

SPORTS MEDICINE REFERENCE

for coaches



VANDERBILT  UNIVERSITY
MEDICAL CENTER



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OUR STORY

Vanderbilt Sports Medicine (VSM) has proudly provided outreach athletic training services to Middle Tennessee high schools and athletic organizations since 1997. During this time, VSM has recruited certified athletic trainers who have expertise in the prevention, recognition, evaluation, immediate care, and rehabilitation of athletic injuries.

For more than a decade, VSM has worked diligently to provide the greater Nashville community with sports medicine coverage. In 2008, VSM successfully launched an events management team to provide on-site sports medicine coverage for sporting events throughout Middle Tennessee. In 2011, Vanderbilt Orthopaedic Institute joined forces with physician partners at Vanderbilt Bone & Joint to expand service coverage in Williamson County, increasing the number of high schools we serve to more than 25.

In an effort to broaden services to the community and address serious concerns about concussions in athletes, the Vanderbilt Sports Concussion Center (VSCC) opened in the fall of 2011 to give athletes and their families access to baseline concussion screening tools, assessing brain function and evaluating and treating athletes so they can return safely to their sports. Beyond the sidelines and clinics, VSM continually strives to provide excellent care and find innovative solutions, both on and off the field. In the summer of 2012, VSM released a smartphone app developed for coaches and parents, which provides real-time information on heat index, lightning strike and other safety information.

Our experience and expert team provides the solid foundation needed to serve you and your family, now and in the future.



HIPPA GUIDELINES

Vanderbilt University Hospital respects our patients' privacy. Every VSM Athletic Trainer has reviewed and understands the 1996 Health Insurance Portability and Accountability Act (HIPAA), which is a law outlining patients' privacy rights. Occasionally, it may be necessary for your school's athletic trainer to access your child's medical records in order to provide safe and efficient care and treatment of the athlete.

High School coaches and administrative staff are considered part of the care team and will be informed of any participation recommendations following an injury to your child that occurs during activity at his or her high school. If a doctor sees your child, we must have written approval from the provider before we allow your child to return to his or her activity.

INSURANCE REQUIREMENTS

The Tennessee Secondary School Athletic Association (TSSAA) requires proof of insurance for every student-athlete. This primary insurance policy may be personal or employer-based. Most school systems offer the opportunity for students to enroll in a primary insurance plan if they are not covered by a parent or guardian's insurance policy. In the event you purchase insurance for your child from an independent provider, make sure the policy covers injuries and accidents resulting from organized high school sports, including football.

SPORTS PHYSICALS

TSSAA Requirements

Prior to participating in TSSAA-sanctioned athletics, there are several forms that must be completed. All student-athletes must have evidence of a current physical on file in their school's athletic office. In accordance with the TSSAA handbook, physicals must be signed by a doctor of medicine, osteopathic physician, physician assistant, or certified nurse practitioner. Physicals for high school athletic participation must be performed after April 15th to be valid for the following school year. A physical must be obtained before participating in any practices, scrimmages or games.

Vanderbilt Sports Medicine Sports Physicals

Each year, Vanderbilt Sports Medicine offers sports physicals at the Vanderbilt Orthopedic Institute and Vanderbilt Bone & Joint. These will happen on a pre-scheduled date in the spring. An athletic trainer assigned to your child's school will provide specific information to student-athletes and coaches .

It is required for a parent or guardian to complete and sign the physical form prior to completion of the exam. Although it is not mandatory, we do encourage all parents and legal guardians to attend physicals with their child.

These sports physicals **should not** replace your child's annual exam with his or her primary care physician. As, this screening will not address immunizations, blood work or evaluate other medical conditions that your pediatrician/primary care physician may perform during an annual exam.

MANAGING SPORTS INJURIES

A Certified Athletic Trainer (ATC) will be on-site for most home events and practices at your child's school. Should your child have an injury, the athletic trainer will provide the initial medical response. Most injuries can be treated on-site or in the school's athletic training room. If further medical treatment is needed, the athletic trainer will contact you with the appropriate recommendations for treatment. In the event of an emergency, each school has an emergency action plan (EAP) in place, which will be activated by the ATC, coach or administrator available. It is for these reasons it is important that a current and accurate emergency contact card is filled out on each child every year.

AWAY GAMES

VSM-certified athletic trainers will travel with varsity football, and in some cases with varsity basketball teams. If your child should sustain an injury while traveling to a game where his or her athletic trainer is not present, most opposing teams in the Middle Tennessee area will have an athletic trainer on-site. If the injury needs further medical treatment, coaches will call the trainers to quickly facilitate treatment and referral to a sports medicine or emergency doctor, if needed.

