SPORTS MEDICINE HANDBOOK

California Interscholastic Federation

3nd Edition

2009

CIF Vision Statement

Athletic competition is an integral part of the high school experience. The CIF is uniquely positioned to foster student growth in values and ethics. CIF's ideal of "Pursuing Victory with Honor$_{sm}$," provides the opportunity to dramatically influence the actions of the athletic community. CIF strives to strengthen the integrity of students and adults across the state by promoting the concepts of sportsmanship, honesty and quality academics. These priorities advance the highest principles of character – trustworthiness, respect, responsibility, fairness, caring and good citizenship.

Introduction

The CIF Sports Medicine Committee was founded in 1996 and is a standing committee of the State CIF. The committee members are "Sports Medicine" professionals, Medical Doctors, Doctors of Osteopathy, Certified Athletic Trainers and school administrators who specialize in sports related issues that affect high school athletes. They meet on a regular basis and amend these bulletins and add new ones as they see the environment and needs of high school athletes and sports evolve. This edition is not intended to be a comprehensive Sports Medicine manual. These "guidelines" are not meant to provide a "standard of care" and are not meant to supersede medical or administrative judgment decisions that must frequently be made on the scene by appropriate individuals.

This handbook is meant to serve as a guideline to CIF member school administrators, coaches, sports medicine staffs, student-athletes and parents on reasonable methods of protecting the health and welfare of student athletes. If medical advice is required, the services or a competent medical professional should be sought.

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SECTION I

ADMINISTRATIVE ISSUES

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PRE-PARTICIPATION PHYSICAL EXAM

The California Interscholastic Federation requires an annual Pre-Participation Physical Examination (PPE) by a health practitioner for all student-athletes before the student engages in a tryout, practice, or actual competition (CIF Bylaw 307). The PPE form must be approved by the school's governing board and it MUST contain a family health history.

The primary objectives of the pre-participation physical examination are to:

1) Screen for medical or musculoskeletal conditions that may predispose a student to injury or illness during training or competition;
2) Detect potentially life-threatening or disabling medical or musculoskeletal conditions;
3) Meet legal, insurance, and administrative requirements.

The secondary objectives are to:

1) Determine general health.
2) Provide opportunity to initiate discussion on health and lifestyle issues (proper training, weight-control, tobacco use, drinking and driving, drug use, seat belt use, STD prevention and birth control;
3) Serve as an entry point into the healthcare system for adolescents.

Before participation, the student must have on file with the school the completed school-approved PPE form that certifies that the student-athlete is cleared to participate in athletics.

The American Academy of Family Physicians, American Academy of Pediatrics, American Medical Society for Sports Medicine, American Orthopedic Society for Sports Medicine and the American Osteopathic Academy of Sports Medicine and the National Athletic Trainers Association all recommend that a thorough examination include a health history be performed at least once at the beginning of a student's high school years and that this history be reviewed annually before participation in athletics each year.

When performed by knowledgeable health care professionals in an appropriate setting, the PPE can enhance the safety of sports participation. Unfortunately, it is often done in a quick manner just before pre-season practice in order to satisfy state requirements. However, when properly done, the PPE can also provide "teachable moments" to discuss proper conditioning techniques, injury prevention, lifestyle issues and form the basis of an athlete's entry into sports.

Attached is a sample form published in the PPE, 3rd edition 2005. **The members of the CIF Sports Medicine Committee urge schools and districts to recommend or require both the physical examination and the history as indicated in the attached format.**

References:

Pre-Participation Physical Evaluation, 3rd Edition. 2005. AAFP, AAP, ACSM, AMSSM, AOSSM, AOASM.

Links: https://secure.aafp.org/catalog/viewItem.do?number=227

Preparticipation Physical Evaluation

HISTORY FORM

DATE OF EXAM _____

Name _____ **Sex** _____ **Age** _____ **Date of birth** _____

Grade ____ **School** _____ **Sport(s)** _____

Address _____ **Phone** _____

Personal physician _____

In case of emergency, contact

Name _____ **Relationship** _____ **Phone (H)** _____ **(W)** _____

Explain "Yes" answers below.
Circle questions you don't know the answers to.

	Yes	No
1. Has a doctor ever denied or restricted your participation in sports for any reason?	☐	☐
2. Do you have an ongoing medical condition (like diabetes or asthma)?	☐	☐
3. Are you currently taking any prescription or nonprescription (over-the-counter) medicines or pills?	☐	☐
4. Do you have allergies to medicines, pollens, foods, or stinging insects?	☐	☐
5. Have you ever passed out or nearly passed out DURING exercise?	☐	☐
6. Have you ever passed out or nearly passed out AFTER exercise?	☐	☐
7. Have you ever had discomfort, pain, or pressure in your chest during exercise?	☐	☐
8. Does your heart race or skip beats during exercise?	☐	☐
9. Has a doctor ever told you that you have (check all that apply): ☐ High blood pressure ☐ A heart murmur ☐ High cholesterol ☐ A heart infection		
10. Has a doctor ever ordered a test for your heart? (for example, ECG, echocardiogram)	☐	☐
11. Has anyone in your family died for no apparent reason?	☐	☐
12. Does anyone in your family have a heart problem?	☐	☐
13. Has any family member or relative died of heart problems or of sudden death before age 50?	☐	☐
14. Does anyone in your family have Marfan syndrome?	☐	☐
15. Have you ever spent the night in a hospital?	☐	☐
16. Have you ever had surgery?	☐	☐
17. Have you ever had an injury, like a sprain, muscle or ligament tear or tendinitis, that caused you to miss a practice or game? If yes, circle affected area below:	☐	☐
18. Have you had any broken or fractured bones, or dislocated joints? If yes, circle below:	☐	☐
19. Have you had a bone or joint injury that required x-rays, MRI, CT, surgery, injections, rehabilitation, physical therapy, a brace, a cast, or crutches? If yes, circle below:	☐	☐

Head	Neck	Shoulder	Upper arm	Elbow	Forearm	Hand/ fingers	Chest
Upper back	Lower back	Hip	Thigh	Knee	Calf/shin	Ankle	Foot/toes

	Yes	No
20. Have you ever had a stress fracture?	☐	☐
21. Have you been told that you have or have you had an x-ray for atlantoaxial (neck) instability?	☐	☐
22. Do you regularly use a brace or assistive device?	☐	☐
23. Has a doctor ever told you that you have asthma or allergies?	☐	☐
24. Do you cough, wheeze, or have difficulty breathing during or after exercise?	☐	☐
25. Is there anyone in your family who has asthma?	☐	☐
26. Have you ever used an inhaler or taken asthma medicine?	☐	☐
27. Were you born without or are you missing a kidney, an eye, a testicle, or any other organ?	☐	☐
28. Have you had infectious mononucleosis (mono) within the last month?	☐	☐
29. Do you have any rashes, pressure sores, or other skin problems?	☐	☐
30. Have you had a herpes skin infection?	☐	☐
31. Have you ever had a head injury or concussion?	☐	☐
32. Have you been hit in the head and been confused or lost your memory?	☐	☐
33. Have you ever had a seizure?	☐	☐
34. Do you have headaches with exercise?	☐	☐
35. Have you ever had numbness, tingling, or weakness in your arms or legs after being hit or falling?	☐	☐
36. Have you ever been unable to move your arms or legs after being hit or falling?	☐	☐
37. When exercising in the heat, do you have severe muscle cramps or become ill?	☐	☐
38. Has a doctor told you that you or someone in your family has sickle cell trait or sickle cell disease?	☐	☐
39. Have you had any problems with your eyes or vision?	☐	☐
40. Do you wear glasses or contact lenses?	☐	☐
41. Do you wear protective eyewear, such as goggles or a face shield?	☐	☐
42. Are you happy with your weight?	☐	☐
43. Are you trying to gain or lose weight?	☐	☐
44. Has anyone recommended you change your weight or eating habits?	☐	☐
45. Do you limit or carefully control what you eat?	☐	☐
46. Do you have any concerns that you would like to discuss with a doctor?	☐	☐
FEMALES ONLY		
47. Have you ever had a menstrual period?	☐	☐
48. How old were you when you had your first menstrual period? _____		
49. How many periods have you had in the last year? _____		

Explain "Yes" answers here: _____

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

Signature of athlete _____ Signature of parent/guardian _____ Date _____

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Preparticipation Physical Evaluation

PHYSICAL EXAMINATION FORM

Name _____ **Date of birth** _____

Height _____ **Weight** _____ **% Body fat (optional)** _____ **Pulse** _____ **BP** ___/___ (___/___ , ___/___)

Vision **R 20/** ____ **L 20/** ____ **Corrected: Y N** **Pupils: Equal** ____ **Unequal** ____

Follow-Up Questions on More Sensitive Issues	**Yes**	**No**
1. Do you feel stressed out or under a lot of pressure?	☐	☐
2. Do you ever feel so sad or hopeless that you stop doing some of your usual activities for more than a few days?	☐	☐
3. Do you feel safe?	☐	☐
4. Have you ever tried cigarette smoking, even 1 or 2 puffs? Do you currently smoke?	☐	☐
5. During the past 30 days, did you use chewing tobacco, snuff, or dip?	☐	☐
6. During the past 30 days, have you had at least 1 drink of alcohol?	☐	☐
7. Have you ever taken steroid pills or shots without a doctor's prescription?	☐	☐
8. Have you ever taken any supplements to help you gain or lose weight or improve your performance?	☐	☐
9. Questions from the Youth Risk Behavior Survey (http://www.cdc.gov/HealthyYouth/yrbs/index.htm) on guns, seatbelts, unprotected sex, domestic violence, drugs, etc	☐	☐

Notes: _____

	NORMAL	ABNORMAL FINDINGS	INITIALS*
MEDICAL			
Appearance			
Eyes/ears/nose/throat			
Hearing			
Lymph nodes			
Heart			
Murmurs			
Pulses			
Lungs			
Abdomen			
Genitourinary†			
Skin			
MUSCULOSKELETAL			
Neck			
Back			
Shoulder/arm			
Elbow/forearm			
Wrist/hand/fingers			
Hip/thigh			
Knee			
Leg/ankle			
Foot/toes			

*Multiple-examiner set-up only.
†Having a third party present is recommended for the genitourinary examination.

Notes: _____

Name of physician (print/type) _____ **Date** _____

Address _____ **Phone** _____

Signature of physician _____, **MD or DO**

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Preparticipation Physical Evaluation

CLEARANCE FORM

Name _____ **Sex** _____ **Age** _____ **Date of birth** _____

❑ **Cleared without restriction**

❑ **Cleared, with recommendations for further evaluation or treatment for:** _____

_____

_____

_____

❑ **Not cleared for** ❑ **All sports** ❑ **Certain sports:** _____ **Reason:** _____

Recommendations: _____

_____

EMERGENCY INFORMATION

Allergies _____

Other Information _____

IMMUNIZATIONS (eg, tetanus/diphtheria; measles, mumps, rubella; hepatitis A, B; influenza; poliomyelitis; pneumococcal; meningococcal; varicella)

❑ **Up to date (see attached documentation)** ❑ **Not up to date** Specify _____

Name of physician (print/type) _____ **Date** _____

Address _____ **Phone** _____

Signature of physician _____, **MD or DO**

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Preparticipation Physical Evaluation

CLEARANCE FORM

Name _____ **Sex** _____ **Age** _____ **Date of birth** _____

❑ **Cleared without restriction**

❑ **Cleared, with recommendations for further evaluation or treatment for:** _____

_____

_____

_____

❑ **Not cleared for** ❑ **All sports** ❑ **Certain sports:** _____ **Reason:** _____

Recommendations: _____

_____

EMERGENCY INFORMATION

Allergies _____

Other Information _____

IMMUNIZATIONS (eg, tetanus/diphtheria; measles, mumps, rubella; hepatitis A, B; influenza; poliomyelitis; pneumococcal; meningococcal; varicella)

❑ **Up to date (see attached documentation)** ❑ **Not up to date** Specify _____

Name of physician (print/type) _____ **Date** _____

Address _____ **Phone** _____

Signature of physician _____, **MD or DO**

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ATHLETIC PARTICIPATION CHECKLIST

By reducing liability and unnecessary exposure to our students and spectators, we create a safer environment for our student-athletes to participate. It takes effort by everyone involved, from the principal to the coach. Listed below is a checklist of supervisory and legal issues that schools could use to begin a self-audit of their athletic supervision. This list is NOT all-inclusive, as each individual school has its own unique set of circumstances, procedures and responsibilities, but should be viewed as a good beginning.

SCHOOL

- All participants have on file a current pre-participation exam form that approves the athlete to participate.
- All participants have on file a current proof of insurance as governed by the California Education Code Section 32221.
- All participants have on file a current "informed consent" form signed by BOTH the parent/guardian and the student that gives the student permission to participate.
- All coaches have on file a valid CPR/First Aid cards as required by California Title V regulations.
- All coaches, paid and volunteer, must be certified in an approved Coaching Education program by December 31, 2008.

