

2011-2012

**SPORTS MEDICINE
GUIDELINES**



PIAA SPORTS MEDICINE ADVISORY COMMITTEE MISSION STATEMENT

The purpose of the PIAA Sports Medicine Advisory Committee is to promote the health and safety of interscholastic athletes by serving in a medical advisory capacity to the PIAA Board of Directors, to encourage continuing education (in-service) programs for physicians, certified athletic trainers and others who contribute to the sports medicine effort at the interscholastic level, to promote more effective communication among all persons associated with interscholastic athletics, and to provide, upon request, site coverage at PIAA championship events. Membership on this Committee shall include, but not be limited to, physicians, certified athletic trainers, and athletic administrators.

SPORTS MEDICINE GUIDELINES

Page

Equipment Guidelines

Eye Safety in Sports	1
Helmet Fitting and Removal in Athletics, Guidelines for	2
Use of the Head as a Weapon in Football.....	4
Mouth Guards	5
Protective Equipment.....	6

Medical Guidelines

Assessment of Body Composition	19
PIAA Wrestling Weight Control Program.....	19
Blood-Borne Pathogens and Interscholastic Athletics.....	20
Burners (Brachial Plexus Injuries)	21
Cold Stress	22
Concussion	24
Eating Disorders--Anorexia and Bulimia.....	26
Heat Illness, Prevention of.....	27
Medical Disqualification of the Student-Athlete	29
Menstrual Dysfunction	29
Nutritional Ergogenic Aids	31
Seizure Disorder	32
Sickle Cell Trait.....	33
Skin Infections in Wrestling	35
NFHS Medical Release Form for Wrestler to Participate with Skin Lesion(s)	36
Weight Loss--Hypohydration	38
Emergency Card for Athletes	39
Guidelines for Medical Coverage for Athletic Events	41

PIAA Comprehensive Initial Pre-Participation Physical Evaluation (CIPPE) Form

Section 1: Personal and Emergency Information	43
Section 2: Certification of Parent/Guardian	44
Section 3: Health History	45
Section 4: PIAA CIPPE and Certification of Authorized Medical Examiner.....	46
Section 5: Re-Certification by Parent/Guardian.....	47
Section 6: Certification by Licensed Physician of Medicine or Osteopathic Medicine.....	48
Section 7: CIPPE Minimum Wrestling Weight	49

EQUIPMENT GUIDELINES

“EYE SAFETY IN SPORTS”

Eye injuries in sports are relatively frequent, sometimes catastrophic, and almost completely preventable with the use of appropriate protective devices.

Eye wear in sports encompasses both corrective lenses to achieve visual acuity and protective lenses to reduce the risk of ocular injury.

The following definitions are listed to aid in the discussion of this topic.

- A. Sports Eye Protector--a specially designed, fracture-resistant unit that serves as eye protection only and that complies with the American Society for Testing and Materials (ASTM) Standard F803-83. The unit comes with or without lenses and is capable of being held securely in place. Some forms can be worn over regular glasses.
- B. Sports Spectacles--a plastic (or reinforced plastic) eyeglasses unit, with nonadjusting nose pads and lens grooves constructed to include a posterior retaining lip.
- C. Sports Goggles--as in definition B (goggle style).
- D. Industrial Safety Spectacles and Goggles--ANSI Z87.1 (1989) is the standard that describes acceptable eye-protection units for use in the American industrial community.
- E. Plastic Lenses--Polycarbonate plastic or CR-39.
- F. One-Eyed Athlete--Participants whose best corrected vision in their weaker eye is 20:70 or worse.

Corrective Lenses

Approximately one-third of all persons participating in sports require corrective lenses to achieve the visual acuity necessary for proper and safe execution of their particular sports activity. There are eye injuries related both to the absence of proper visual correction, and the use of corrective lenses and frames that do not meet proper sports-safety standards.