REFERRAL PROCESS

Although the choice for medical care is yours, sending your child to Vanderbilt University Medical Center will expedite your child's care, facilitate open communication between the physician and the athletic trainer, and allow the greatest continuity of care possible. If an injury requires an appointment with a doctor, athletic trainers are typically able to get an appointment with a Vanderbilt Sports Medicine physician within 24 hours.



TREATING SPORTS INJURIES

THE R.I.C.E. PRINCIPLE

Typically, muscle strains and ligament sprains are not emergencies. Your school's athletic trainer will assess the severity of the injury and treat it accordingly. Generally, these injuries are treated utilizing the RICE principle.

REST: Avoid any unnecessary activity. If the athlete is unable to stand or a fracture is suspected, get crutches or another assistive device (such as a sling, if the injury is to the arm).

ICE: Apply an ice bag or a cold pack to the affected area for approximately 15 to 20 minutes and re-apply every 2 hours. If using a frozen chemical pack, be sure to use a barrier between the skin and the cold pack (i.e., a damp cloth). Avoid heat for the first 72 hours.

COMPRESSION: Lightly wrap the injured area with a compression bandage starting with the area furthest away from the body and working your way up. Except for when icing or bathing, the compression wrap should be left on at all times during the first 72 hours. If the wrap gets uncomfortable or the fingers or toes begin to swell, makes sure to loosen the bandage.

ELEVATION: Raise the injured body part above the level of the heart. This will lower swelling. Simply propping a foot up onto a chair is not sufficient to achieve this function. For the leg, the athlete should lie down and prop his or her foot (not the knee) with a pillow. This method is most effective when accompanied by ice and compression.



CONCUSSION: RECOGNIZING SIGNS & SYMPTOMS

A concussion is a serious brain injury that changes the way the brain works. Concussions are often caused by a blow to the head, but they can also happen when the head and upper body are shaken violently. You can't see a concussion and symptoms may not appear for hours or days after the injury.

HOW CAN I TELL IF SOMEONE HAS HAD A CONCUSSION?

Watch for:

- A blow or jolt to the head or body that causes the head to move very fast
- Any change in the athlete's behavior, thinking or function

COMMON OBSERVED SYMPTOMS

- Seems dazed or stunned
- Is confused about assignment or position
- Forgets an instruction
- Is unsure of game, score or team
- Clumsiness
- Answers questions slowly
- Blacks out (even briefly)
- Shows mood, behavior or personality changes
- Can't recall events before hit or fall
- Can't recall events after hit or fall

COMMON SYMPTOMS REPORTED BY ATHLETES

- Headache or pressure in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light or noise
- Feeling sluggish, hazy or groggy
- Concentration or memory problems
- Confusion

AFTER A HEAD INJURY, GO TO THE EMERGENCY ROOM OR CALL 911 IF:

- it is difficult to wake your child up
- your child has severe confusion
- your child keeps vomiting
- your child has a severe headache
- your child has numbness or tingling in arms or legs
- your child's symptoms get worse
- your child has vision changes that do not get better

WHAT TO DO AFTER A HEAD INJURY

1. Remove the athlete from play right away, even if he or she claims to feel fine.
2. Inform the athlete's parents or guardians.
3. Have the athlete checked by a medical provider who has experience with concussions.
4. Keep the athlete out of play until a medical provider approves return to play.



VANDERBILT SPORTS CONCUSSION CENTER

SPORTS CONCUSSION MANAGEMENT

High impact sports such as football and soccer, place participants at increased risk of injury, including concussions. A concussion is a type of brain injury that happens after a blow to the head. Concussions may affect memory, senses, speech, balance, and sleep. Symptoms can include headache, nausea, dizziness, and tiredness.

Since you can't see a concussion, there is no way to tell how serious a head injury is without an evaluation by a trained health care professional. Vanderbilt Sports Concussion Center (VSCC) applies the expertise of medical professionals from many disciplines—sports medicine, neurosurgery, neuropsychology, athletic training—to diagnose and treat sports concussions. VSCC provides state-of-the-art concussion care to all athletes who enter the Vanderbilt system.

If a concussion is suspected, the athlete should be withheld from play until evaluated by a healthcare professional trained in concussion management.

For more information visit

www.VanderbiltSportsConcussion.com

To schedule an appointment, call VSCC at (615) 875-8722.