ATHLETIC ADMINISTRATOR

- Coaches have "emergency" information on all participants with them at all practices/contests.
- Check the facility regularly to maintain a safe and proper playing environment.
- Emergency phone numbers and emergency care guidelines are posted near an easily accessible telephone.
- Provide coaches with an emergency action plan (what to do in case….).
    - For more information from the National Athletic Trainers' Association on Emergency Planning in Athletics: http://www.nata.org/statements/position/emergencyplanning.pdf
- Ensure the school is providing proper, safe and effective equipment.
- Keep written records of when equipment was purchased, repaired or reconditioned.
- Create policies and procedures for the athletic department (Coaches Handbook).
- Follow-up and enforce such policies and procedures.
- Inform all participants of the risk of participation and inherent dangers (Informed Consent).
- Ensure that coaches have been instructed on proper actions and behavior.
- Ensure that proper skills are being taught.

COACHES

- Coaches have "emergency" information on all participants with them at all practices/contests.
- Properly plan the activity.
- Provide adequate and proper equipment.
- Match your athletes by maturity, skill and experience.
- Evaluate and treat the injured athlete.
- Supervise your activity, both specific and general supervision.
- Check the facility daily to maintain a safe and proper playing environment.
- Emergency phone numbers and emergency care guidelines are posted near an easily accessible telephone.
- Know how to use the "school" phone system to call 911 or have a working cell phone at all practices and games.
- Coaches ensure that proper skills are being taught by documenting and keeping all practice plans and instructions.
- Inform all participants of the risk of participation, both in writing and verbally. Along with teaching the proper techniques, remind students daily of the risks of injury when they fail to follow proper technique.

Links:
www.cifstate.org – Coaching Education
www.nata.org

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EMERGENCY MANAGEMENT CHECKLIST FOR SCHOOL ADMINISTRATORS

We need to do all we can to protect active youth from serious injury while participating in sports. **"BE PREPARED."** The time to think about emergency care is long before the emergency happens. The purpose of the **Emergency Management Checklist** is to assist a school site administrator in ensuring that basic policies and procedures are in place prior to an injury. By NO MEANS should this list be considered complete as each school site, practice and game facility has unique designs and issues that must be addressed in advance of an emergency.

- Does our school have "Certified Athletic Trainer" (ATC) on site? (The trainer should be certified by the National Athletic Trainers Association.)
- By law, all athletic coaches, paid and volunteer, must be currently certified in CPR and First Aid. Do we have a process in place to ensure that this requirement is being met?
- Do all of our coaches know how to call 911 using our school phone system? (60+% of coaches are not on-campus and may not be familiar with an internal phone system.)
    - It is recommended that "hard line" phone access be easily accessible at all practice and game facilities.
    - If a school is using cell phone, phones should be set with "speed dial" for the local emergency phone number as cell phone 911 first goes to the California Highway Patrol and may slow medical emergency response time to your location.
- Do our coaches know the address or nearest cross road of our practice or game site? (This question is always asked by 911 operators).
- Do our coaches have accurate insurance information and emergency release forms for each student at ALL PRACTICES AND GAMES?
- Do our coaches have necessary First Aid supplies at all practices and games?
- Is there fresh water available at all practice and game sites? Is there ice available at all practice and game sites?
- Does our school/district have a policy in case a parent is not at the practice/game and the injured student must be transported to the hospital? Who will travel with the injured student to the hospital? (Head Coach, Assistant Coach, School Administrator, no one?).
- Has responsibility been assigned as to who will notify parent or guardian of a students injury?
- Does the school/district have a policy as to "who will be the spokesperson" with the media in case of a traumatic injury or death of a student-athlete? Has the administration discussed with the coaches, in advance of an injury, as to what is appropriate to say regarding such an incident?

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ESSENTIAL ITEMS FOR A HIGH SCHOOL FIRST AID KIT

The high school coaches' first aid kit can vary in size from a soft fanny pack to a large E.M.T. kit. Depending on what sport is being covered, the quantity and type of supplies will vary from sport to sport.

- Athletic tape (½ inch, 1 inch, 1½ inch)
- Alcohol
- Arm sling
- Antiseptic soap (pHisoderm®, etc.)
- Band-aids (1x3)
- Cotton-tipped applicators
- Elastic bandages 3 inch (Ace Wraps)
- Elastic tape role (Elasticon)
- Eyewash (Visine, Sterile Water, etc.)
- Fungicide (polysporin spray, etc.)
- Heel & Lace pads
- Medicated ointment (Polysporin, etc.)
- Mirror (hand)
- Moleskin
- Nose Plugs
- Non-adhering sterile pad (2x3)
- Tape underwrap
- Thermometer – Battery Operated
- Peroxide
- Pen light
- Plastic bags
- Pocket CPR Mask
- Powder (baby powder, etc.)
- Rubber gloves
- Skin Lube (Vasoline, etc.)
- Sponge Gauze (4x4)
- Sterile gauze pads (4x4) ¼ inch
- Sun Screen
- Tape adherent (Tuff Skin)
- Tape cutters
- Tongue depressors
- Triangular bandage

In addition to the items listed above for the athletic training kit, the following items should be available at the sideline.

- Cutting tool for helmet facemask
- Ice (crushed)
- Water (cups, containers)
- Coolers – for athletes & Ice for injuries
- Crutches
- Towel

NOTE: The amounts will depend on number of players and amounts used in previous years.

- Additionally: All first aid kits should carry bags for blood disposal. Coaches are advised to check with either your school nurse or health attendant regarding safe disposal of these bags.
- Every box needs a list of Emergency Telephone Numbers and a cell phone is also recommended.
- To assist the attending paramedics and/or physician, an Emergency Treatment Card should be included in the coaches first aid kit for each athlete.

Recommended Additional Items

Automated External Defibrillator (AED) and cell phone with the local emergency numbers already programmed. **Remember that 911 calls from cell phones go to the CHP and could delay response of paramedics.*

SECTION II

RISK MANAGEMENT ISSUES

SAMPLE LETTER – PARENT NOTIFICATION
(PLACE ON YOUR SCHOOL LETTER HEAD)

To: Athletes and Parents/Guardians
From: (Athletic Trainer, Athletic Director, Coach)
Subject: Head Injury/Concussion

Your Son/Daughter received a blow to the head today in practice/game. The following information is for their health and safety. Quite often after a blow to the head, signs and symptoms of a head injury do not appear immediately after trauma, but appear hours after the injury itself. The purpose of this fact sheet is to alert you to the symptoms of significant head injuries, symptoms that may occur several hours after the student has left school.

If your Son/Daughter experiences one or more of the following symptoms after a head injury or the symptoms worsen, seek medical help immediately.

- Difficulty remembering recent events or meaningful facts
- Difficulty concentrating or making decisions
- Severe headache, particularly at a specific location
- Stiffening of the neck
- Bleeding or clear fluid from the ears or nose
- Mental confusion, strangeness or irritability
- Nausea or vomiting
- Dizziness, poor balance, unsteadiness, or clumsiness
- Weakness or inability to move one or more limbs
- Abnormal drowsiness, sleepiness or loss of consciousness
- Convulsions or seizures
- Unequal pupils, dilated, unequal in size or non-reactive to light changes
- Loss of appetite
- Persistent ringing in the ears
- Slurring of speech
- Blurred vision, double vision or trouble focusing
- Unusual or bizarre behavior
- Initial improvement followed by worsening symptoms

The appearance of any of the above symptoms may signify that your son/daughter has a significant head injury that requires immediate medical attention. **If any of these symptoms do appear, report to the nearest Emergency Room or call 911.** Do not give any pain relievers (they may hide the symptoms) or allow your son/daughter to go into a deep sleep for the next 24 hours. Wake up you son/daughter every two (2) hours and ask several simple questions to check on their well-being.

Athlete's Name: _____

Parent/Guardian Signature _____

Released by: _____

Date: _____ Phone (____) _____

Relationship to Athlete: ☐ Parent/Guardian ☐ Relative ☐ Other _____

This paper must be signed, dated and the time recorded by the parent/guardian upon receipt. Return this form to school with the student-athlete prior to participation in the next practice/game.

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STUDENT EMERGENCY PROCEDURES

The following procedures are presented for all school personnel as guidelines for preparing for and handling student emergencies. It is recognized that good judgment is the key factor in any crisis. When in doubt, all efforts should be extended to protect the health and welfare of the student.

EXTREME EMERGENCY

- Activate EMS – Use land line if possible and **CALL 911 (cell phone calls will go to the CHP)**.Ask for a paramedic unit that serves the school. Be sure to access the students "emergency contact card" that contains the permission to treat as well as parent/family contact information.
- Call parent; advise him/her of the accident and of all measures that have been taken.
- If parent cannot be located, contact local police for assistance.
- Record time, location and actions taken. DOCUMENT, DOCUMENT, DOCUMENT!
- Be sure to submit a district/school Student Accident Report Form to the appropriate administrator or athletic director within 24 hours.
- Be sure to contact the school principal, who should notify the district administration.

ILLNESS OR INJURY

- Notify parents, advise them of the injury or illness.
- If parent cannot be reached, contact another responsible adult (eighteen years of age or older) who is listed on the emergency card.
- Submit Student Accident Report Form to the appropriate administrator or athletic director.

SENDING A STUDENT HOME

- A student is to be released only to a responsible adult who is listed on the emergency card and is eighteen years of age or older.
- It is the responsibility of the parent or other authorized adult to provide transportation.
- If the parent or responsible adult gives permission for the student to walk to a designated place, the school personnel should exercise judgment as to the student's ability to do so before releasing. If this alternative is used, the school should request notification when the student reaches destination.

PLACE ON SCHOOL LETTER HEAD

INFORMED CONSENT
AWARENESS OF SPORTS INJURY RISK WARNING AND AGREEMENT

By its very nature, competitive athletics can put students in situations in which SERIOUS, CATASTROPHIC and perhaps FATAL accidents could occur.

Students and parents/guardian must assess the risks involved in such participation and make their choice to participate in spite of those risks. No amount of instruction, precaution or supervision will totally eliminate all risk of injury. Just as driving an automobile involves choice of risk, participation in athletics is inherently dangerous. The obligation of parents and students in making this choice to participate cannot be over stated.

By granting permission to your son/daughter to participate in athletic competition, a parent/guardian acknowledges that playing or practicing in any sport can be a dangerous activity involving MANY RISKS OF INJURY. Both the athlete and parent must understand that the dangers and risks of playing or practicing include but are not limited to: death, complete or partial paralysis, brain damage, serious injury to virtually all internal organs, bones, joints, ligaments, muscles, tendons and other aspects of the skeletal system and potential impairment to other aspects of the body, general health and well-being.

Because of the dangers of participating in sports, we (parent and player) recognize the importance of following coaches' instructions regarding playing techniques, training, equipment and other team rules, etc. both in competition and practice and agree to obey such instructions.

If any of the foregoing is not completely understood and you have questions, please contact your school athletic director or school administrator for further information.

At the beginning of the school year or a season of practice, both the athlete and parent need to be informed in writing of the above information. The school must require that both the athlete and the parent sign and date a sheet of paper acknowledging that they have read the above statement and understand it thoroughly. This paper, with signature, should be kept on file with the athletic director.

It is also preferable to have this warning additionally transmitted verbally to parents and athletes at pre-season meetings held by either the coach or athletic director. It is one of the legal responsibilities of a school that parents be informed of both awareness of risk and the responsibility to follow instructions and then give their consent to participate.

I have read and understand the information above and give my son/daughter permission to participate.

Parent Signature _____ Date _____

I have read and understand the information above and I want to participate.

Student Signature _____ Date _____

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REDUCING HEAD AND NECK INJURIES IN FOOTBALL

Head and neck injuries have decreased dramatically since the mid-1970's. Here are a few simple things you can do to prevent these devastating injuries. Although head and neck injuries can occur in any sport, these guidelines are most relevant for contact/collision sports such as football.

- Pre-season physical exams
  - Full physical exam by a physician including review/evaluation of previous head and neck injuries.
  - No athlete should participate in practice/competition until a physician has provided medical clearance.

- Properly fitting equipment
  - Coaches, trainers and players must ensure the helmet and other equipment are properly fitted and meet the recommended safety guidelines for each specific sport.

- Use of proper technique: The head is NOT a weapon
  - Proper conditioning regimens to strengthen the neck and upper back to enable athlete's to hold their head firmly erect during contact.
  - Coaches must teach the proper execution of fundamental football skills, especially blocking and tackling.
  - "Spearing" (hitting another player with the top of the head) must be prohibited in training and competition.

- Strict rule enforcement
  - For example in football, rules that penalize spearing must be enforced by game officials!

- Appropriate management of injuries
  - If a player exhibits any signs of head/neck injury, the athlete should be immediately evaluated by medical personnel and should not be returned to practice/games until cleared by medical personnel.

Signs of head/neck injury include (see "**ON-THE-FIELD EVALUATION OF HEAD AND NECK INJURIES**")

- Loss of consciousness
- Visual disturbances
- Headache
- Inability to walk normally
- Disorientation
- Memory Loss
- Neck pain
- Numbness
- Weakness

- Emergency-preparedness
  - If possible, a physician and/or EMT should be present for all games/practices.
  - All staff should know what to do if a head or neck injury occurs: Do NOT move player and do NOT remove helmet or equipment → Call 911
  - Fully functioning communication devices (i.e. cell phone, walkie-talkie) should be available to personnel attending practice/competitions.
  - It is recommended that a stable land-based telephone line be available
  - Build a relationship with EMS in advance. Review field access and protocol for emergency response.