Contact lenses are a popular form of corrective eye wear for sports. Advantages include cosmetic considerations, improved peripheral vision, and correction of certain visual irregularities. Nuisances and limitations accompany contact lens use. These include accidental displacement of contact lenses (which can impair vision) during sports activity, loss of contact lenses during competition, and readjustments of lenses during sports play. Having a duplicate set of lenses on hand is often prudent for the student-athlete. Contact lenses are not capable of protecting the eye from direct blows. Student-athletes that wear contact lenses for corrective vision may want to accompany this by wearing sports safety glasses for ocular protection. Student-athletes who choose to engage in sports while wearing contact lenses should adhere faithfully to the guidelines and recommendations of their eye-care specialist.

Protective Lenses

Protective lenses should be worn for all sports that have a projectile object (i.e. field hockey, lacrosse, baseball, softball, tennis) whose size, consistency or speed could potentially cause ocular damage. If no ASTM standard has been developed for a sport, equipment from a comparable sport with an ASTM standard should be used. Certified head and eye protection should be developed for each relevant activity. Eye-protection devices are designed to reduce significantly the risk of injury, but can never provide a guarantee against such injuries.

Guidelines

1. All participants in collision-contact sports who use corrective lenses (including contact lenses) in their sports activity should have eye protection conforming to definitions A through D.
2. All participants in any sport that uses a projectile of a size, consistency or speed capable of causing ocular injuries (i.e. field hockey, lacrosse, baseball, softball, tennis) should consider eye protection with lenses conforming to ASTM Standard F803-83, as in definition A. This protector should be of the closed type, as it has been shown that the open (without lenses) models are not protective.
3. When external lenses (i.e., all other than contact lenses), either corrective or noncorrective, are used for eye protection, they should be of polycarbonate plastic or CR-39 as in definition E.
4. All one-eyed participants (definition F) in collision-contact sports should have eye protection conforming to definitions A through D.

“GUIDELINES FOR HELMET FITTING AND REMOVAL IN ATHLETICS”

Several sports, including football, require wearing tight-fitting, similarly constructed helmets. The following guidelines, while focused on football, are applicable to periodic evaluation, fitting and removal of protective helmets worn in any sport. These guidelines represent minimal standards of care that are designed to assist physicians, Coaches, athletic trainers, student athletic trainers, paramedics, EMT's and hospital personnel who care for student-athletes.

Medical coverage of interscholastic football Teams entails many routines preventive and acute health-care duties for dedicated practicing professionals; however, an occasional, serious, on-the-field, life threatening head and/or neck injury poses a difficult challenge. It is incumbent upon those individuals assigned to provide medical coverage to be prepared to handle each situation efficiently and expertly.

Proper on-the-field management of head and neck injuries is essential to minimize sequelae, expedite emergency measures and to prepare for transportation. The action of those in attendance must not compound the problem. For this reason, clear communication between the medical staff and emergency-transportation personnel should be maintained.

It is important that those involved in the medical management of Teams engaged in collision sports like football, as well as the student-athlete, be knowledgeable about the

helmet. The student-athlete should be instructed in the fitting, care and use of the helmet.

The resilient plastic shell is shaped spherically to deflect impacts. Interior suspension pads are designed to match the skull contour to ensure a snug crown fit. Various rigid and removable jaw and brow pads, along with the double-snap chin strap, help to hold the sides of the helmet firmly against the mandible and the forehead. When in place, the front edge of the helmet should be positioned about a finger's breadth above the eyebrows. Pressure on the helmet crown should be dissipated through the interior suspension padding over the top of the head.

The helmet should fit snugly without dependence on the chinstrap. The helmet should not twist or slide when an examiner grasps the facemask and attempts to rock or turn the helmet with the wearer resisting the movement.

With a properly fitted helmet, the top of the head is separated from the helmet shell by a uniform, functional, shock-absorbing support lining. Daily evaluation of this support mechanism, including cheek and brow pads, for placement and resiliency should be taught to the student-athlete. Helmets that require air inflation should be inflated and inspected daily by those assigned to equipment care. Helmet shells should be examined weekly for cracking and be inspected closely again if the face mask has been bent out of shape. **All helmets need to be reconditioned and the plastic loop attachments of the swing-away mask replaced on a yearly basis.**

Although the helmet is designed for a stable fit for protection during play, removal of the helmet by others is relatively difficult. In the case of a head or neck injury, jostling and pulling during removal presents high potential for further trauma.