CONCUSSION BASELINE TESTING (ImPACT)

SPORTS CONCUSSION BASELINE TESTING (ImPACT)

Vanderbilt Sports Concussion Center (VSCC) is now offering pre-concussion baseline testing to all community recreational athletes 12 and older. The baseline testing combines individual neurologic history, balance assessment, and a computerized test that measures factors such as reaction time, memory, and attention span. A trained member of the VSCC staff administers the testing in a controlled environment to ensure accuracy. In the event of a concussion, VSCC can compare baseline results to post-injury testing to determine the complexity of the injury, brain systems affected, and when it's safe to return-to-play. Individual and team screening packages are available. For more information or to schedule an appointment for a baseline screening contact:

**Vanderbilt Sports Concussion Center
(615) 875-VSCC (8722)**

EVENTS MANAGEMENT TEAM INFORMATION

Vanderbilt Sports Medicine has a special events management team that provides medical coverage for community events such as youth sport leagues, tournaments and large nonprofit charitable events.

If you are interested in learning more about this program or are interested in medical coverage for your upcoming athletic event, please email ATC@vanderbilt.edu for more details.

EMERGENCY ACTION PLAN

An emergency action plan helps programs and facilities handle emergency situations at practices or games. All programs and facilities should develop an emergency action plan and make sure it is put in writing. Being prepared is crucial in order to respond to unexpected emergencies.

An emergency action plan should include the following:

1. FACILITY DESIGN

- Determine where EMS personnel will enter and exit the field or venue.
- Establish a location for rescue and emergency equipment.
- Make sure there is a working phone nearby with emergency telephone numbers posted (such as EMS, police, fire, local hospitals or health departments).

2. EQUIPMENT

- First aid kits should be fully stocked.
- Other recommended emergency equipment, such as an Automatic External Defibrillator (AED) should be on-site and easily accessible.
- Physical and medical release forms for athletes should be easily accessible.

3. INTERNAL SUPPORT PERSONNEL

- Determine which support personnel are to be present at practices and games.
- Internal support personnel may include coaches, athletic trainers, athletic officials, facility administrators, management personnel, teachers, school nurse/physician, athletic director, clerical personnel and maintenance personnel.
- Internal support personnel are in a position to act as first responders in emergency situations and thus it is recommended that they receive certified training in CPR and AED use and the provision of first aid.



4. REVIEW OF EMERGENCY ACTION PLAN

- It is recommended that your local external support personnel review your emergency action plan. Contacts may include EMS, police, fire, Hazmat team, hospitals, and health departments.
- The emergency action plan should be practiced at least annually with athletic trainers, team and consulting physicians, athletic training students, school and institutional safety personnel, administrators, coaches, and other designated first responders.

5. COMMUNICATION

- Make sure it is clear how and when to call 911 or the local emergency number.
- Provide the following information to EMS personnel:
 - Name, address, telephone number of caller.
 - Number and condition of athletes.
 - First aid treatment initiated.
 - Specific directions to field or venue. Consider including directions to every athletic facility located on the premise in the written emergency action plan.
 - Any other information requested by the dispatcher.
 - Make sure there is a person to contact the family or guardian of an injured athlete.

5. FOLLOW-UP

- Make sure first aid kits and other emergency response equipment are refilled, replaced or recharged. Complete appropriate documentation of the emergency.

HEAT RELATED ILLNESS AND PRACTICE RECOMMENDATIONS

The 3 most common types of heat injury are:

1. Heat cramps
2. Heat exhaustion
3. Heat stroke

AVOIDING HEAT ILLNESS

- Drink plenty of fluids. This is the #1 way to prevent heat injury.
- It's harder for the body to control heat when it's hotter than 80 degrees. Move practices and games indoors during warm days or schedule to avoid heat.
- Athletic clothing should be lightweight and should expose as much skin as possible without affecting safety.
- Get athletes used to hot, humid weather by starting with light practices. Slowly increase intensity the first 1 to 2 weeks.
- Anyone with an illness should not exercise in hot, humid weather. Children with chronic conditions including obesity should check with a doctor before playing sports in extreme heat.
- Anyone with a history of heat injury should pay extra attention to hydration, rest and acclimation.

GUIDELINES FOR ATHLETIC ACTIVITY IN HOT WEATHER*

Heat Index Under 95° F

Always offer water and watch athletes carefully. Offer water breaks and check the heat index every 30 mins. Offer ice-down towels if needed.