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RISK MANAGEMENT – POLE VAULT

One of the most important aspects of pole vaulting is managing and reducing the risks involved so that your student-athletes compete in the safest environment possible. This requires a daily assessment made by the coaches and students prior to any actual vaulting. This list should be considered as a basis for the coach and students to begin their assessment. Each individual school site may have additional needs because of its unique environment.

DAILY CHECK LIST FOR COACHES AND STUDENTS

- Are all pads and top cover properly fastened together? Any buckles or straps should not be exposed to the jumper.
- Is the pit in the proper position? Do not allow the pad to "slide back" during practice, and it should remain snug around the planting box.
- If the pit sits on a cement or asphalt base **is the entire cement/asphalt** base covered with proper padding up to 5' from the pit. This includes curbing.
- Are standards fastened to the ground?
- Are the standards covered so that no part of the base is exposed?
- Are the poles in good condition?
- Are the poles visibly marked with maximum weights and maximum hand hold positions?
- Have the coaches reviewed with the jumpers the proper techniques **and** the risk of injuries?
- Are the weather conditions safe for pole vaulting? Rain, sleet, snow and excessive wind are all conditions that can make pole vaulting dangerous.
- Is the runway surface and surrounding area free of holes and debris?

SEASONAL CHECK LIST FOR COACHES AND ATHLETIC DIRECTORS

- Does your vaulting box meet the National Federation standards? Look to the NFHS rulebook for exact acceptable standards.
- Is your pit large enough considering how high your potential users are going to vault? Remember, the higher they go, the larger the pit. The pad should never be smaller than 16'6 near the base of the unit.
- Does the shape of your landing pad give protection to the "box" area? If your pit does not cover this area, you should get covering immediately.

SUPERVISION

Pole vaulting is fun and can be very rewarding for those who participate wisely. The pole vault must NEVER be attempted without **DIRECT SUPERVISION** of the coach. This means that the coach must be present and directly watching and assisting the athletes. Athletes must be taught the proper techniques and must also be warned on a daily basis the risk of injury when instruction is not followed. Athletes must be taught that they should never attempt to vault without the coach present. Having the students check their environment every day will help them gain an understanding of the risks involved, however, this does not relieve the coach of their responsibility of checking.

SECTION III

MEDICAL ISSUES

Part A - Heat Related
Part B - Injury Management
Part C – Hygiene & Sports
Part D – Skin Disorders
Part E – Nutritional Concerns
Part F – Supplements
Part G - Physical Conditioning
Part H – Others

Heat Related Issues

GATORADE

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PREVENTION OF HEAT ILLNESS

Exercise produces heat within the body and can increase the player's body temperature. Add to this a hot or humid day and any barriers to heat loss such as padding and equipment, and the temperature of the individual can become dangerously high. There are several steps which can be taken to prevent heat illness from occurring:

ADEQUATE HYDRATION

- The athlete should arrive at practice well-hydrated to reduce the risk of dehydration.
- Water or sports drinks should be readily available to athletes during practice and should be served ideally chilled in containers that allow adequate volumes of fluid to be ingested.
- Water breaks should be given at least every 30-45 minutes and should be long enough to allow athletes to ingest adequate volumes of fluid.
- Athletes should be instructed to continue fluid replacement in between practice sessions.

GRADUAL ACCLIMATIZATION

- Intensity and duration of exercise should be gradually increased over a period of 7-14 days to give athletes' time to build fitness levels and become accustomed to practicing in the heat.
- Protective equipment should be introduced in phases (start with helmet, progress to helmet and shoulder pads, and finally fully uniform).

HYDRATION STATUS RECORD KEEPING

- Athletes should weigh-in before and after practice, ideally in dry undergarments in their to check hydration status.
- The amount of fluid lost should be replaced by the next session of activity. An athlete should drink approximately 16 oz of fluid for each kilogram of fluid lost (1 kg = 2.2 lbs).
- The color of the urine can provide a quick guess at how hydrated the athlete. If the urine is dark like apple juice means the athlete is dehydrated. If the urine is light like lemonade in color means the athlete seems adequately hydrated.

ADDITIONAL PREVENTION MEASURES

- Appropriate medical coverage during exercise.
- The use of light weight synthetic clothing which aids heat loss.
- Athletes should wear light colored clothing.
- Well balanced diet which aids in replacing lost electrolytes.
- Avoid drinks containing stimulants such as ephedrine or high doses of caffeine.
- Alteration of practice plans in extreme environmental conditions.
- Adequate rest breaks in the shade.
- Allow athletes to remove unnecessary equipment during rest breaks.
- Adjust the amount of conditioning activities in hot weather.
- Athletes with febrile or gastrointestinal illnesses should not be allowed to participate until recovered.

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IDENTIFICATION AND TREATMENT OF HEAT ILLNESS

Exercise produces heat within the body and can increase the player's body temperature. Add to this a hot or humid day and any barriers to heat loss such as padding and equipment, and the temperature of the individual can become dangerously high.

Heat Illness occurs when metabolically produced heat combines with that gained from the environment to exceed the heat and large sweat losses. Young athletes should be pre-screened at their pre-participation physical exam for medication/supplement use, cardiac disease, history of sickle cell trait, and previous heat injury. Athletes with any of these factors should be supervised closely during strenuous activities in a hot climate. Fatal heat stroke occurs most frequently among obese high school middle lineman.

Much of one's body heat is eliminated by sweat. Once this water leaves the body, it must be replaced. Along with water loss, many other minerals are lost in the sweat. Most of the commercial drinks now available contain these minerals, such as Gatorade, etc., but just plain water is all that is really required because the athlete will replace the lost minerals with his/her normal diet.

PROBLEMS

HEAT STROKE:

Dysfunction or shutdown of body systems due to elevated body temperature which cannot be controlled. This occurs with a body-core temperature greater than 107 degrees Fahrenheit.
Warning Symptoms:

- Dizziness
- Drowsiness, loss of consciousness
- Seizures
- Staggering, disorientation
- Behavioral/cognitive changes (confusion, irritability, aggressiveness, hysteria, emotional instability)
- Weakness
- Hot and wet or dry skin
- Rapid heartbeat, low blood pressure
- Hyperventilation
- Vomiting, diarrhea

This is a MEDICAL EMERGENCY. Death may result if not treated properly and rapidly.

Treatment: Stop exercise, Call 911, remove from heat, remove clothing, immerse athlete in cold water for aggressive, rapid cooling (if immersion is not possible, cool the athlete as described for heat exhaustion), monitor vital signs until paramedics arrive

HEAT EXHAUSTION:

Inability to continue exercise due to heat-induced symptoms. Occurs with an elevated body-core temperature between 97 and 104 degrees Fahrenheit. '

Warning Symptoms:

- Dizziness, lightheadedness, weakness
- Headache
- Nausea
- Diarrhea, urge to defecate
- Pallor, chills
- Profuse sweating
- Cool, clammy skin
- Hyperventilation
- Decreased urine output

Treatment: Stop exercise, move player to a cool place, remove excess clothing, give fluids if conscious, COOL BODY: fans, cold water, ice towels, or ice packs. Fluid replacement should occur as soon as possible. The athlete should be referred to a hospital emergently if recovery is not rapid. Athletes with heat exhaustion should be assessed by a physician as soon as possible in all cases.

HEAT SYNCOPE:

Dizziness or fainting due to high temperatures. It often occurs after standing for long periods of time, immediately following cessation of activity, or rapidly standing after resting or sitting.

Warning Symptoms:

- Fatigue
- Tunnel vision
- Pale or sweaty skin
- Dizziness
- Lightheadedness, fainting

Treatment: Move the athlete to a cool, shaded area, elevate the legs and rehydrate. Remove excess clothing and cool the athlete with wet towels or ice bags.

EXERTIONAL HYPONATREMIA:

A rare condition of bodily dysfunction due to inadequate sodium levels. This occurs either because of the ingestion of too much water.

Warning Symptoms:

- Disorientation, altered consciousness, lethargy
- Headache
- Vomiting
- Swelling of hands and feet
- Seizures

Treatment: Stop exercise, call 911, monitor athlete until paramedics arrive. Athletes who may have hyponatremia should not be given fluids until a physician is consulted.

HEAT CRAMPS:

Acute, painful, involuntary muscle contractions that occur during or after intense exercise sessions.

Warning Symptoms:

- Muscle cramps
- Sweating, thirst, fatigue

Treatment: Gently stretch the cramping muscle. Ice or gentle muscle massage may also help to stop the cramp. The athlete should drink fluids, especially with electrolytes if possible.

Salt tablets are still controversial. Athletes can use greater amounts of salt on their food by instinct and can get additional salt from sports drinks with electrolytes.

GENERAL TREATMENT GUIDELINES

Adequate medical personnel should be on-site to handle any heat illnesses/emergencies. Equipment for treating heat illnesses (cooling equipment such as fans, ice, tub of cold water, thermometers, etc) should be readily available for use in the event of a problem. Coaches and medical personnel should be aware of and familiar with procedures for handling any emergencies due to heat illness.

GENERAL PREVENTION REMINDERS

Heat illnesses can often be prevented through proper, adequate hydration and safe practice guidelines. For information on prevention of heat illness, see Bulletins 15.

Source:
Binkley HM et al. National Athletic Trainers' Association Position Statement: Exertional Heat Illnesses. J Athl Train. 2002 Sep;37(3):329-343.

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FACTS ABOUT HEAT STRESS AND ATHLETIC PARTICIPATION

HEAT RELATED ILLNESSES ARE ALL PRVENTABLE. Heat stress should be considered when planning and preparing for any sports activity. Football, cross-country, tennis, soccer and field hockey practices are conducted in very hot and humid weather in many parts of the United States. Many of the heat problems have been associated with football, due to added equipment which acts as a barrier to heat dissipation. Several heatstroke deaths in football continue to occur each season. There is no excuse for heatstroke deaths to increase if the proper precautions are taken.

The following practice guidelines are recommended for programs of all sports to reduce the risk of heat illnesses:

- Each athlete should have a physical exam with a medical history when first entering a program and an annual health history update. History of previous heat illness, cardiac disease, sickle cell trait, medication and supplement use, and type of training activities before organized practice begins should be included. State high school association's recommendations should be followed.

- For gradual acclimatization, the first week of practices should have no two-a-day practices (a second no intensity walk-through session is ok), should limit conditioning activities to 60-90 minutes, and should limit total practice time to 3 hours. Also during this first week, protective gear should be gradually introduced in stages.

- When two-a-day sessions begin, they should not be held on consecutive days. An adequate rest time of at least 3 hours should be scheduled between sessions.

- There should not be more than 6 consecutive days of practice.

- Practices should include adequate water/rest breaks of sufficient length to allow unlimited fluid consumption. Water breaks should be given at least every 30-45 minutes or more frequently in extreme temperatures. Athletes should be allowed to rest in the shade with protective equipment removed to allow more heat loss.

- Athletes should be instructed to continue hydration and to eat balanced meals outside of practice to ensure fluid and electrolyte replacement. Drinks with stimulants such as ephedrine and high doses of caffeine should be avoided.

- Athletes should be weighed before and after practice, ideally in dry undergarments. If there is more than a 2% weight loss, the athlete is at increased risk for heat illness. For each kilogram lost the athlete should drink 16 oz. of fluid to replace what was lost.

- Practices should be scheduled to avoid the hottest part of the day and should be cancelled or moved indoors to air conditioning in very hot or humid weather.

Coaches should be aware of both the TEMPERATURE and HUMIDITY. The greater the humidity, the more difficult it is for the body to cool itself. Test the air prior to practice or game using a wet bulb, globe, temperature index (WBGT Index) which is based on the combined effects of air temperature, relative humidity, radiant heat and air movement. The following precautions are recommended when using the WBGT Index (ACSM's Guidelines prevention of heat illness during distance running, 1996):

Below 65 · · · · · · · · Low risk
65-73 · · · · · · · · · Moderate risk
73-82 · · · · · · · · · High risk
82 -90 · · · · · · · · · Very high risk
Above 90 · · · · · · · · Dangerous

Heat index is one factor in assessing the risk of heat related illness and is NOT a substitute for local judgment. Other factors such as local climate norms, significant changes in the normal weather patterns and acclimation must also be considered.

A Heat Stress Advisor tool to estimate the WBGT from the local measured temperature and humidity is available online http://www.zunis.org/sports_p.htm
. This program can be used on the computer or downloaded to a handheld device.

- Athletes should be closely monitored in extreme environmental conditions. If heat illnesses are suspected, activity should stop immediately and medical personnel notified.

- Be aware of emergency procedures and always be ready practice them.

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Position Statement and Recommendations for Hydration to Minimize the Risk for Dehydration and Heat Illness National Federation of State High School Associations (NFHS) Sports Medicine Advisory Committee (SMAC)

Dehydration, its effects on performance & its relationship to heat illness:

►Appropriate hydration before, during & after exercise is an important ingredient to healthy and successful sports participation.

