school athletes with a concussion should sit out of sports for THREE months. None of the experts in the field agree with this. What has become apparent is that all of the athlete’s with poor outcomes after concussion have been allowed to return to participation while they still had symptoms of their concussion. On December 1, 2009, LaSalle University agreed to settle a lawsuit for \$7.5 million brought by the family of a football player who suffered significant injuries from being allowed to return to a game while still having symptoms from a concussion.

Concussions don’t just happen in football; they are seen in soccer, basketball and other contact sports as well. The key to safety is being able to recognize the signs and symptoms of concussion and removing the athlete from play. Signs and symptoms to look for include headaches, dizziness, nausea, and irritability, just to name a few. The current “Standard of Care” is that any athlete who is suspected of sustaining a concussion or head injury in a practice or game be removed from activity at that time. The athlete may not return to any physical activity until the coaching staff receives written clearance from a health care provider trained in the evaluation and management of concussion. Let’s do what is right and avoid legislative interference. “If in doubt, sit them out!”

“Physicians, Certified Athletic Trainers, and Physician Assistants are trained in concussion management...
If in doubt, sit it out”

Sudden Cardiac Arrest

By: **Bobbie Hirsch, Head Athletic Trainer,
Tulane Institute of Sports Medicine**

It was late in the first half of a playoff game at Glenn Oaks High School in early 2008 when seventeen year old Shannon Veal stepped up to the free throw line. She sank two free throws and signal to her coach that she needed a breather. Moments later, before her coach could replace her, Shannon collapsed on the court. Paramedics arrived shortly and began CPR. They used a defibrillator in an attempt to shock her heart back into rhythm as a crowd of about 200 watched in awe. Shannon Veal could not be revived that night, tragically passing away too soon from what was later diagnosed as an enlarged heart (Cardiomyopathy).

Harold Boudreaux, Glen Oaks Girls basketball coach, later stated that “nothing can prepare you for this... The only comfort is that she was doing what she loved.” Coach Boudreaux was right. Nothing can prepare a family, a team, or a school for the unexpected death of one of its cherished members and while it is impossible to prevent these types of events from occurring, we can learn from them and take the necessary steps to significantly reduce the risks of losing another child.

In order to reduce the risks of deaths like Shannon’s we must first have a basic understanding of the problem. Shannon died from sudden cardiac death which results from an abrupt loss of heart function. This abrupt loss of heart function is known as cardiac arrest and is often a result of a malfunction in the electrical system of the heart. And often without swift action, death occurs minutes of the initial symptoms.

In Shannon’s case, she had an enlarged heart, or what is known as hypertrophic cardiomyopathy, that had not been previously diagnosed. This thickening of the heart muscle made it difficult for blood to leave her heart, forcing it to work harder to pump oxygenated blood to other parts of the body. And while sudden cardiac death may only affect 1 in every 200,000 athletes, it is a health issue not all that unfamiliar to the state of Louisiana. In 2002, LSU outfielder and Jesuit High School standout Wally Pontiff Jr. passed away in his sleep from sudden cardiac death. It was believed at the time that he too suffered from an enlarged heart.

The statistics are staggering. The Hypertrophic Cardiomyopathy Association reports that an enlarged heart is the most common cause of sudden cardiac death in young people. In fact, the National Center for Catastrophic Sports Injury Research reported that cardiovascular conditions accounted for 100 of the 136 non traumatic deaths sustained by athletes between 1983 and 1993. Of those 100 deaths, 51 of them were the result of an enlarged heart and 16 were due to an abnormal or malformed coronary artery. Keep in mind that these statistics involve young, “healthy” athletes, but this condition affects everyone. The Centers for Disease Control (CDC) reports that approximately 400,000-460,000 people of all ages die each year of sudden cardiac death. So whether it’s an athlete at play, a parent or fan in the stands, an official at work or a coach on the sideline, sudden cardiac death can touch us all.

So what can we do to help reduce the risk of death?