Heat Index 95°-99° F

Same as under 95°, plus: Reduce time outdoors and move practice inside to A/C, or postpone to later in the day. For contact sports, remove helmets and pads when in non-contact practice.

Heat Index 100°-104° F

Same as 95°-99°, plus: If possible, remove layers from uniforms and let players change into dry clothes.

Heat Index 105°+ F

Stop all outside activity. Stop all indoor activity if A/C isn't available and the heat index indoors is 105° or greater.

BASIC FIRST AID FOR HEAT ILLNESS

- Activate your emergency action plan and call 911 if needed.
- Move the athlete to a shaded area or A/C.
- Remove equipment and unnecessary clothing.
- Lay athlete on his or her back with the legs raised.
- Massage towels soaked in ice water on the head and legs.
- Place ice packs on the neck, armpits and groin.
- Have the athlete drink fluids if he or she can swallow safely.
- **Ice water immersion is the most effective method of rapid cooling.**

* For the complete Heat Policy visit www.tssaa.org



HYDRATION FOR OPTIMAL PERFORMANCE

WHY IS IT IMPORTANT TO HYDRATE?

Water should be readily available to student-athletes at all times. The American Academy of Pediatrics Committee on Sports Medicine recommends that regular water breaks be taken every 30 minutes when the heat index reaches 82 degrees or higher. These breaks should last for approximately 5 to 10 minutes. During water breaks, athletes should be permitted to rest in shaded areas and remove protective equipment (i.e., helmets).

Proper hydration is required for optimal athletic performance. Dehydration can affect an athlete in less than 1 hour of exercise and puts them at greater risk for heat illnesses such as cramps, heat exhaustion, and heat stroke.

Proper nutrition should be taught and encouraged. Salt tablets, caffeine, pickle juice, protein, and nutritional supplements are not recommended. Replace these with water to replenish body fluids, and keep healthy dietary habits.

HELPFUL HINTS FOR REHYDRATING DURING ACTIVITY:

- If your child is less than 90 pounds, he or she should drink 10 gulps of fluid (about 5 oz) every 15 to 20 minutes
- If your child weighs more than 90 pounds, he or she should drink 20 gulps of fluid (about 10 oz) every 15 to 20 minutes

**THIRST IS A SIGN YOUR CHILD-ATHLETE IS
ALREADY DEHYDRATED.**



LIGHTNING SAFETY

More than 400 Americans are struck by lightning each year. Always check local weather forecasts and warnings when planning an athletic event outside. Delay or cancel if a thunderstorm is approaching before or during the event.

IF YOU SEE LIGHTNING

1. Start counting. Stop when you hear thunder.
2. Divide the number by 5; that's roughly the distance of the lightning strike in miles.
3. If you counted to 30 or less, clear the area and move everyone to safe shelter. Stay there until lightning has been gone for at least 30 mins.

SAFE SHELTER

Choose a safe shelter ahead of time. The safest shelters have 4 solid walls and a roof plus electrical and telephone wiring. If no safe shelter is nearby, take shelter in a vehicle with a hard top.

- Avoid standing water, open fields, telephone poles, trees, metal structures and hilltops.
- While inside a safe shelter, don't shower/bathe or use a landline phone until lightning has passed.

LIGHTNING SAFE POSITION

If you feel your skin tingling:

1. Crouch on the ground with your weight on the balls of your feet.
2. Keep your feet together, your head lowered and your ears covered.

BASIC FIRST AID

- Survey the scene for safety
- Activate local EMS
- Lightning victims do not "carry a charge" and are safe to touch.
- Assist victim(s) who are motionless or silent first.
- If necessary, move the victim(s) with care to a safer location.
- Evaluate airway, breathing and circulation, and begin CPR if necessary.
- Evaluate and treat for hypothermia, shock, fractures and/or burns.

COACHSMART SMARTPHONE APP

CoachSmart, a new Vanderbilt smartphone app, puts an athletic trainer, personal assistant, and meteorologist all in the palm of your hand. Designed especially for coaches, this iPhone or Android app is a great tool.

VanderbiltHealth.com/CoachSmart



NUTRITION FOR OPTIMAL PERFORMANCE

Eating a healthy diet is a great way for athletes to perform their best. Healthy nutrition is essential to boost energy levels, lower injury risk, speed muscle recovery, increase focus and concentration, and keep a healthy weight.