►Rapid weight loss represents a loss of body water and athletes should be weighed before & after warm weather practice sessions/contests to assess fluid losses. 1-2% loss of body weight (1.5-3 pounds for a 150 pound athlete) can negatively impact performance $\geq$ 3% loss of body weight can increase risk for exertional heat- related illness

►Athletes with high body fat percentages can become dehydrated faster than those with lower body fat percentages while working out under the same environmental conditions.

►All athletes have different sweat rates and some tend to lose much more salt through their sweat.

►Poor acclimatization/fitness levels can greatly contribute to an athlete's dehydration problems.

►Medications, fevers, environmental temperatures and humidity can each greatly attribute to dehydration and risk for heat illness.

►Clothing, such as dark, bulky or rubber protective equipment can drastically increase the chance of dehydration and heat illness.

►Wet bulb temperature measurements should be taken 10-15 minutes before practices/contests. The results should be used with a heat index to determine if practices/contests should be started, modified or stopped.

►Dry climates can have high humidity if sprinkler systems are scheduled to run before early morning practices start. This collection of water does not evaporate until environmental temperatures increase and dew points lower.

►A heat index chart should be followed to determine if practices/contests should be held: The NOAA National Weather Service's heat index http://www.weather.gov/om/heat/index.shtml

To determine the heat index for your location, enter your postal zip code: The OSAA (Oregon School Activities Association) Heat Index Calculator http://www.osaa.org/heatindex/

►Relative Humidity & Temperature can contribute to heat illness & heat stroke:

Relative Humidity & Temperature	Heat Illness	Heat Stroke
35% & 95 degrees	Likely	Likely
70% & 95 degrees	Very Likely	Very Likely

What to Drink during Exercise:

►For most exercising athletes, cold water is the ideal fluid for pre- and re-hydration. Water is quickly absorbed, well tolerated, an excellent thirst quencher & cost effective.

►The use of a cold sports drink with appropriate carbohydrates (CHO) and sodium may prove beneficial in some situations and for some individual conditions:

Situations	**►Prolonged continuous activity > 45 minutes** **►Extremely intense activity with risk of heat injury** **►Extremely hot & humid conditions**
Individual Conditions	►Poor hydration prior to participation ►Increased sweat rate ►Poor caloric intake prior to participation ►Poor acclimatization to heat & humidity

►A 6-8% addition of CHO to water is the maximum that should be utilized. Any greater concentration will produce slow emptying from the stomach and may produce a bloating feeling. A low concentration (0.3-0.7g/L or 300-700mg/L) of sodium may help with cramping.

What NOT to drink during exercise:

Type of fluid	Reasons NOT to drink
Fruit juices with >8% CHO content **Soda**	Bloating Abdominal cramping
Beverages with excessive caffeine **Alcohol**	Increases risk of dehydration associated with: Increased urine production Decreased voluntary fluid intake

►Nutritional supplements are not limited to pills and powders; many of the new fluids contain stimulants such as caffeine, ephedrine/ephedra, guarana and mahuang.

- These stimulants may increase the risk of heart or heat illness problems when exercising
- As with other forms of supplements these "power drinks or fluid supplements" are not regulated by the FDA. Thus, purity and accuracy of contents on the label are not guaranteed.
- Many of these beverages, which claim to provide additional power, energy, etc., have additional ingredients that are not necessary, some that are potentially harmful, and some that actually include substances banned by such governing bodies as the NCAA and the USOC.

Hydration Tips and Fluid Guidelines:

►In general, athletes do not voluntarily drink sufficient water to prevent dehydration during physical activity. Drink early, by the time you're thirsty, you're already dehydrated.

►The American College of Sports Medicine (ACSM) Exercise & Fluid Recommendations 2007:

Before Exercise	Encourage fluid intake several hours (2-4) before exercise and ensure adequate urine output and urine color (clear-pale yellow)
During Exercise	Encourage to drink every 10-15 minutes; Routine measurement of pre- and post-exercise body weight is useful for determining estimated individual fluid needs
After Exercise	Drink 16-24 oz.

►The volume and color of your urine is an excellent way of determining if you're well hydrated:
Large amounts of clear urine = Hydrated
Small amounts of dark urine = Not hydrated and need to drink more
A Urine Color Chart can be accessed at http://at.uwa.edu/admin/UM/urinecolorchart.doc

►*The NFHS SMAC strongly recommends that coaches, certified athletic trainers, physicians, and other school personnel working with athletes not provide or encourage use of any beverages for hydration other than water and appropriate sports drinks that meet the above criteria. They should also make information on the potential harm and lack of benefit associated with many of these other beverages available to parents and athletes.*

References:

Sawaka MN, Burke L, Eichner ER, Maughan RJ, Montain SJ, Stachenfeld NS. American College of Sports Medicine Position Statement: Exercise and Fluid Replacement. Medicine & Science in Sports & Exercise. 377-390, 2007.
Casa DJ, Armstrong LE, Hillman SK, Montain SJ, Reiff RV, Rich BSE, Roberts WO, Stone JA. National Athletic Trainers' Association Position Statement: Fluid Replacement for Athletes. Journal of Athletic Training. 35(2):212-224,2000.
McKeag DB, Moeller JL. ACSM's Primary Care Sports Medicine. 2nd Ed, Philadelphia: Wolters Kluwer/Lippincott Willians & Wilkins, 2007.

Revised and Approved October 2008

These guidelines are from the ACSM Exercise and fluid replacement position stand.

At least 4 hours before exercise	5-7 ml/kg body weight (240 ml=8 ounces)
During Exercise	4-9 ounces every 15-20 minutes See fluid calculator chart below
After Exercise	1.5 L/kg body weight lost (1 Liter= 32 ounces

Fluid calculator to calculate sweat rate:

	Example	My calculation
1. Actual weight before exercise (no clothes)	150	
2. Run or walk for ~1 hour		
3. Amount of fluid intake (ounces) during exercise	16	
4. Actual weight after exercise (no clothes)	149	
5. Weight before exercise minus weight after exercise	1	
6. Convert weight to ounces: #5 value times 16 ounces	X16	
7. Weight change in ounces	16	
8. Determine hourly sweat rate: Add #7 value to #3 value	32	
9. Determine how much to drink every 20 minutes: Divide #8 value by 3-4	8-11	

Injury Management

GATORADE

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Sports Mouth Guards

PREVENTION

- Proper fitting headgear and facemasks.
- Athletes must be taught the proper techniques at all levels of play.
- Properly fitted mouth guards.

MOUTHGUARDS – THE ULTIMATE PREVENTATIVE MEASURE

- The incidence of mouth injuries among football players in the United States today is significant.
- Four types of mouth protectors: stock mouth protector, the thermoplastic mouth formed–protector and the custom made protector type 1 and type 2.
- The stock mouth protector is intended to fit any mouth and is usually the least expensive of the four.
- The thermoplastic mouth-formed protector, commonly known as the "boil and bite." This mouth guard is pre-formed by the manufacturer in standard sizes and formed be the athlete by boiling in water for 1 minute and placed into the mouth for forming. The disadvantages include decreased retention over time, hardening of the material, and poor stability of the guards. The advantages are that it is the least expensive and it can be refitted at any time by boiling the mouth piece again.
- The type 1 custom mouth guard is made by dentists. The disadvantage is that the thickness can vary due to the types of vacuum forming machines. The advantages are that they are custom made and inexpensive.
- The type 2 custom mouth guard is also made by dentists, but used for player with missing teeth or heavy contact sports e.g. football. The advantages are that they are less bulky, the most retention, the least interference with breathing, and they have the best fit.

CONCLUSION

- Mouth guards protection, when utilized, has an overall much lower incidence of oral injuries.
- The incidence of fractured jaws and soft tissue injuries decreases significantly when mouth protection is used.
- Proper use of mouth guards can reduce the amount of trauma to the brain, decreasing the occurrence, and severity of concussion.
- Proper on-site diagnosis and treatment is essential to minimizing potential damage.

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MY ATHLETES HURT, WHAT DO I DO NOW?

(On The Field Assessment and Returning to Play)

This is merely meant to give some basic guidelines and information pertaining to coaches' assessment of athletic injuries. Knowing the mechanism of injury and properly performing an initial assessment is critical in determining the next course of treatment.

- If the injured athlete states that there is numbness, tingling or burning sensations, STOP THE EVALUATION and do no further testing. DO NOT RETURN TO PLAY. These symptoms may indicate a serious injury.

- If, after an initial evaluation, the injury seems minor and the athlete wants to return to participation, there are several criteria and functional tests that will help assess the athlete's physical ability to return.

  - The injured athlete has complete range of motion of the affected body part
  - The injured athlete should have nearly full strength of the uninjured side
  - The injured athlete should have NO significant swelling or fever in the affected body part
  - The injured athlete should have NO significant pain in the injured area

The injured athlete should be able to perform a series of tests which will test his/her ability to participate in the activity. (These tests, for specific area of the body are on other bulletins)

- **IF THERE IS ANY CONCERN ABOUT AN INJURY, DO NOT RETURN A STUDENT TO PLAY.**

- **IF A STUDENT HAS BEEN INJURED AND REFERRED TO A DOCTOR'S CARE, DO NOT RETURN TO PLAY WITHOUT WRITTEN PERMISSION FROM THE PHYSICIAN AND EXPLICIT PERMISSION FROM A PARENT.**

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HEAD AND NECK INJURIES ON-THE-FIELD ASSESSMENT

Head and neck injuries are among the most serious of all athletic-related injuries. Although these injuries are fortunately rare, all game and medical personnel must be prepared for their occurrence at EVERY practice and game. The following provide guidelines for the evaluation of these injuries once they have occurred, however, prevention (see "**REDUCING HEAD AND NECK INJURIES IN FOOTBALL**") and preparation are the keys to avoiding these injuries.

If the athlete is wearing a HELMET:

- Do **NOT** remove the helmet or shoulder pads until the athlete has been cleared by appropriate medical personnel of a serious neck injury.

If the athlete is UNCONSCIOUS and BREATHING:

- Do **NOT** move athlete → Call 911
- Prevent any movement

If the athlete is UNCONSCIOUS and NOT BREATHING:

- Call 911
- Clear Airway
- Begin CPR
- Attempt minimal movement of the head and neck

If the athlete is CONSCIOUS:

- Instruct the athlete **NOT** to move;
- Immobilize the cervical spine (Assume a neck injury exists);
- ASK the athlete:
  - To tell you what is wrong;
  - To say if he/she can feel you touching his/her hands/feet (right/left);
  - If he/she has pain, numbness and/or tingling. If yes, where?
- FEEL (without moving the athlete's head/neck):
  - Behind and along the sides of the athlete's neck from the base of the skull to the upper back and ask if he/she has pain.
- Only if the athlete is alert, responsive and you have found nothing wrong:
  - Help the athlete to a sitting position;
  - Check that he/she is not dizzy;

- Assist him/her to standing with support personnel on each side;
- Help the athlete off the field;

If the player is not alert, not responsive, or you have any reason to suspect something is wrong, DO NOT move the athlete→ Call 911

Additional Resources:

- Center for Disease Control Coach's Concussion Kit: www.cdc.gov/ncipc/tbi/Coaches_Tool_Kit.htm
- USA Football Health and Safety Center: www.usafootball.com/articles/health-and-safety/
- National Federation of State High Schools, Sports Medicine: www.nfhs.org

-There are occasions when a student-athlete has received a blow to the head and on-site medical personnel have evaluated the student and cleared him/her to go home after the injury. However, you should still inform the parent/guardian of the potential for injury, the dangers involved, and what actions should be taken.

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SHOULDER INJURIES
ON-THE-FIELD ASSESSMENT

An athlete should be able to minimally complete all tests before returning to participation. If an athlete who is performing the tests exhibits an inability to perform a specific test, has great anxiety during a specific test, limps or is favoring the injured area, exhibits indications of pain or instability, he/she should NOT be allowed to return to participation.

- If the athlete mentions any signs of numbing, tingling or burning sensations – **STOP - DO NO FURTHER TESTING**.
- Any local pain, loss of range of motion, or pain in the neck **- STOP – DO NO FURTHER TESTING**.

1. FULL RANGE OF MOTION – Have the athlete perform full range of motion of the arm and shoulder. Make sure and remove protective equipment such as shoulder pads. Have the athlete move their arm forward and then up and over their head and side to side in a full arm circle. Then complete the same test with resistance at shoulder rotation level.

2. SCRATCH TEST – Have the athlete stand and reach with the injured arm up behind the back as high as possible between the shoulder blades. Next, have the athlete reach down, behind the head from the shoulder blades as far as possible (scratch your back). Compare injured arm with uninjured arm.

3. SHOULDER SHRUG TEST – Have the athlete stand and shrug the shoulders as high as possible; relax, then push the shoulders as far forward as possible; relax, then squeeze the shoulder blades together as far as possible.

4. THROWING TEST – have the athlete throw a ball easily and at short distances. Progress to throwing harder and at longer distances (or other sport specific test).

5. RACKET SWINGS TEST – Have the athlete simulate swinging a racket using forehand, backhand and over the head motions. Progress from easy swings to full swings (or other sports specific test).