Unless there are special circumstances such as respiratory distress coupled with an inability to access the airway, the helmet should never be removed on the field when there is a potential head/neck injury.

When such helmet removal is necessary in any setting, it should be performed only by personnel trained in this procedure.

Ordinarily, it is not necessary to remove the helmet on the field to evaluate the scalp. Also, the helmet can be left in place when evaluating an unconscious student-athlete, an individual who demonstrates transient or persistent neurological findings in his extremities, or the student-athlete who complains of continuous or transient neck pain.

Before the injured student-athlete is moved, airway, breathing and circulation (ABC's) should be evaluated by looking, listening and palpation. To monitor breathing, care for facial injury, or to institute resuscitation, the face mask can be swung away by cutting the plastic loops that attach the mask to the helmet. A sharp pocket knife or scalpel usually suffices. It should be noted that cold weather and old loops may make cutting difficult. The chin strap can be left in place unless resuscitative efforts are necessary. For resuscitation, the mouth guard needs to be manually removed and a finger-swipe made of the mouth.

Once the ABC's are stabilized, transportation to an emergency facility by an experienced crew demands that the head be secured in the helmet and the neck immobilized by strapping, taping and/or using lightweight bolsters on a spine board. Care is needed to skillfully complete this maneuver to provide a stable unit of head, neck and spine.

At the emergency facility, satisfactory initial skull and cervical X-rays usually can be obtained with the helmet in place. Should removal of the helmet be needed to initiate treatment or to obtain special X-rays, specific protocol needs to be followed. With the head, neck and helmet manually stabilized, the chin strap can be cut. While maintaining stability, the cheek pads can be removed by slipping the flat blade of a screwdriver or bandage scissor under the pad snaps and above the inner surface of the shell. While another individual provides manual stability of the chin and neck, the persons stabilizing the head place their thumbs or index fingers into the earholes on both sides. By pulling both laterally and longitudinally, the helmet shell can be spread and eased off. Should a rocking motion be necessary to loosen the helmet, the head/neck unit must not be allowed to move. Those individuals participating in this important maneuver must proceed with caution and coordinate every move.

If the injured student-athlete, after being rehabilitated fully, is allowed to participate in the sport again, refitting his helmet is mandatory. Re-education about helmet use as protection should be conducted. Using the helmet as an offensive, injury-inflicting instrument should be discouraged.

“USE OF THE HEAD AS A WEAPON IN FOOTBALL”

Serious head and neck injuries leading to death, permanent brain damage or quadriplegia (extensive paralysis from injury to the spinal cord at the neck level) occur each year in football. The number is relatively small but evident. Most of these catastrophic injuries result from initiating contact with the head. The injuries may not be prevented due to the tremendous forces occasionally encountered in football collisions, but they can be minimized by helmet manufacturers, Coaches, players and officials complying with accepted safety standards and playing rules.

The American Football Coaches Association, emphasizing that the helmet is for the protection of the wearer and should not be used as a weapon, addresses this point as follows:

1. The helmet shall not be used as the brunt of contact in the teaching of blocking or tackling;
2. Self-propelled mechanical apparatuses shall not be used in the teaching of blocking and tackling, and
3. Greater emphasis by players, Coaches and officials should be placed on eliminating spearing.

Proper training in tackling and blocking techniques constitutes an important means of minimizing the possibility of fatalities or catastrophic injury. Using the helmet as an offensive, injury-inflicting instrument should be discouraged.

The rules against butting, ramming and spearing with the helmet are for the protection of the helmeted player as well as the opponent. A player who does not comply with these rules is a candidate for a catastrophic or fatal injury.

“MOUTH GUARDS”

The National Federation of State High School Associations (NFHS) has mandatory protective-equipment rules, including the use of mouth guards for various sports. Detailed studies of mouth guards indicate that they reduce dental injuries and cerebral concussions secondary to blows to the jaw or head. The American Dental Association has urged the mandatory use of mouth guards for those engaged in interscholastic athletics that involve body contact.