1. Preparation. It all begins with a quality physical exam. Each year the LHSAA requires all of its student athletes to obtain a physical exam to detect or uncover any conditions which could predispose an athlete to injury. And while standard exams are not designed to recognize abnormalities within the heart, a physician may recognize abnormal heart sounds that would require further diagnostic testing before allowing that athlete to participate.
2. Development, preparation, and practice of a comprehensive emergency action plan. This plan should be practiced prior to the start of the athletic season and should involve the coaches, the administration, and anyone else who would play a role in an emergency situation. This plan should also require that someone who has received CPR and AED training and certification to be present at each athletic event. Finally and most importantly, it should mandate access to an Automated External Defibrillator (AED) at each athletic competition site.



The American Heart Association (AHA) reports that for every minute that passes without CPR and defibrillation a victim's chance of survival are reduced by 7 to 10 percent and that few attempts at resuscitation succeed after 10 minutes.

Quick Tip List for AEDs:

- If used correctly and AED can increase a person chance of survival.
- The AED should be located in a central location and be accessible at all times.
- An AED is fully automated and does not require decision making by the person operating the AED.
- The battery and pads should be checked often. (Battery is charged and the pads have not expired).
- Keep a CPR mask, razor, alcohol pads, and scissors hanging with the AED.
- Make sure the victim is not submerged in water or covered in excessive sweat.
- Be aware of any metal on the victim's body.
- Make sure no one is touching the victim.
- Use the appropriate pads on the victim.

(sudden cardiac arrest continued)

3. Access to an AED is the most crucial step in this risk reduction process because cardiac arrest which often leads to death, like those of Shannon and Wally, is reversible in most victims if treated with a defibrillator within minutes.

Could the lives of Shannon and Wally have been saved if CPR and AED been available at just the right time? Only the Good Lord knows the answer to that question. But why not take an opportunity to reduce the chance that we may lose another precious life when we have the knowledge, the ability, and the technology to potentially save them.

In memory of Shannon Veal and Wally Pontiff Jr.

Signs & Symptoms of Cardiac Arrest:

Sudden loss of responsiveness
No normal breathing
No pulse

Signs & Symptoms of a Heat Attack:

Fainting Changes in Heart Rate
Chest pain Nausea
Vomiting Shortness of breath
Disorientation

Including an Automated External Defibrillator in your Emergency Action Plan

By: Karen Lew, Athletic Training Education Program Director, SELU

In the last newsletter, the importance of an Emergency Action Plan (EAP) was discussed. Hopefully, you have either updated or created the EAP for your school. It is important to have a standing plan that everyone is aware and can be enacted should an emergency arise. This article will highlight the need to include an Automated External Defibrillator (AED) into the EAP.

Although Louisiana is not one of the states that require AEDs in schools, there has been a significant increase in AEDs present. Texas just recently passed Senate Bill 7, which relates to instruction in cardiopulmonary resuscitation and the availability and use of automated external defibrillators at public school campuses and certain athletic events. The Bill passed in Texas outlines the importance and necessity for instruction and education of school personnel and all coaches. AEDs, save lives by automatically diagnosing potentially life-threatening cardiac conditions and treating them through defibrillation, the application of electrical therapy allowing the heart to reestablish an effective rhythm.

CPR and AED education, Emergency Action Plan review, and crisis management should be a part of annual meetings held by the athletic departments. The signs to recognize cardiac arrest should be emphasized during the annual training. Cardiac arrest is the sudden, abrupt loss of heart function. Cardiac Arrest often referred to as Sudden Cardiac arrest is usually the result of a malfunction in the electrical system within the heart. According to the American Heart Association, cardiac arrest strikes immediately and without warning. Signs and symptoms of Cardiac Arrest include fainting, chest pain, shortness of breath, disorientation, changes in heart rate, nausea, or vomiting. You must act quickly as brain death and permanent brain damage begins to occur within 4 to 6 minutes

The ideal situation would be to have multiple AEDs available on campus but that is not always possible. If there is only one AED on the campus, it should be located where it is always accessible and close to all athletic events. In too many situations, the AEDs are in the front office of the school or a location that is not accessible after hours.