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ELBOW AND WRIST INJURIES ON-THE-FIELD ASSESSMENT

Elbow Injuries

Injured area should be uncovered prior to any examination. Examine the uninjured extremity first. This gives the coach a basis from which to begin. Tests are given in a numbered progression in which they should be performed. **THE ATHLETE SHOULD BE ABLE TO COMPLETE THESE TASKS WITHOUT PAIN OR WEAKNESS**.

- If the athlete mentions any signs of numbing, tingling or burning sensations – **STOP - DO NO FURTHER TESTING**.
- Any local pain, loss of range of motion or pain in the neck - **STOP – DO NO FURTHER TESTING**.

1. RANGE OF MOTION – Have the athlete bend and straighten the elbow as far as possible without pain. Rotate wrist, palm up and then rotate to palm down with elbow bend and held against athletes' side.

2. RANGE OF MOTION WITH RESITANCE – Same as above but with the coach providing resistance.

3. GRIP STRENGTH TEST – Have the athlete grasp the first two fingers on each of your hands and squeeze tightly. Compare the strength of both hands. Any losses of strength in grip test, do not return to play.

Wrist and Hand Injury

1. RANGE OF MOTION – Bend wrist up and down. Make wrist circles (both directions). Palm up and down. Then complete the same series of test with the coach applying resistance.

2. GRIP STRENGTH TEST – Have the athlete grasp the first two fingers on each of your hands and squeeze tightly. Compare the strength of both hands. Any loss of strength in grip test, do not return to play.

3. ATHLETIC ABILITY TEST – Have the athlete do an athletic move that is close to what they will have to do once they return to play.

You may add taping or bracing to support the area before testing. With any type of injury or anything you are not familiar with, call for a higher medical authority. Make sure that you record all injuries and what was done for the athlete. Follow up with the athlete and his/her family to ensure they obtained proper medical care for the injury.

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KNEE INJURIES
ON-THE-FIELD ASSESSMENT

Injured area should be uncovered prior to any examination. Examine the uninjured extremity first. This gives the coach a basis from which to begin. Tests are given in a numbered progression in which they should be performed. **THE ATHLETE SHOULD BE ABLE TO COMPLETE THESE TASKS WITHOUT PAIN OR WEAKNESS**.

- If the athlete mentions any signs of numbing, tingling or burning sensations – **STOP - DO NO FURTHER TESTING**.
- Any local pain, loss of range of motion, or pain in the neck - **STOP – DO NO FURTHER TESTING**.

1. RANGE OF MOTION TEST - While seated, have the athlete attempt to bend and straighten the knee equal to the uninjured knee.

2. SQUAT TEST – Standing with the weight distributed evenly on both legs, have the athlete do a 2-legged squat to approximately 45 degrees and hold for five seconds. Progress to a 1-legged squat to approximately 45 degrees and hold for five seconds.

3. HOP TEST – Have the athlete hop on both feet and land without a limp.

4. FORWARD/BACKWARD TEST – Have the athlete jog forward ten yards, then stop and back pedal five yards. Gradually increase speed and the intensity of the starts and stops. Watch for limping or hesitation.

5. JOGGING FIGURE 8 TEST – Have the athlete slowly jog in a large figure 8 pattern, and progress to smaller patterns and a quicker pace.

6. CUT AND PIVOT TEST – Have the athlete jog toward you several steps and on your command pivot either to the right or left. Increase the speed at which the athlete jogs and watch for limping or hesitation. Progress to pivoting at full speed.

7. ZIG ZAG TEST – Have the athlete run a zig zag pattern, increasing speed and the intensity of the cuts. Again, watch for limping or hesitation.

8. RUN AND JUMP TEST – Have the athlete jog several steps, then jump off both feet. Progress to jumping off only the injured leg. Watch for limping or hesitation.

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FOOT, ANKLE AND LOWER LEG INJURIES ON-THE-FIELD ASSESSMENT

Injured area should be uncovered prior to any examination. Exam the uninjured extremity first. This gives the coach a basis from which to begin. Tests are given in a numbered progression in which they should be performed. **THE ATHLETE SHOULD BE ABLE TO COMPLETE THESE TASKS WITHOUT PAIN OR WEAKNESS**.

- If the athlete mentions any signs of numbing, tingling or burning sensations – **STOP - DO NO FURTHER TESTING**.
- Any local pain, loss of range of motion or pain in the neck - **STOP – DO NO FURTHER TESTING**.

1. RANGE OF MOTION – Seat the athlete with knee bent and the toes pointing away from the body. Have the move their leg a full range of motion, up and down, side to side.
2. BREAK TEST – Same as above, now with resistance. Have the athlete move the foot up/down and side to side. Check to see if the athlete can resist your force or if the ankle is too weak and painful.
3. WEIGHT BEARING TEST – Have the athlete gently step down on the foot, progressing to a slow walk, if possible, and watch for pain or limping.
4. TOE RAISE TEST – have the athlete stand with the weight evenly distributed on both legs. With both feet together, rise up on the toes twenty (20) times. Progression to raising up on the toes of only the injured leg.
5. HOP TEST – Have the athlete hop on both feet and land without a limp.
6. FORWARD/BACKWARD TEST – Have the athlete jog forward ten yards, then stop and back pedal five yards. Gradually increase speed and the intensity of the starts and stops. Watch for limping or hesitation.
7. JOGGING FIGURE 8 TEST – Have the athlete slowly jog in a large figure 8 pattern, and progress to smaller patterns and a quicker pace.
8. CUT AND PIVOT TEST – Have the athlete jog toward you several steps and on your command pivot either to the right or left. Increase the speed at which the athlete jogs and watch for limping or hesitation. Progress to pivoting at full speed.

9. ZIG ZAG TEST – Have the athlete run a zig zag pattern, increasing speed and the intensity of the cuts. Again, watch for limping or hesitation.

10. ATHLETIC ABILITY TEST – Have the athlete do an athletic move that is close to what they will have to do once they return to play.

You may add taping or bracing to support the area before testing. With any type of injury or anything you are not familiar with, call for a higher medical authority.

Make sure that you record all injuries and what was done for the athlete. Follow up with the athlete and his/her family to ensure they obtained proper medical care for the injury.

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CAUSE, PREVENTION, AND TREATMENT OF MUSCLE CRAMPS

Muscle cramps are muscle contractions that do not cease and that will continue until proper treatment is given. They may well cause an athlete to temporarily stop activity, but they generally have no serious long-term consequences. One has no control over when a muscle cramp is going to occur. They can strike during activity, during rest or even during sleep.

While no one knows exactly what causes muscle cramps, there are several factors that are associated with them. Muscles that are fatigued, injured or exposed to extreme temperatures are more prone to cramping. Dehydration, electrolyte imbalance, mineral deficiency, impaired circulation or other more serious disorders may cause muscles to cramp. Some persons, often those who sweat profusely, are predisposed to muscle cramps and get them quite regularly, while others have never experienced a cramp.

Muscle cramps are often divided into two basic categories – night cramps and heat cramps. Night cramps include any cramp that occurs while a person is at rest. They often affect the calf muscle and the small muscles in the feet. Heat cramps are most often associated with dehydration and electrolyte imbalance. Heat cramps occur most often after the athlete has been exercising for an hour or more in the heat. Athletes may be more prone to heat cramps after several days of exercising in extreme heat. Heat cramps may occur in any of the skeletal muscles, but are most common in the large muscles in the arms and legs, especially the calf muscles. Heat cramps often occur at the beginning of the warm weather season before athletes have had an opportunity to acclimate themselves to the environment and when the body is more prone to losing fluids and electrolytes.

Prevention of Heat-Related Muscle Cramps

The following steps should help to prevent many heat-related muscle cramps.

- **Drink Plenty Of Fluids**. Urine color is the key to determining how well-hydrated an athlete is. Clear urine indicates adequate hydration, yellow urine indicates dehydration and pale urine indicates that the athlete is somewhere between hydration and dehydration. Athlete weigh-ins before and after practice may be helpful in monitoring fluid loss.

- **Get Enough Electrolytes**. While it is most important to replace fluids lost from sweating, one can't forget about electrolytes. Replacement of sodium and potassium are suspected to prevent muscle cramps. Sodium can be replaced with salty foods, such as pretzels or chips, or adding extra salt on your meals. Potassium levels can be maintained by eating bananas and oranges or drinking orange juice. Many popular sports drinks will help fulfill this need.

- **Wear Proper Clothing**. Avoid exposing muscles to rapid changes in temperature.

- **Get In Shape And Stay In Shape**. Fatigue and poor conditioning can make muscles more prone to muscle cramps.

- **Stretch**. Stretching before and after exercise can reduce the muscle's susceptibility to cramps.

Treatment of Muscle Cramps

- The most effective treatment for muscle cramps is to gently stretch the cramped muscle.
- Use of ice, along with gentle stretching, will numb the area and cause an increase in circulation once the ice is removed.
- Gentle massage of the muscle may help.
- Fluids replacement should begin immediately.

Often athletes suffering from muscle cramps will return to participation immediately after the cramp has been relieved. Severe muscle cramps may require the athlete to rest and avoid exercise for 12 to 24 hours. Recurring bouts of muscle cramps should be referred to a medical professional for further examination and testing.

An unusual method of treating muscle cramps is to pinch the upper lip. There are several theories available on why this may help. Whether it alters nerve transmission or draws the athlete's attention away from the cramp, it may work for some athletes.

As with any type of athletic injury, preventing muscle cramps is more desirable than treating them. Those methods are most likely drinking plenty of fluids, eating foods with adequate amounts of potassium and sodium and conditioning the muscles so they don't fatigue as quickly. Any athlete with repeated bouts of cramps, despite the above, needs to see a physician.

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Ankle Sprains

There are thousands of ankle sprains that occur each day in the United States. In athletics, basketball, soccer and volleyball have the highest occurrences. Sprains happen early in the season and during the second half of a game when muscles fatigue easily and are weak. Female athletes tend to have a higher risk for sprains then their male counterparts.

Description: An ankle sprain results from over-stretching or tearing of the joint capsule and/or ligaments. Ligaments are tissues that connect bone to bone. The joint capsule is the envelope that encloses/surrounds the joint and is similar to a ligament.

Three types of ankle sprains:
Lateral (Inversion)- sprain of ligaments on the outside of the ankle, most common
Medial (Eversion)- sprain of ligaments on the inside of the ankle
Syndesmosis (High Ankle)- sprain of ligaments that connect the two leg bones

Ankle sprains are classified into three grades:
Grade 1- mild with stretching of the ligament/s
Grade 2- moderate with partial tear of ligament/s
Grade 3- severe with a complete tear of ligament/s

Signs & Symptoms
Pain, tenderness, and swelling in the ankle starting at the side of the injury that may progress to the whole ankle and foot. A popping, tearing or giving way sensation may be felt at the time of injury. Bruising may also be seen immediately or develop over time. Athlete may have an impaired ability to walk soon after injury.

Treatment
Immediate recognition and early intervention is the key to a quick recovery.

Phase 1 (acute or immediate): Decrease swelling and pain

- REST and RICE (rest, ice, compression, elevation)
  - **R**est the ankle to decrease the effects of immediate inflammation
  - **I**ce every couple of hours for 20 minutes at a time.
  - **C**ompress using an Ace wrap or similar item to decrease the swelling
  - **E**levate the ankle by putting your foot up on a chair or table when sitting above the level of your heart

- Non-weight bearing till further evaluation by an athletic trainer or doctor
- Non-weight bearing range of motion exercises 3x day starting day 2
    - Circles with your ankle both clockwise and counter clockwise
    - Alphabet spelling using capitals with your big toe and ankle

(Once a player is weight-bearing without increased pain you can progress to Phase 2. This may take a week or several weeks depending on the severity of the injury.)

Phase 2: Strengthening and stretching

- Achilles tendon and calf stretching before any strengthening
- Increase muscle strength and balance within pain-free range of motion
- Important to strengthen the lateral (outside) aspect of ankle and lower leg as well as ankle dorsiflexion (raising up on toes like a calf raise)

(Motor control must be reestablished before an athlete can progress to Phase 3. This may take several weeks.)

Phase 3: Sport-specific training
(Should be performed in a controlled setting)

- Functional progressive conditioning (brisk walking-running-figure 8 running-hopping-jumping-cutting-running with cutting)
- Progress balance exercises to more unstable surfaces
- Introduce agility drills
- Progress to endurance exercises

(Return to play when full motion and strength have returned with all agility and functional conditioning. This may take several weeks.)

Ankle Sprain Increased Risk

Previous ankle sprain
Walking or running on uneven surfaces
Shoes with inadequate lateral support
Poor strength and flexibility
Poor balance skills
Poor warm ups and pre-workout stretching
Sports such as volleyball, basketball, and soccer where the foot may land awkwardly

Preventive Measures

Appropriately warm up and stretch before practice or competition
Maintain appropriate physical conditioning

- Ankle and leg flexibility, muscle strength, and muscle endurance
- Balance training activities

Use proper technique
Taping or bracing
Wear proper protective shoes

Hygiene Issues

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MRSA

MRSA (methicillin-resistant staph aureus) is a type of staph infection that is resistant to many common antibiotics and, in cases where treatment is needed, can be very difficult to treat. Staph bacteria are one of the most common causes of skin infections in the United States. Most of these skin infections are minor (such as pimples and boils) and can be treated without antibiotics, but occasionally serious infections require treatment. In the last few years, there have been a number of cases where these bacteria have spread among members of sports teams. Recently, this issue is making headlines as MRSA can have serious and deadly ramifications if not dealt with immediately.