GENERAL NUTRITION TIPS

- Eat breakfast daily
- Choose low-fat dairy products
- Pack a healthy snack, such as granola bars, pretzels, peanut butter crackers, dried fruit and nuts, and whole fruits
- Avoid fried foods
- Look for “baked, broiled or grilled” lean meats and fish
- Load up on fruits and vegetables
- Limit high sugar and sweets
- Not all fats are bad. Avocado, nuts and seeds, nut butters, and olive and vegetable oils contain healthy fats
- Drink water, 100% fruit juice, or low-fat milk
- Avoid sodas and energy drinks. These can increase dehydration and are not part of a healthy diet

RECOMMENDED PRE-GAME MEALS

- Pasta with meat sauce, salad with low-fat dressing, fruit and granola, low-fat milk
- Baked chicken, steamed vegetables, rice, fig bar, sports drink
- Grilled steak, baked potato with low-fat sour cream and low-fat cheese, steamed vegetables, water
- Lean deli meat sandwich on whole wheat bread, baked chips, fruit-and-yogurt smoothie
- Peanut butter and jam sandwich, low-fat Greek yogurt, banana, 100% juice
- English muffin pizza made with tomato sauce, low-fat cheese, vegetables and lean meat toppings-chicken, ham, turkey pepperoni, pasta salad, fruit cup, low-fat chocolate milk

PROPER WOUND CARE

Skin wounds are very common in athletic events. Clean any broken skin thoroughly with warm soap and water. Be sure to cover any open wounds for the duration of athletic practice and games. Change bandages regularly and keep the affected area clean and dry. **DO NOT** leave bandages or tape on when showering unless directed by a physician or athletic trainer.

DO NOT allow athlete to soak in whirlpools or swim with open wounds. This not only will put them at risk for infection, but also those around them.

DISCOURAGE your athletes from sharing equipment such as helmets, shoulder pads, shin guards, jerseys, socks, or shoes. These are common ways for infection to spread quickly through your team.

WHAT ARE THE SIGNS AND SYMPTOMS OF A SKIN INFECTION?

Monitor all skin wounds for possible signs of infection, including:

- Heat
- Redness
- Swelling
- Pain
- Loss of function

Seek immediate medical attention if you suspect the wound has become infected.

Personal hygiene is the key to prevention of skin infections, as well as regularly cleaning and sanitization of locker rooms and athletic equipment.

AFTER-HOURS CLINIC AT VANDERBILT BONE & JOINT

Vanderbilt Bone & Joint is now offering an after-hours clinic to care for acute orthopaedic injuries that happen after typical office hours. An orthopaedic specialist is available to walk-in patients Monday through Thursday from 5 to 8 p.m. No appointment is necessary.

The clinic will care for a wide range of acute orthopaedic issues, including sports injuries, soft tissue injuries, and broken bones.

Vanderbilt Bone & Joint Clinic
206 Bedford Way
Franklin, TN 37064
(615) 261-0443

PROGRAM FOR INJURY PREVENTION IN YOUTH SPORTS (PIPYS)

PIPYS at Vanderbilt was created to develop, evaluate and promote strategies through research, education and community service in order to prevent youth sports related injuries and to protect the overall health of the pediatric athlete. For more information on sports injury topics, injury prevention tactics, and more go to:

www.childrenshospital.vanderbilt.org/sportssafety.

OUR FACILITIES

DAVIDSON COUNTY

VANDERBILT ORTHOPAEDIC INSTITUTE
1215 21st Avenue
Medical Center East, South Tower, Suite 3200
Nashville, Tennessee 37232
(615) 322-7878

ADOLESCENT CLINIC
Vanderbilt at One Hundred Oaks
719 Thompson Lane, Suite 36300
Nashville, TN 37204
(615) 936-8200

WILLIAMSON COUNTY

VANDERBILT BONE & JOINT
206 Bedford Way
Franklin, Tennessee 37064
(615) 790-3290

VANDERBILT ORTHOPAEDICS AT COOL SPRINGS
324 Cool Springs Blvd.
Franklin, TN 37067
(615) 790-4280

WILSON COUNTY

VANDERBILT ORTHOPAEDICS AT MT. JULIET
5002 Crossings Cir, Suite 230
Mt Juliet, TN 37122
(615) 773-2710

KENTUCKY

VANDERBILT SPORTS MEDICINE AT MURRAY
1000 S. 12th St. Murray, KY 42071
(877) 826-3976

VANDERBILT SPORTS MEDICINE AT BOWLING GREEN
542 Three Springs Road
Bowling Green, KY 42104
(877) 826-3976