Specific objectives for the use of mouth guards as protective devices in sports are:

1. Mouth guards should reduce potential chipping of the tooth enamel surfaces and reduce fractures of the tooth, root and bone;
2. Mouth guard materials should protect the lip and cheek tissues from being impacted and lacerated against tooth edges;
3. Mouth guards should reduce the number of fractured jaws caused by blows coming from under the jaw;
4. Mouth guards should reduce the incidence of concussions by partially absorbing energy from blows to the chin, and
5. Mouth guards should provide support to toothless spaces so that partial dentures can be removed when appropriate.

Three types of protective mouth guards are generally available:

1. Boxer-type guards made of molded rubber;
2. Mouth-formed guards made of pliable plastic, and
3. Custom-fitted mouth guards made of latex or plastic sheets formed over a cast with a vacuum apparatus.

The custom-fitted mouth guard most readily meets the criteria quoted above. The cost for outfitting a Team is recognized as a limiting factor.

Mouth guards should be rinsed with water daily to remove saliva and dirt. It is recommended that twice a week the mouth guard be soaked in a solution of one cup water and one-half teaspoon bleach for 15 to 20 minutes and then rinsed thoroughly. This procedure will preserve and sanitize the mouth guard effectively.

Too often players wear a mouth guard by having it dangle from the face mask or by using a small piece of plastic in their mouth that barely covers the two front teeth. This defeats the protective purpose intended for the mouth guard. A periodic check of all mouth guards by the Coaching and/or sports medical staff will help ensure that student-athletes have not trimmed the mouth guards beyond protective use. The ideal mouth

guard is one that fits between the upper and lower teeth without hampering breathing, does not have to be held in position, can be chewed without deforming or changing shape, has an external attaching point to allow easy removal and covers all the upper teeth except the last two molars.

In order to realize fully the benefits of wearing a mouth guard, the Coach, student-athlete and sports medical staffs need to be educated about the protective functions of a mouth guard; and the rules must be enforced.

“PROTECTIVE EQUIPMENT”

Rules governing mandatory equipment and equipment use vary by sport. Interscholastic athletic administrators, Coaches and equipment managers should be familiar with what equipment is mandatory by rule and what constitutes illegal equipment; how to wear mandatory equipment during the Contest, and when and to whom notice is given that the equipment has become illegal during competition. Interscholastic athletic personnel involved in sports with established equipment standards should adhere to those standards.

The NOCSAE mark on a helmet or on a football face mask indicates that the equipment has been tested by the manufacturer in accordance with NOCSAE test standards. By keeping a proper fit, by not modifying its design, and by reporting to the Coach or equipment manager any need for its maintenance, the student-athlete also is complying with the purpose of the standard.

The following list of mandatory equipment and rules regarding protective equipment use is accurate as of the most recent edition of the specific sport rules book. Updated information should be obtained from the relevant Contest rules committee.

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
1. Baseball - NFHS	1. Gloves/mitts made of leather shall be worn by all fielders and not be altered to create any adhesive, sticky, and/or tacky surface. The glove/mitt worn by all fielders except the catcher shall conform to the following maximum specifications: a) height (measured from the bottom edge or heel straight up across the center of the palm to a line even with the highest point of the glove/mitt): 14”; b) width of palm (measured from the bottom edge of the webbing farthest from the thumb in a horizontal line to the outside of the little finger edge of the glove/mitt): 8”;	1. It is recommended that baseball players wear a tooth and mouth protector (intraoral), which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the posterior teeth of any readily visible color, other than completely clear or white. 2. A face mask/guard may be attached to batting helmets at the time of manufacture. All face masks/guards shall meet the NOCSAE standard. 3. Defensive players are permitted to wear face/head protection in the field. If a pitcher or any defensive player wears face/head protection, its outer covering