WARNING SIGNS

It is common for athletes to have pimples, cuts and abrasion on their skin. Coaches must be aware of the signs and symptoms that their student-athletes may exhibit.

- **Unusual or increasing pain and/or warmth**
- **The presence of pus or a pustule**
- **Induration (hardness)**
- **Increasing swelling, size or redness of the wound**
- **Red streaks around the wound**
- **Fever and/or chills (flu-like symptoms)**

If you have any of these signs or symptoms, seek medical attention immediately.

Preventing MRSA

Precaution that coaches should take for preventing the spread of MRSA

- **<u>Insist that your athletes shower with soap as soon as possible after practices and competitions.</u> If MRSA bacteria are present on your skin, you can wash them away before they have a chance to cause infection.**
- **Ensure that athletes do not share equipment, clothing, towels and other personal items. <u>Implement a NO-SHARING rule if you have not done so already.</u>**
- **Whether your athletic department launders practice and game uniforms or athletes do it themselves, implement a policy that uniforms (practice and game) get washed after EACH use.**
- **Ensure that all wounds, cuts and abrasions are covered to help prevent infection, especially during practice and completion.**
- **Equipment MUST be stored in clean, dry areas. A dark, moist, warm environment (lockers) is perfect for bacteria growth.**
- **Clean and disinfect daily, surfaces that are touched on a regular basis. This includes benches, training room tables, weight room equipment and benches.**
- **Wrestling mats MUST be cleaned DAILY before and after use. This would include use by physical education classes.**
- **Research is inconclusive on whether athletic fields can harbor MRSA bacteria. Since some studies have shown that the possibility exists, there are companies that offer antimicrobial treatments for athlete fields.**

For more information go to www.cifstate.org and click on the 'Health and Safety" box at the top of the page. Open the Sports Medicine Handbook and refer to page 44 for practical health hygiene policies and

What to do about MRSA in School Athletic Programs

Infection Control Policies and Procedures Checklist

Please review the policies and procedures below. Use this tool to help determine which policies/procedures you already have, if they are being followed, and which policies and procedures you need to put in place. This check list is meant to serve as a guideline on reasonable methods of protecting the health and welfare of student athletes. These guidelines are not meant to provide a "standard of care" and are not meant to supersede medical or administrative judgment decisions that must frequently be made on the scene by appropriate individuals.	Policy/Procedures		
	Exist (x)	**Follow (x)**	**Needed (x)**
General			
All hard environmental surfaces that may come in contact with body fluids are cleaned and sanitized daily with EPA-approved disinfectant (if area in use).			
All floor and wall padding in athletic area(s) are washed daily, if athletic area is used.			
Separate mop heads/ buckets are used for each activity area, locker rooms and rest rooms. Mop heads and buckets are cleaned regularly. (Washable micro-fiber heads or disposable mop cloths are preferred.)			
Towels/ linens laundered on premises are washed at a minimum of 160 °F and dried in a hot dryer.			
Notes:			
Wrestling Room and Mats			
Wall padding, benches and door knobs are wiped-down with quaternary ammonium (quat) or 1:100 bleach solution after each practice and meet.			
Floors are cleaned before and after any moveable mats are used.			
Mat surfaces with *small* holes or tears are repaired with mat tape. When mat sides are in poor condition, mats are taped together for meets *and* for practice.			
Mat surfaces are replaced promptly when there are *large* holes or surfaces are excessively worn.			
Both sides of mats are thoroughly cleaned before and after each use for practices and meets.			
A separate mop head/ bucket is used specifically for cleaning mats; mop heads and buckets are washed regularly.			
Notes:			
Weight Room			
Weight machine padding is inspected regularly, and promptly replaced if punctured or torn.			
Grip areas on weight bars, dumbbells and machines are not taped.			
Grip areas on weight bars, dumbbells, and machines, and lift belts are wiped down daily.			

recommendations.

Wall dispensers of hand gel (≥ 60% alcohol) are placed at each entry/exit. Athletes and coaches are instructed to use when entering/leaving room-minimum use, may use more often.			
Floors, benches, supports, pads, light switches and door knobs are cleaned daily (when room in use).			
Notes:			
Locker Rooms/Shower Rooms			
Wall dispensers for liquid soap are located next to showers.			
All shower and locker room areas are cleaned daily (if used).			
All floor and walls in athletic area(s) are washed daily, if athletic area is used.			
All benches are washed daily, if used.			

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BLOOD BORNE PATHOGENS IN SPORTS

Or What To Do When There Is Blood

Blood-Borne pathogens of specific concern to athletics include, but are not limited to, the hepatitis B virus (HBV) and the human immunodeficiency virus (HIV). These pathogens cause serious health related issues, therefore every effort must be made to prevent transmission occurrence. The Occupational Safety and Health Administration (OSHA) has set forth standards for blood-borne pathogens and should be reviewed by each institution. There are two key situations to consider in the control of blood-borne pathogens in athletics. First, is the cleaning of blood from an athlete and their uniform. Second, is the cleaning of blood from environmental surfaces (i.e. floors, mats, training tables and other non-porous surfaces). Regardless of the setting, all personnel involved with the handling of potentially infectious material should be trained in first aid and the use of personal protective equipment (universal precautions). This update addresses some of the supplies that are effective in the control of blood-borne pathogens.

Cleaning Blood from Athletes and Uniforms

- Warm, running water and antibacterial soap containing Triclosan or Triclocarbon
- Waterless, antiseptic hand cleanser
- 70% Isopropyl alcohol
- Hydrogen peroxide
- Antiseptic wipes
- Germicidal wipes

Uniforms with excessive blood on them should be removed and laundered properly (>160 deg F) before they are worn again. If an athlete's uniform becomes saturated (soaked through the fabric and in contact with skin) with blood, the uniform must be removed and changed before the athlete can return to competition. After any antiseptic is used to remove blood from skin, antibacterial soap and water should be used to wash the area as soon as possible.

Cleaning Blood from Environmental Surfaces

- 1:10 household bleach and water solution, made fresh every 24 hours
- 70% Isopropyl alcohol
- Hydrogen peroxide
- Commercial sprays and liquids which are effective in killing HIV and HBV viruses

Janitorial and Sports Medicine supply companies carry a wide variety of products suitable for cleaning blood from environmental surfaces. Institutions are advised to contact manufactures or distributors to ensure their cleaning products meet the appropriate specifications.

CAUTION: **Products designed to clean environmental surfaces are not generally designed for cleaning skin. Read product labels to ensure that the product you are using is deemed safe for your particular intent.**

NOTE: Protective gloves should always be worn when cleaning blood from environmental surfaces, uniforms or another person's skin. Wash hands immediately following glove removal. Red biohazard bags should also be used to dispose of gauze, gloves, and other materials used to clean up blood.

Skin Disorders

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COMMON SENSE SKIN HYGIENE

- Certain types of skin infections have been shown to spread among members of sports teams at all levels. Many of these infections are caused by an organism called *Staphylococcus Aureus*, often referred to simply as "staph". These bacteria are commonly carried on the skin or in the nose of otherwise healthy people. Staph bacteria are one of the most common causes of skin infections in the United States. Most of these skin infections are minor (such as pimples and boils) and can be treated without antibiotics, but occasionally serious infections requiring treatment occur.
- Some staph bacteria are resistant to antibiotics. MRSA (methicillin-resistant staph aureus) is a type of staph resistant to many common antibiotics, and in cases where treatment is needed, can be more difficult to treat. In the last few years there have been a number of cases where these bacteria spread among members of sports teams.
- Staph infections, including those with MRSA can cause skin infections that look like a pimple or boil. The surrounding area is often red, swollen and painful, and there may be pus or other drainage. In some cases they may resemble a spider bite with a dark center surrounded by redness. These lesions are frequently located on the buttocks or legs. They can be quite painful. Treatment consists of draining the lesion (lancing) and or appropriate antibiotics. Even after treatment, infections can recur, in part because other family or team members have been contaminated and may be "carriers" of the bacteria even if they have no lesions themselves. Any athlete with a suspicious boil should of course be evaluated by an appropriate medical professional.

In order to avoid the occurrence and spread of such infections in sports teams we have formulated a set of recommendations for schools and coaches.

1. Cover all wounds. If a wound cannot be covered adequately, consider excluding players with potentially infectious skin lesions from practice and competition until the lesion is healed or can be covered adequately Bandages should be disposed of so as to prevent other people contacting them, and anyone handling such bandages should use gloves and wash hands thoroughly.

2. Encourage good hygiene, including showering and washing with soap after all practices and competitions.

3. Ensure availability of adequate soap and clean towels. If there are known MRSA cases among team members, antibacterial soap is preferred.

4. Towels and uniforms should ideally be cleaned after each use.

5. Discourage sharing of towels and personal items such as razors, clothing and equipment.

6. Train athletes and coaches in first aid for wounds and in recognition of wounds that are potentially infected or infectious.

7. Encourage athletes to report skin lesions to coaches and encourage coaches to assess athletes for skin lesions.

8. Consider placing alcohol hand sanitizer dispensers at the exits from facilities such as locker rooms and wrestling rooms and encourage their use. If hands are visibly soiled, soap and water is preferred.

9. Encourage use of clothing or clean towels to create a barrier between skin and equipment such as weight machines which are used by more than one person.

10. Wipe down common surfaces such as gymnasium mats and exercise benches with an appropriate disinfectant on a regular basis. Commercially available disinfectants such as Lysol can be used as can isopropyl (rubbing) alcohol or a dilute bleach solution (one part bleach to nine parts water). Be sure the disinfectant used will not damage the surface being cleaned.

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SKIN CANCER PREVENTION FOR STUDENT-ATHLETES AND COACHES

Avoid the Sun: Try to minimize exposure to the sun between 10:00a.m. and 3:00p.m. When possible, avoid scheduling practices and games during that time.

Use Sunscreen with SPF 15 or Above: Apply sunscreen at least 20 minutes before exposure to the sun. Always reapply sunscreen after swimming or sweating. If you are outside, give your athletes several "sunscreen breaks" during practice. Remember to use sunscreen even on cloudy or hazy days.

Cover Up: Wear a wide-brimmed hat and long-sleeved shirt whenever possible in the sun. There are also special lightweight fabrics available which block the UV light.

Avoid Tanning Parlors and Sunlamps: These products emit UV light, which can cause sunburn, skin cancer and premature aging of skin.

Perform a Monthly Skin Self-Exam: Note the location of any moles, blemishes or birthmarks on a human body diagram. Each month use the body map to detect any changes in these skin conditions or the appearance of any new ones.

OTHER FACTORS THAT AFFECT SUN PROTECTION

Time of Day: The sun's UV rays are strongest during midday hours—10:00a.m. to 3:00p.m.

Skin Tone: Fair-skinned individuals are at greatest risk of experiencing sunburn and must be particularly careful to protect their skin from the sun.

Check Medications: Some medications such as antibiotics increase the skin's sensitivity to sunlight.

Altitude: The sun's rays increase in intensity as the altitude increases.

Climate: Reflections off of ice, snow, and cement can increase your exposure to UV rays.

Weather: Even on cloudy or hazy days, you are exposed to 80% of the sun's radiation.

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SKIN CANCER

SKIN CANCER STATISTICS

Skin cancer is the most common type of cancer.

More than 90% of all basal and squamous cell carcinomas are thought to be caused by overexposure to the sun's ultraviolet (UV) rays.

The effects of sun's rays are cumulative with as much as 80% of lifetime sun exposure occurring before the age of 20.

THE THREE TYPES OF SKIN CANCER

BASAL CELL CARCINOMA may be translucent or pearly, and usually occurs on the face.

SQUAMOUS CELL CARCINOMA often has a rough surface and most commonly occurs on the face, forearms and the back of the hands.

MELANOMA may occur anywhere on the skin. Warning signs for melanoma include **A,B,C,D:**

- Asymmetry: One half of the skin spot is unlike the other half.
- Border irregularity: The border of the spot is irregular of blurred.
- Color: There are multiple colors in the same skin spot, sometimes in an irregular pattern.
- Diameter: The skin spot is larger than a quarter of an inch (the size of a pencil eraser).

RISK FACTORS FOR SKIN CANCER

Although everyone is at risk for developing skin cancer, those with the following characteristics are at higher risk.

- Fair skin, freckles, or numerous moles
- Blond, red or light-brown hair
- A tendency to sunburn easily and to tan very little or not at all
- A family history of skin cancer
- Long periods of daily sun exposure or short periods of intense exposure

Nutritional Information

GATORADE

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PREFORMANCE-ENHANCING NUTRITION

One often neglected component of optimizing performance is proper nutrition. To perform at your best, besides a well-structured training schedule, the body needs proper balanced diet of carbohydrates, proteins, fat, fluids and electrolytes. Sound nutrition provides fuel for workouts as well as components for recovery.