Schools should be required to develop safety procedures to follow in responding to a medical emergency involving cardiac arrest, including appropriate response time for CPR and use of AED. An AED study published in the August 11, 2009 *Circulation* (a journal of the American Heart Association) found that at 1,710 U.S. high schools with AEDs on site, nearly two-thirds of cardiac arrest victims survived. That's more than 12 times higher than the typical survival rate of only about 5 percent when cardiac arrest occurs outside of a hospital.

AEDs in the high school setting make sense for a lot of reasons: the typical sudden cardiac arrest in an adolescent is often related to a congenital problem such as a transposed coronary artery that causes no symptoms - or mild symptoms that are easy to ignore. Over the past several years there has been an increase in cardiac arrest related incidents within athletics. It is up to everyone involved in athletics to ensure the procurement of an AED. All school personnel both athletic and non-athletic should received the appropriate training in the event an emergency should occur. More information on AEDs can be found on the American Heart Association website www.americanheart.org or the Red Cross website www.redcross.org

Maintaining Energy Levels during Tournaments with Quality Nutrition

Tavis Piattoly, Sports Dietician, New Orleans Saints, New Orleans Hornets,
and St. Amant High School Athletics

Its tournament time and your adrenaline elevates on the thought of who your opponents will be on the path to a championship. Preparation for multiple matches (i.e. Wrestling) or games (i.e. Soccer) start with off-season conditioning, daily practice, and a plan to execute. A component of preparation that often gets neglected is how to properly fuel the body during multiple events. Multiple games or matches make athletes more susceptible to fatigue, slower recovery and a decrease in muscle strength. Muscle and Liver Glycogen (the storage form of carbohydrate) are considered an athlete's gas tank and are depleted during prolonged activity, especially if proper fueling guidelines have not been implemented.

During a tournament, proper fueling between games or matches may determine the overall outcome. In order to ensure athletes have enough fuel to get through that second, third, or fourth match or game, a little planning and preparation is all you need. By ensuring an athlete eats within a specific time frame before and after an event, you can enhance muscle recovery, minimize fatigue, and set the foundation for a good performance.

Tournament or Match Eating Schedule

The most important nutrition rule I educate every athlete, coach, and parent on is to eat every 3 to 4 hours. The same guideline holds true for tournaments. Going longer than 4 hours without eating will cause the body to use muscle tissue for energy.

Below is an example of a fueling schedule if you have a tournament that starts at 10:00 am and concludes at 8:00 pm (i.e. Wrestling or Basketball Tournament).

Breakfast or Meal 1 (7:00 am)	2-4 hours before match/game
Snack or Meal 2 (11:00 am)	Within 30-60 minutes after a match/game
Light Lunch or Meal 3 (12:30 pm)	60-90 minutes before 2 nd match/game
Snack or Meal 4 (3:30 pm)	Within 30-60 minutes after match/game
Dinner or Meal 5 (5 or 6:00 pm)	2-3 hours before 3 rd match/game
Snack or Meal 6 (8:00 pm)	Within 30-60 minutes after match/game
Dinner or Meal 7 (9:00 pm)	Recovery Meal

Meal times will depend on several variables (tournament schedule, match/game time, travel time, etc). It is important to design an eating schedule in advance so you can have a plan to ensure proper fueling and hydration practices are in place for success.

(Nutrition continued)

Healthy Snacking Options for Tournaments

Dried fruits are a great portable snack



Sandwiches are a good source of lean protein

Below are healthy snack options for athletes to have between meals or as lunch.

Sandwiches with lean protein (Turkey, Ham, Roast Beef, Grilled Chicken)	Baked Chips
Peanut Butter (Natural PB or Almond Butter) and Jelly (Polaner all Fruit Jelly)	Whole Grain Crackers
Assortment of Fresh Fruit	String Cheese or 2% part skim cheese
Dried Fruit (raisins, apricots, dates)	Unsweetened Applesauce
Nuts and Seeds	Light Popcorn (94% Fat free or less)
Trail Mix	Lean Beef Jerky (i.e. Jacks)
Nutrition Bars	Ready to Drink Nutrition Shakes (i.e. Muscle Milk, Myoplex)
Nature's Valley Granola Bar	Light Yogurt
	Dry Cereal (any less than 8-10 grams of sugar per serving)
	Fresh Vegetables (Carrots, Dark Green Lettuce, 100% Fresh Fruit Juice

What to avoid on Game Day

While there are foods that enhance recovery and provide athlete's with a source of energy, there are also foods that can inhibit performance if consumed on game day. Below is a list of the type of foods to avoid.