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Baseball – NFHS (Continued)	<p>c) webbing (measured across the top end or along any line parallel to the top): 5 ¾”.</p> <p>2. It is mandatory for on-deck batters, batters, runners, retired runners, players/students in the coaches boxes as well as non-adult bat/ball shaggers to wear a batting helmet that meets the NOCSAE standards. The batting helmet shall have extended ear flaps that cover both ears and temples and also display the NOCSAE stamp and the exterior warning statement.</p> <p>3. All catchers shall wear, in addition to a head protector, a mask with a throat protector, body protector, protective cup (male only), and baseball protective shin guards. A catcher’s helmet and mask combination shall meet the NOCSAE standard. Any helmet or helmet and mask combination shall have full ear protection (dual ear flaps). A throat protector, which is either a part of or attached to the catcher’s mask, is mandatory. A throat protector shall adequately cover the throat.</p>	<p>shall have a non-glare surface.</p> <p>4. Hard and unyielding items (guards, casts, braces, splints, etc.) must be padded with a closed-cell, slow-recovery foam padding no less than ½” thick. Knee and ankle braces which are unaltered from the manufacturer’s original design/production do not require any additional padding.</p>
2. Basketball - NFHS	None	<p>1. It is recommended that basketball players wear a tooth and mouth protector (intraoral), which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the posterior teeth of any readily visible color, other than completely clear or white.</p> <p>2. Illegal items include, but are not limited to:</p>

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Basketball – NFHS (Continued)		<p>a) A guard, cast or brace made of hard and unyielding substance, such as, but not limited to leather, plaster, plastic or metal shall not be worn on the elbow, hand, finger/thumb, wrist or forearm; even though covered with soft padding.</p> <p>b) Hard and unyielding items (guards, casts, braces, etc.) on the upper arm or shoulder must be padded with a closed-cell, slow recovery foam padding no less than ½” thick.</p> <p>c) Knee and ankle braces which are unaltered from the manufacturer’s original design/production are permitted and do not require any additional padding/covering.</p> <p>d) A protective face mask may be worn and made of hard material, but must be worn molded to the face with no protrusions. Must be worn for medical reasons.</p>
3. Bowling - USBC	None	None
4. Cross Country - NFHS	None	<p>1. The use of an atomizer during competition containing a prescription drug designed to alleviate the asthmatic condition is not considered to be an illegal aid, as long as a licensed physician of medicine’s or osteopathic medicine’s (MD’s or DO’s) statement documenting the need of the athlete to use the prescription is presented to the meet director/referee prior to the beginning of the meet.</p> <p>2. Providing liquids during competition is not considered to be an aid or assistance.</p>

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
<p>5. Field Hockey – NFHS</p>	<p>1. All field players shall wear mouth protectors. A tooth protector shall be of any readily visible color, other than white or clear. A tooth and mouth protector (intraoral) shall include occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portions and shall cover the posterior teeth with adequate thickness.</p> <p>2. All field players shall wear shin guards made of plastic, foam rubber or fiberglass, which shall cover the front of the leg from the ankle to just below the knee.</p> <p>3. All field players shall wear eye protection that meets the current ASTM standard for field hockey.</p> <p>4. Goalkeepers shall wear field hockey goalie pads, not to exceed 12 inches in width per pad (frontal view); field hockey goalie shoes or kickers; a full face/cage mask-helmet which covers the entire head including the back of the head (cage must be rounded at all points). Mask helmets shall not have a hard, visor-type protrusion which extends beyond the cage.</p> <p>A chest protector specifically manufactured for field hockey goalkeepers. Field hockey goalie gloves with separate fingers (no webbing) that do not exceed 8 inches in width when lying flat; or foam hand protectors which are no more than 9 inches wide when laid flat, face up, and no more than 14 inches long when</p>	<p>1. Field players may wear a face mask provided it is made of fiberglass or plastic and molded to the face, rounded at all points and without sharp edges. It shall not be attached to any hard, unyielding headgear (even if padded); and/or soft headgear.</p> <p>2. Goalkeepers may wear field hockey shoulder pads and/or elbow pads.</p>