Pre-Game Meals Tips:

- Easily digested
- >2-3 hours before competition
- Adequate calories (you want your tank full)
- Avoid heavy, fatty meals (but not too full)
- Adequate fluids

Post-Game Meals Tips:

- Replenish calories, electrolytes
- Replenish fluids
- Replenish muscle glycogen in the first 30 minutes after exercise by eating simple carbohydrates or high carbohydrate sports drinks.

Options For Eating On The Go:

- bagel
- fruit
- graham crackers
- pretzels
- granola bar
- low fat cheese sticks
- popcorn

Choices When Eating Out:

- baked, broiled, boiled or poached
- avoid fried, breaded or gravy
- limit butter, margarine, mayonnaise, sour cream, cream cheese, creamy salad dressing.

SAMPLE MENUS TAKEN FROM THE FOLLOWING FAST FOOD RESTAURANTS.

Breakfasts
McDonalds

	Calories	Protein	Carbohydrates	Fat
Plain English Muffin (S)	747	17%	56%	25%
Strawberry jam (1 packet)				
Scrambled egg (1)				
Orange Juice (6 ounces)				
2 % milk (1 carton)				
or Hot Cakes with	650	11%	66%	25%
butter and 1/2 syrup pack				
and orange juice				

Lunch/Dinner
Wendy's

	Calories	Protein	Carbohydrates	Fat
Chicken breast Sandwich	719	22%	53%	25%
on multi-grain bread				
(no mayonnaise)				
Baked potato				
Sour cream (1 packet)				
2 % milk				
or Chili (8 ounces)	1,016	16%	57%	25%
Baked potato, plain				
Frosty (small)				
Side Salad				
3/4 cup lettuce				
3/4 cup fresh veggies				
1/4 cup cottage cheese				

Arby's

	Calories	Protein	Carbohydrates	Fat
Jr. Roast Beef on multigrain	695	22%	51%	27%
bread with lettuce and tomato				
(no mayonnaise or horseradish)				
Side salad*				
2 % milk				
or Arby's Regular Roast Beef or	970	20%	52%	30%
ham and cheese sandwich				
Side salad*				
Vanilla shake				

*1/2 cup lettuce, 1 cup fresh veggies, 1/2 cup garbanzo beans, 1/4 cup cottage cheese 2 tablespoons low-calorie dressing.

Taco Bell

	Calories	Protein	Carbohydrates	Fat
tostadas*	1,040	18%	56%	27%
1 bean burrito				
2 plain tortillas				
2% milk				
or 1 tostada*				
2 bean burritos				
1 plain tortilla				
2% milk				
or 1 tostada*				
2 bean burritos				
1 plain tortilla				
2% milk				

*if possible, ask that tostada shell be plain, not fried

Pizza Hut*

	Calories	Protein	Carbohydrates	Fat
Large Spaghetti	1,023	19%	61%	20%
with meat sauce				
Breadsticks				
2% milk				
or 1/2 medium onion, green	1,126	20%	55%	25%
pepper and cheese pizza				
(thin crust)				
2 breadsticks				
2% milk				

*Pizza Hut does have a salad bar.

Balanced Diet Components

1) Fruits and Vegetables (5x day, raw, steamed, dried, canned)
2) Low-Fat Dairy (milk, yogurt, cheese)
3) Lean Protein (beans, peas, fish, lean meats & poultry)
4) Healthy Fats (mono- or polyunsaturated fats, olive oil, fish)
5) Whole Grains and Variety of Carbs (breads, cereals, rice, pasta, potatoes)
6) Intake: 55-65% carbohydrates, 20-25% fats, 15-20% protein
7) Avoid sweets, caffeine, alcohol, fast food
8) Timing (don't miss meals, eat at regular times, don't eat in front of the television)

Protein- This is important for growing adolescents and for building muscle.
Protein Requirements (Daily)

Sedentary adult	0.4g/lb
Strength training adult	0.6 - 0.9g/lb
Endurance athlete	0.5– 0.9g/lb (depending on intensity)
Growing teen athlete	0.8-0.9g/lb
Maximum recommended	1g/lb

Supplements

There is no "miracle" supplement that will replace a good balanced diet. Eating a variety of foods in a balanced diet will provide all the necessary nutrients to allow for peak performance. Supplements should not replace food. Be wary of supplements -- they are not FDA regulated and may contain banned substances.

Hydration

Dehydration can decreased performance and increase your risk for heat illnesses such as exercise associated collapse, heat exhaustion, and heat stroke. Signs of dehydration or heat illness may include muscle cramping, decrease performance, unsteadiness, vomiting, irritability, incoherency or inappropriate cessation of sweating.

The best way to determine your hydration needs are to measure pre- and post- exercise weights on a bathroom scale. Your deficit is how much fluid replacement you will need.

For those athletes who tend not to drink enough water or who need something with more taste, sports drinks often provide a more palatable alternative. They usually contain electrolytes that will help replenish losses if you have been exercising for a prolonged period of time. For shorter durations (<1-2 hours) of exercise, water is probably adequate.

Avoid caffeine or alcohol which can contribute to dehydration.

Hyponatremia

If you will be exercising for prolonged periods (>2 hours), heed your thirst. You should drink if you are thirsty. If you are not thirsty, be wary of the potential to over-drink resulting in diluting the sodium in your blood (hyponatremia). You may notice bloating or swelling in your hands or fingers or lethargy. Risk factors for this include weight gain after exercise and prolonged exercise (ie, ultra-distance events).

Prevention of Heat Illness

- adequate hydration
- conditioning – gradual increase in intensity and duration
- acclimatization – gradual exposure to new environmental condition (heat, humidity, elevation)
- sweating – maximize exposed skin (convection)

Links for additional information

http://www.drugfreesport.com/choices/nutrition/
http://www.drugfreesport.com/choices/supplements/index.html
http://www1.ncaa.org/membership/ed_outreach/nutrition-performance/index.html

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Recognition, Management and Prevention of Eating Disorders

Significance:

- Disordered eating is a multi-factorial disorder that includes social, familial, physiological and psychological components. Disordered eating can be defined as a spectrum of abnormal eating behaviors, ranging from mild food restriction and occasional binging and purging, to severe conditions of anorexia and bulimia.
- In the athletic population, the incidence of disordered eating behaviors and pathologic eating disorders is significantly higher than the general population. The high incidence in athletes has been attributed to the athlete's attempt to control body weight or body composition in an effort to improve their performance.
- The estimated **mortality** rate is 15 percent, highest of all mental health disorders. All individuals working with young athletes, particularly active females, should be educated about these disorders and work within their resources to develop strategies for prevention and management.

Recognition:
The signs and symptoms of disordered eating are vast and vary depending on the condition. General signs to watch for:

- **Repeated expressed concerns about being fat.**
- **Preoccupation with food, calories, weight.**
- **Alterations in menstrual cycle.**
- **Avoidance of eating in public.**
- **Making trips to the bathroom following a large meal.**
- **Relentless physical activity above and beyond the requirements of their training program.**
- **Wearing layered or baggy clothing.**
- **Bloodshot eyes, swollen regions around the cheeks and in front of the ears.**
- **History of reoccurring stress fractures, i.e., Female Athlete Triad.**
- **Social isolation over meals with family and friends.**
- **Strong denial pattern when confronted about eating or weight loss.**

Management

- Identify athletes at risk for disordered eating.
- If an athlete displays signs or symptoms of disordered eating, refer them to a medical professional trained or specializing in disordered eating in adolescent athletes.

Prevention

- Educate coaches, athletes, parents, officials and administrators about the signs, symptoms and dangerous consequences of disordered eating.
- Take special care when working with athletes who have weight problems or who are involved in at-risk sports (Cross Country, Gymnastics, Wrestling, Swimming and Diving).
- Avoid placing too much emphasis on body weight, leanness or size as a key to optimal performance.
- Close observation of athlete's demeanor for defensiveness, indifference or anger concerning their weight or eating patterns.
- Use personal relationship to have open, direct conversations about concerns in a non-confrontational manner and INCLUDE THE PARENT/GUARDIANS.

Additional Resources

- Free school guidelines available from National Association of Anorexia Nervosa and associated disorders at **www.ANAD.org**
- Siegel, Michele, "Surviving an Eating Disorder" – Manual for family and friends.
- Garner, D., Rosen, L. Eating disorders among athletes. Child and Adolescent Psychiatric Clinics of North America. 1998: 839-857.
- Putukian, M. The female athlete triad. Clinics in Sports medicine. 1998; 17:675-696.

Supplements

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Effects of Caffeine on Athletic Performance

Caffeine creates a mild stimulating effect when taken in small amounts.

- Small amounts increase blood pressure, metabolic rate, respiration, heart rate and with excessive amounts can act as a diuretic??

- Caffeine is not only found in coffee, tea and soda, but many popular energy products contain caffeine which can be listed as caffeine or as a different name on labels (ex. guarana). See table below for examples of caffeine content in these popular products. Other ingredients such as ma huang act as a stimulant and are found in some of these products along with caffeine.

- Doses higher than 1000 milligrams - the equivalent of 10 cups of coffee in one sitting or 6-10 Vivarin or No-Doz- isolated cases of seizures and death have been reported.

- Caffeine enters the bloodstream within minutes after consumption, and reaches its peak level in about 30 minutes.

- Some studies indicate that some endurance athletes may benefit from ingesting caffeine prior to exercise, others show caffeine has no effect what-so-ever on endurance performance. For those athletes who do benefit, performance does not increase with increases in caffeine dose. *In other words, if some is effective, more is not better.*

- One caution to be pointed out is that the side effects of nervousness and with excessive amounts, dehydration, may very well offset any benefits that may occur due to increased workload.

- At higher levels of intake, caffeine has the potential to cause anxiety, impairments or alterations of fine motor control and technique and interfere with recovery and sleep patterns.

- Studies have supported the conclusion that athletes involved in strength and power sports, such as strength training or sprinting have shown no improvement due to taking caffeine.

- Caffeine induced dehydration seen with excessive intake may actually decrease athletic performance by decreasing the efficiency of the muscles which are forced to work while being deprived fluids.

- As athletes drink their caffeinated beverages, they need to be aware that caffeine rarely has any positive effects on athletic performance, but may very well have a negative impact on their overall health and performance.
- Caffeine addiction does exist. Withdrawal symptoms such as headaches, irritability, fatigue and upset stomach may occur, within 12 hours after the last ingestion.

Caffeine content of many popular products:

Beverage	Serving	Caffeine Content (milligrams)
Coca-Cola	12 oz.	29
Brewed Coffee	8 oz.	80 (40-165)*
GU	32 g packet	20
Monster	16 oz.	160
Mountain Dew	12 oz.	45
Powergel	40 g packet	25
Red Bull	8.oz	76
Redline Power Rush	2.5 oz.	350
Rockstar Juiced	16 oz.	160
SoBe Adrenalin Rush	16 oz.	172
Sobe No Fear	16 oz.	174
Tea	8 oz.	27 (9-51)*
V	8	50
XS	8.4 ounces	83

*Caffeine content is approximate and varies widely among brands. This list of caffeine-containing drinks is not all inclusive. Sources: Australian Institute of Sport. www.ais.org.au/nutrition and USDA National Nutrient Database for Standard Reference.

The side effects of caffeine use outweigh any possible benefits the athlete may be seeking.

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PERFOMANCE ENHANCING DIETARY SUPPLEMENTS

SUPPLEMENTS

The use of supplement and ergogenic aids to enhance athletic performance is becoming more prevalent in athletics; however, there exist considerable safety concerns and myths surrounding their use. It is imperative that athletes, parents and coaches be educated as to the current state of knowledge regarding these products, which are currently are **NOT REGULATED by the United States Food and Drug Administration (FDA).**

Several organizations, including the CIF and the NCAA have created policies regarding the use of supplements by athletes and in many cases prohibiting their use.

General Concerns Regarding Supplements

- **Nutritional supplements are not evaluated or regulated by the FDA.**
    - With no FDA standards, there is no guarantee of the amount or concentration of the ingredients.
    - The only requirement of a supplement manufacturer is to have a label with no requirement regarding accuracy.
    - With no FDA controls, products frequently lack purity and are laced with other compounds.

What Science Tells Us

- Very few controlled scientific studies exist on the short-term or long-term side effects associated with their use.
- There are even fewer studies addressing the side effects in children and adolescents.
- Very few controlled scientific studies have been done to evaluate effectiveness.

Common Myths Regarding Supplements

- If a substance is natural, it must be safe – NOT TRUE
- If a substance is natural, it must be healthy and beneficial. NOT TRUE
- If a little bit is good, then a whole lot more is better. NOT TRUE
- Most athletes are deficient in important compounds. ALMOST NEVER TRUE

CIF Policies

- CIF Bylaw 22.B.12 prohibits school personal including athletic directors, sports coaches, school officials or employees or booster club/support groups from distributing supplements other than those listed below. Schools may not accept sponsorships or donations from manufacturers that distribute any dietary supplement banned by the United States Anti-Doping agency as well as synephrine. The bylaw also states that only non-muscle building nutritional supplements may be provided to students and those permissible non-muscles building nutritional supplement are identified according to the following classes: Carbohydrate/electrolyte drinks; energy bars; carbohydrate boosters and vitamins and minerals.