High Fat Meat	Fried Foods	High Fat Sauces	Beans	Cruciferous Veg.
Dark Meat	Fried Seafood	Alfredo	Any Kind of Beans	Broccoli
Fast Food Beef	Fries	Nacho Cheese		Brussels Sprouts
Ribs	Fried Chicken	Hollandaise		Cauliflower
Bacon				Cabbage
Sausage				

Spotlight: Careers in Sports Medicine

By : **Bobbie Hirsch, Head Athletic Trainer**
Tulane Institute of Sports Medicine

Every year sports seasons are hampered or even ended for athletes and teams because of injuries of all kinds. As any good coach will tell you a good emergency action plan and a certified athletic trainer are the key to handling situations like the ones above. From the chronic to the acute; the life-threatening to the nagging, athletic trainers are there to keep your athletes in the game.

Like good coaching, athletic training requires a great deal of education and expertise. Athletic trainers are skilled medical experts trained to help optimize the health of not only athletes but physically active individuals in a variety of settings. So whether it's an athlete of any age, an industrial worker performing physical tasks or even an average citizen delving into recreational athletics, the certified athletic trainer can help. As athletic trainers, it is our job to oversee the healthcare of the athletes and other individuals in our care.



A football player is injured in a game after making a tackle.

What would you do?

The primary responsibilities of an athletic trainer include the evaluation, treatment, rehabilitation, and prevention athletic related injuries. We are often one of the first healthcare providers on the scene when injuries occur, so it is important to be able to perform these duties with great skill in order to provide immediate care. Athletic Trainers work under the direction of a licensed physician and in cooperation with other healthcare providers to determine the most appropriate course of treatment for all of our patients. But in addition to caring for those already injured, they also try to prevent injuries by educating people on how to reduce their risk.

While a job as an athletic trainer can be fun, there is some stress involved. Work as an athletic trainer often requires long, irregular hours and frequent interaction with others during stressful times. In addition to consulting with physicians, Athletic Trainers have frequent contact with athletes and patients, parents, and coaches to discuss, design, coordinate and administer treatments, rehabilitation programs, and injury-prevention practices. They are responsible for their patients' health, and sometimes have to make quick decisions that could affect the health or career of our patients.

Certified Athletic Trainers (AT's), are educated professionals who undergo rigorous educational training to specialize in the areas of prevention, recognition, management and rehabilitation of athletic-related injuries. The education required is intensive including many science and health-related courses, such as human anatomy, physiology, nutrition, and biomechanics, as well as hands on experience in clinical rotations. However it takes more than just a college degree from an accredited program to become an athletic trainer. In addition to a college degree, Certified Athletic Trainers are required obtain and maintain BOC certification. The Board of Certification, Inc. requires athletic trainers to pass a rigorous exam once they have obtained their degree and maintain their certification by attending continuing education courses each year and by adhering to a strict code of conduct. Most states, including the state of Louisiana, require athletic trainers to be licensed, certified, or registered within that state. Louisiana requires all athletic trainers working at public institutions obtain certification from the Louisiana State Board of Medical Examiners. (For information regarding state regulations regarding athletic trainers go to www.bocatc.org.)

Athletic trainers are adept at evaluation and assessment; treatment and rehab; taping and bracing. And having access to a highly skilled and educated athletic trainer can be an enormous asset to any team. So whether it's evaluating an athlete on or off the field, rehabbing an injury, or making a return to play decision, athletic trainers play a huge role in the daily activities of any athletic program. And as all

Accredited Athletic Training Education Programs in Louisiana

Louisiana State University

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LHSAA History

In October of 1920 a group of high school principals met in Baton Rouge to discuss ways to better regulate and develop the high school interscholastic athletic program. This meeting led to the formation of the Louisiana High School Athletic Association (LHSAA).

Today the LHSAA is working with professionals in the field of sports medicine to help educate coaches on areas that affect the health and performance of high school athletes.

www.lhsaa.org