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Field Hockey – NFHS (Continued)	measured from the base to the extremity of the hand protector. Hand protectors shall not be altered. A wrap-around type throat protector. A tooth protector, which may be attached to the facemask/helmet, as set forth above.	
6. Football - NFHS	<p>Each player shall participate while wearing:</p> <ol style="list-style-type: none"> 1. A helmet and facemask which met the NOCSAE test standard at time of manufacture. The facemask shall have a surface covered with a resilient material designed to prevent chipping, burrs or abrasiveness and be properly secured to the helmet as designed by the manufacturer. 2. The helmet shall be secured by a properly fastened chin strap with at least four attachment points. 3. Hip pads and tailbone protector which are unaltered from the manufacturer's original design/production. 4. Knee pads which are unaltered from the manufacturer's original design/production, which are worn over the knee and under the pants and shall be at least ½ inch thick or ¾ inch thick if made of shock absorbing material. 5. Shoulder pads and hard surface auxiliary attachments, which shall be fully covered by a jersey. 6. Thigh guards which are unaltered from the manufacturer's original design/production. 	<p>Illegal equipment shall always include, but is not limited to:</p> <ol style="list-style-type: none"> 1. Hard and unyielding items (guards, casts, braces, etc) on the hand, wrist, forearm, elbow, or upper arm unless padded with a closed-cell, slow-recovery foam padding no less than ½" thick. 2. Knee and ankle braces which are altered from the manufacturer's original design/production. 3. Knee braces worn over the pants. 4. Plastic material covering protective pads whose edges are not rounded with a radius equal to half the thickness of the plastic. 5. Rib pads and back protectors, unless fully covered by a jersey. 6. Shin guards that do not meet NOCSAE specifications. 7. Eyeshield attached to the helmet that is not: <ol style="list-style-type: none"> a) constructed of a molded rigid material; or b) clear without the presence of any tint. 8. Metal which is projecting or other hard substance on clothes or on person. 9. Equipment not worn as intended by the manufacturer.

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Football – NFHS (Continued)	7. Tooth and mouth protector (intraoral) which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the posterior teeth with adequate thickness. The tooth and mouth protector shall be of any readily visible color, and may not be completely white or clear.	
7. Golf - USGA	None	None
8. Gymnastics, Girls - NFHS	None	1. Casts or splints on any body parts are prohibited. 2. Hand, wrist, elbow, knee and ankle braces which are unaltered from the manufacturer's original design/ production do not require any additional padding.
9. Lacrosse, Boys - NFHS	1. A protective helmet, designed for lacrosse, which met the NOCSAE test at the time of manufacture and has a visible, exterior warning label regarding the risk of injury. Both the chin pad and chin strap shall be firmly attached to the mask as designed. 2. A face mask with a center bar from top to bottom and the lateral (horizontal) openings shall not exceed 1 ½ inches. No foreign material may extend below the base of the helmet. 3. A professionally manufactured (not altered) tooth and mouth protector (intraoral) which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion that covers the posterior teeth of any readily visible color, other than clear or white.	1. Goalkeepers may wear: a) Shin guards: b) Football pants with or without pads. 2. A players may wear: a) A clear, molded, and non-rigid helmet eye shield. b) Eye glasses, either tinted or clear. 3. A player may not wear both a clear, molded, and non-rigid helmet eye shield and tinted eye glasses.

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Lacrosse, Boys – NFHS (Continued)	4. Protective gloves. 5. Shoulder pads (optional for goal-keeper). 6. Arm pads (optional for goalkeeper). 7. Goalkeepers shall wear: a) throat protection and b) chest protection.	
10. Lacrosse, Girls - USLacrosse - Official Rules for Girls & Women's Lacrosse	1. The goalkeeper must wear a helmet with face mask, a separate throat protector, padded gloves, a mouthpiece, and a chest protector. In addition, the goalkeeper must wear padding on the shins and thighs. The protective helmet, designed for lacrosse, must meet the NOCSAE test standard, 2. All players must properly wear a professionally manufactured intra-oral mouthpiece that fully covers the upper jaw teeth. The mouth piece shall be of any readily visible color, other than clear or white. It must not be altered to decrease protection, and there may be no protruding tabs for field players. 3. All field players must properly wear eye protection. Eye protection must meet the most current ASTM Specification Standard F803 for women's lacrosse.	1. It is recommended that the goalkeeper wear padding on arms, shoulders, and legs. This padding must not excessively increase the size of these body parts. Body padding must not exceed the thickness of legal goalkeeping gloves – 2.54cm (1”) padding. Gloves must not contain any webbing and must not excessively increase the size of the hands as they are presented to the ball. 2. Close-fitting gloves, nose guards, and soft headgear may be worn by all players. 3. Hard and unyielding items (guards, casts, braces, splints, etc.) on the hand, wrist, forearm, elbow, upper arm or shoulder are prohibited unless padded with a closed-cell, slow recovery foam padding no less than ½” thick. Knee and ankle braces that are unaltered from the manufacturer's original design/production do not require any additional padding.
11. Rifle - NRA	None	Eye and ear protection devices are recommended.