- CIF Bylaw 524 states that as a condition of membership, all schools shall policies prohibiting the use of androgenic/anabolic steroids and dietary supplements banned by the United States Anti-Doping Agency, as well as synephrine, without the written prescription from a licensed health care practitioner to treat a medical condition. Participating students and their parent/caregiver must sign a notification form regarding these restrictions.

Preventing Athletes From Taking Supplements

School administrators, coaches, parents/caregivers and certified athletic administrators must send a strong message that discourages the use of supplements for performance enhancement. This can be done through a positive example of healthy behaviors regarding exercise and diet. In addition there are message you can send to your athletes to counteract the marketing and advertising ploys regarding supplements. These include:

- Coaches and Parents must educate and teach the student-athlete the correct way to train and develop their body.
- There is no short cut to excellence, it takes hard work.
- If it sounds too good to be true, it probably is.
- No drug is harmless and free of consequences
- The CIF and the NCAA tell student athletes that they must be responsible for what they put in their body and to avoid ANY product that may jeopardize their future.

Resources:
National Federation of High Schools Sports Medicine Handbook, 200
American College of Sports Medicine

For more information go to www.cifstate.org and to the "Health and Safety" section.

Physical Conditioning

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ADDITIONAL INFORMATION IS AVAILABLE ON THE STATE CIF WEB SITE

THE IMPORTANCE OF STRETCHING

THE WARM-UP
The importance of the Warm-up is to prepare the body for physical activity. Warm ups have been found to be a crucial part of injury prevention and decreasing muscle soreness. The warm-up increases the body temperature, stretches ligaments and muscles, and increases flexibility.

It is important to be sport specific. The warm-up should include both a general warm-up and a sport specific warm-up.

GENERAL WARM - UP:
To elevate the body's core temperature and perform static stretching exercises.

Stretching is intended to increase flexibility and may help reduce pain and spasm of muscles. Stretching is an important part of injury prevention. Flexibility helps to increase the range of motion a muscle has to work, meaning that with better flexibility you have more muscle available to utilize through a given range of motion. The more flexible an athlete is the more agile he/she will become. Good flexibility is an essential component of successful physical performance.

SPORT SPECIFIC WARM - UP:
Involves sport specific activities and should gradually increase in intensity.

TIME ALLOCATED FOR WARM - UP:
10-15 minutes is ideal.

Example: 5 minutes of light jogging, biking, or swimming to increase metabolic rate and core temperature, followed by a stretching program, then on to the sport specific warm-up activities.

* Warm-up and Cool-down decrease the chance of athletic injuries and muscle soreness.

TYPES OF STRETCHING:

- Ballistic: Bouncing is not recommended.
- Static: Holding nice/easy for 30 seconds minimum.

ADVANTAGES OF PROPER STRETCHING:

1. Reduces muscle tension
2. Helps with coordination
3. Increase range of motion - ex. longer running stride
4. May prevent injuries/strains
5. Prepares the muscles, joints and tendons for strenuous activity
6. Increase the amount of power generated through muscle contraction

PRECAUTIONS AND SUGGESTIONS:

1. Never Bounce
2. Always stretch slow and controlled
3. Do not over stretch
4. Stretching should never hurt
5. Do not hold your breath - relax through the stretch
6. Stretch Daily 1-3 times
7. Hold stretch for 30 seconds minimum

COOL-DOWN:

Cool-down is essential to decreasing muscle soreness and muscle lactic acid levels after exercise. It helps in returning the blood to the heart for re-oxygenation, which will help to prevent blood pooling in the muscles. If athletes complain of dizziness or faintness after exercise they might not be cooling down appropriately. Slowing down from vigorous exercise for a few minutes rather than stopping completely can help the body recover to its resting state more smoothly.

Examples of cool-down activities are walking, static stretching, and deep breathing. This is a good time to work on any minor aches and pains, including icing. A good cool down may help speed recovery from practice so that the athlete is ready for future activity.

TIME ALLOCATED FOR COOL DOWN:

5-10 minutes

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STRENGTH AND CONDITIONING

AVOIDING OVERUSE INJURIES

KEY POINTS IN STRENGTH AND CONDITIONING

- Strength training programs should be appropriate to the level of the athletes' level of maturity, physical abilities and individual goals.
- Athletes should work with their coaches to develop realistic goals for their strength programs. Arbitrary "standards" are not realistic for all athletes at varying levels of maturation.
- Strength training programs should be designed around specific periods associated with the athletes' season.
- For long term improvement, variations in training specificity, intensity and volume are necessary.

Most common model for strength training periods:

- Pre-Season- No competition
  - Goals are to establish a base level of conditioning
  - Start with a low to moderate intensity with 3-6 sets of 10 to 20 reps
  - As fitness level improves, move to high intensity with 3-5 sets of 4-8 reps to improve basic strength
  - Just prior to the onset of competition, basic strengthening should shift to developing strength and power. High intensity consisting of 3-5 sets of 2-5 reps should be used. Exercises should include plyometrics and dynamic stabilization activities.
- In-Season- Competitive events
  - Strength training should take a back seat to skill development.
  - Goals are to peak at the appropriate time or maintain strength through an extended season.
  - Intensity should be moderate to high with 1-3 sets consisting of 3 to 8 reps.
  - Continue to maintain a focus on core strengthening and dynamic stabilization.
- Post-Season- No competition
  - The goal of the post season is to rest and recover from a successful competitive season.
  - Active rest period should include recreational activities and may not include any resistance training.
- Off-Season
  - The off-season period follows the active rest period.
  - The goal of the off-season is to develop a base level of fitness in preparation for the higher intensity pre-season period.
  - This is an ideal time to determine fitness levels by conducting field tests such as the 12 minute run, 300 yard shuttle run, vertical jump test and flexibility tests.

Other Important Issues

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ASTHMA AND EXERCISE-INDUCED ASTHMA (EIA)

What is Asthma?

- Asthma is a lung disease involving reversible airway obstruction, inflammation, and hyper-responsiveness. About 6% of the population has asthma, and furthermore, approximately 80% of those with asthma have some degree of exercise induced bronchospasm (acute narrowing of the airways).
- Asthma is also common among athletes. At least 1 out of every 10 athletes has exercise induced asthma (EIA), although many are not aware of their limitation.

What Causes Asthma?

- Blockage of airflow and inflammation occur when the sensitive cells lining the airways of the lungs become irritated by contact with "triggers." These include inhaled allergens (pollen, dust, animal dander), chemical irritants (smoke, fumes), respiratory infections, cold air or weather changes, and exercise.
- The airways become overly sensitive with subsequent swelling and increased mucous production. The small muscles surrounding the airways constrict making it more difficult to breathe.

The Symptoms and Diagnosis

- The symptoms of asthma are wheezing, shortness of breath, chest tightness, cough and exercise intolerance. When severe, these symptoms can be life-threatening. Frequent chest colds lasting longer than 10 days may also be a sign of asthma.
- In EIA, symptoms usually occur with exercise within 3 minutes, peak by 10-15 minutes, and resolve by 60 minutes. Occasionally, symptoms may persist after exercise is completed. Being winded at the end of intense exercise is normal, but persistent coughing during a prolonged recovery period is not. Suspect EIA if a conditioned athlete still cannot keep up with others or feels like he or she is out of shape.
- Individuals with asthma frequently have associated seasonal allergies, or a skin condition called eczema. Family members may also have similar disorders.
- The diagnosis of asthma is typically made based upon a thorough history, physical examination, lung function test, and response to medications. It is important that the exam is carried out by a physician as there are other health issues that may have similar symptoms to EIA.

Prevention and Treatment

Asthma is a chronic condition with acute exacerbations of varying frequency. It is of utmost importance to first achieve optimal control of underlying asthma. Once this is accomplished, the focus should be on preventing exacerbations by identifying and eliminating triggers. There are two main categories of medications used in the treatment of asthma and EIA. The first category treats the inflammation of the airways which makes asthma a chronic disorder. These medications should be taken daily, even if the athlete is not having symptoms currently. The most common example of this type of medication is inhaled corticosteroids (not to be confused with anabolic steroids). The second category of medications target the acute airway constriction experienced during an "attack." Most commonly these are inhaled bronchodilators which relax the small muscles constricting the airway.

What to do if you have EIA

- Avoid exercise in cold, dry, or polluted air.
- Make sure your allergies are controlled and avoid / remove triggers. If you have a cold, avoid strenuous exercise until your infection resolves.
- Improve your fitness, as better conditioning makes EIA less troublesome.
- Warm up adequately. Some athletes can provoke a mild bout of EIA during warm up. After you have symptoms and recover, you may be able to exercise without symptoms for 1-4 hours (called a refractory period).
- If you think you have EIA, see you healthcare provider for evaluation. Make sure you use your medications correctly (i.e. bronchodilator 20-30 minutes prior to exercise) and make sure you receive training on how to use an inhaler correctly. A spacer or aero chamber can help improve delivery of your medication.
- **HAVE YOUR MEDICATIONS WITH YOU AT ALL TIMES!**

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The Hazards of Smokeless Tobacco

Up to 20% of high school athletes are using smokeless tobacco. It is **not** a "safe" alternative to smoking cigarettes as some people believe. It is addictive, contains cancer causing agents, increases risk for cardiovascular disease, and damages teeth and gums.

What is it?

Two main types of smokeless tobacco:

- Chewing tobacco
  - Comes as loose leaf, plug, or twist
- Snuff
  - Finely ground tobacco that can be dry, moist, or in sachets

- Most users suck on the tobacco and spit out the juices

How is harmful?

- 28 cancer-causing agents → increases the risk of mouth, throat, stomach, and bladder cancers
- Leukoplakia – white precancerous lesions in the mouth
- Addiction to nicotine
- Users more likely to become cigarette smokers
- Mouth sores and bad breath
- Cracking and bleeding lips and gums
- Gum recession, loosened teeth, tooth loss
- Teeth staining yellow-brown
- Teeth abrasion, wearing enamel, increasing hot & cold sensitivity
- Interferes with sense of taste and smell
- Increased blood pressure and heart rate, increasing risk for heart attack or stroke

It is Illegal on a High School Campus and at a High School event.

TOBACCO-FREE CAMPUS POLICIES - California Health and Safety Code Section 104420(p)
A school may use its normal disciplinary powers to enforce no-tobacco-use rules against students, its general power over its property to enforce no-tobacco-use rules against visitors, and its general power over its terms of employment to enforce no-tobacco-use rules against employees.

Additional References:
http://www.tobaccofacts.org/tob_truth/spit.html and
http://www.cancer.gov/cancertopics/factsheet/Tobacco/smokeless

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BODY PIERCING

WHAT IS BODY PIERCING?

Body piercing can include the "traditional" piercing of the lobes of the ears, as well as other sites, including the pinna (above the lobe), belly buttons, nipples, cheeks and lips, tongues, and genitals. Body piercing is becoming increasingly common among high school students. There is currently no state policy restricting the use of jewelry, body piercing or tongue studs at high school athletic events. However, it is very important that you as athletic directors and coaches clearly understand the potential medical complications, and set clear policies for your athletes regarding the wearing of these during practice and competition.

What Are The Potential Dangers Of Body Piercing?

Infections: If the piercing was not performed in a sterile manner (such as disposable gloves, brand-new disposable needles, sterilization of the skin before the procedure), the person is at risk for skin infections and other infections such as hepatitis (infection of the liver) and HIV. The skin infections can lead to a breakdown of the cartilage of the pinna, which then needs to be repaired with cosmetic surgery.

Difficulty breathing: Most tongues will swell, some to double its size, after being pierced. This can interfere with talking and breathing. In one recent reported case, a tongue piercing almost became fatal when the swollen tongue became infected and cut off the air supply; doctors had to force a tube down her throat to help her breathe.

Chipped teeth: Tongue rings and barbells can cause numerous dental chips, even in those athletes who wear mouthguards. If the fracture of the tooth is severe, a root canal may be needed, and the tooth may die.

Swallowing or aspirating the jewelry: The tongue jewelry also may come "unscrewed," and either piece (one of them sharp) can be swallowed or aspirated (breathed) into the lungs, leading to potentially dangerous problems.

Difficult intubation: If an athlete stops breathing, e.g. after a head injury, intubation (insertion of a tube to help clear a passage) may be difficult to perform because of the tongue jewelry. When seconds count, this can be life-threatening.

Avulsion of the body part and cuts: Other risks of body piercing include avulsion of a body part if the jewelry gets caught by a finger or article of clothing, or cuts either on the athlete (such as a ball hitting the area) or his her opponents from sharp jewelry edges. One athlete with nipple rings, when diving for a loose ball, injured the nipples so severely that they had to be surgically repaired.

What Advice Should You Give Your Student-Athletes Who Have Their Body Pierced?

Make sure they have been instructed on how to clean their pierced body part. Advise them of the risks involved, and set a clear team or school policy on removing all jewelry during practice and competition.