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
12. Soccer - NFHS	<p>1. The required player equipment includes: Shinguards which shall provide adequate and reasonable protection, be professionally manufactured, age-and size-appropriate, not altered to decrease protection, worn under the socks, and are worn with the bottom edge no higher than 2 inches above the ankle. Shinguards must meet the National Operating Committee on Standards for Athletic Equipment (NOCSAE) specifications. The NOCSAE seal and the appropriate height range of the player shall appear on the shinguard. Beginning with 2012 fall season, the NOCSAE seal and height range shall be permanently marked on the front of the shinguard. Equipment shall not be modified from its original manufactured state and shall be worn in the manner the manufacturer intended it to be worn.</p>	<p>It is recommended that male players wear a supporter and protective cup. Types of equipment which are illegal, but are not limited to, include the following:</p> <ol style="list-style-type: none"> 1. Projecting metal or other hard plates, or projections on clothing or person. 2. Head, arm, thigh or hip pads containing sole leather, fiber, metal or any unyielding materials. 3. Hard and unyielding items (guards, casts, braces, etc.) on the hand, wrist, forearm, elbow, upper arm or shoulder unless covered, and must be padded with a closed-cell, slow-recovery foam padding no less than ½-inch thick. 4. Shinguards which have exposed sharp edges or have been altered. 5. Spectacle guards. 6. Knee braces which are altered from the from the manufacturer's original design/production. Knee braces that are unaltered are legal and do not require any additional padding. 7. Ankle braces, which are altered from the manufacturer's original design/production. Non-metal ankle braces that are unaltered are legal and may be worn outside a sock. Ankle braces of metal or unyielding material that are unaltered are legal if covered by a sock. 8. Helmets, hats, caps, or visors, knee. <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> a) The goalkeeper may wear a head protector made of closed-cell, slow-recovery rubber or other similar material that stays soft in its

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Soccer – NFHS (Continued)		<p>final form. The head protector shall not have a bill, or other protruding sign. It shall not cover the face, other than the forehead, and shall be secured by a chin strap.</p> <p>b) The goalkeeper may wear a soft-billed baseball type hat or soft-billed visor. If worn in conjunction with a head protector, it is to be worn outside and may not be attached to the head protector.</p> <p>9. A tooth and mouth protector (intraoral), which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the posterior teeth with adequate thickness is legal. The tooth and mouth protector should be of a readily visible color, other than clear or white.</p> <p>10. A protective face mask may be worn by a player with a facial injury. The mask may be made of hard material, but must be worn molded to the face with no protrusions. A medical release for the injured player signed by a licensed physician of medicine or osteopathic medicine (MD or DO) shall be available at the game site.</p>
13. Softball, Fast Pitch- NFHS	<p>1. The catcher shall wear a glove/mitt of any size. Gloves/mitts shall be worn by all other fielders and conform to the following maximum specifications:</p> <p>a) Height measured from the bottom edge or heel straight up across the center of the palm to a line even with the highest point of the glove/mitt: 14 inches;</p>	<p>1. It is recommended that softball players wear a tooth and mouth protector (intraoral), which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the posterior teeth of any readily visible color, other than completely clear or white.</p>

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Softball, Fast Pitch- NFHS (Continued)	<p>b) Width of palm measured from the bottom edge of the webbing farthest from the thumb in a horizontal line to the outside of the little finger edge of the glove/mitt: 8 inches;</p> <p>c&d) Webbing measured across the top end, or along any line parallel to the top: 5¾ inches.</p> <p>2. A batting helmet with a permanently affixed NOCSAE stamp and legible exterior warning label is mandatory for each batter, on-deck batter, players/students in the coach's boxes, runners and retired runners. The exterior warning label may be affixed to the outside of the helmet which includes both sides of the bill, in either sticker form or embossed (at the point of manufacture). The batting helmet is required to be worn while the ball is live and in live-ball territory until the ball enters dead-ball territory without being touched by a fielder or after being touched, goes directly into dead-ball territory. Non-adult bat/ball shaggers shall wear batting helmets while in live-ball area, even if the ball is dead.</p> <p>3. The batting helmet shall have extended ear flaps which cover both ears and temples.</p> <p>4. All batting helmets shall be equipped with a NOCSAE-approved face protector. The phrase, "Meets NOCSAE Standard" must be permanently affixed to the face protector.</p>	<p>2. Defensive players are permitted to wear face/head protection in the field. Face/head protection worn by defenders shall have a non-glare outer surface.</p> <p>3. Hard and unyielding items (guards, casts, braces, splints, etc.) must be padded with a closed-cell, slow-recovery foam padding no less than ½" thick. Knee and ankle braces which are unaltered from the manufacturer's original design/production do not require any additional padding/covering.</p>

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Softball, Fast Pitch- NFHS (Continued)	<p>5. If an eye shield is worn attached to the batting helmet, it must be constructed of a molded rigid material that is clear and permits 100 percent (no tint) allowable light transmission</p> <p>6. The catcher shall wear a catcher's helmet and mask combination that meets the NOCSAE standard. The helmet shall bear the permanent NOCSAE seal. A throat protector that is part of or attached to the mask shall be worn and extend far enough to adequately protect the throat. An attached throat protector shall be commercially manufactured, properly attached, unaltered and worn properly. Plastic visors attached to the catcher's helmet are prohibited. If an eye shield is worn attached to the catcher's helmet, it must be constructed of a molded rigid material that is clear and permits 100 percent (no tint) allowable light transmission.</p> <p>7. The catcher shall wear a body protector, baseball/ softball protective shin guards, and a protective cup (male).</p>	
14. Swimming and Diving - NFHS	None	No Team personnel/ competitor shall perform any on-site shaving before, during, or after the meet.
15. Tennis - USTA	None	None
16. Track and Field - NFHS	None	1. The use of an atomizer during competition containing a prescription drug designed to alleviate the asthmatic condition is not considered to be an illegal aid, as long as a licensed physician of medicine's or osteopathic medicine's (MD's or DO's)

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
Track and Field – NFHS (Continued)		<p>statement documenting the need of the athlete to use the prescription is presented to the meet director/referee prior to the beginning of the meet.</p> <p>2. Taping of any part of the throwing hand or fingers shall not be permitted unless there is an open wound that must be protected by tape in the shot put, discus throw, javelin throw, and pole vault.</p> <p>3. It is recommended that vaulters wear protective headgear that meets the current ASTM standard for the pole vault event.</p>
17. Volleyball - NFHS	None	<p>1. It is recommended that volleyball players wear a tooth and mouth protector (intraoral), which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the posterior teeth of any readily visible color, other than completely clear or white.</p> <p>2. A guard, cast, or brace made of hard and unyielding leather, plaster, pliable (soft) plastic, metal or any other hard substance shall not be worn on the hand, finger, wrist, or forearm, even though covered with soft padding.</p> <p>3. Hard and unyielding items (guards, casts, braces, etc.) on the elbow, upper arm or shoulder must be padded with a closed-cell, slow-recovery foam padding no less than ½-inch thick. An elbow brace shall not extend more than halfway down the forearm.</p> <p>4. Knee and ankle braces, which are unaltered from the manufacturer's original design/production, do not require any additional padding.</p>

Sport	Mandatory Protective Equipment	Rules Governing Special Protective Equipment
18. Water Polo - NFHS	Each player (in the water or on the bench) must wear a cap with protective ear guards at all times. Caps shall be fastened under the chin.	It is recommended that water polo players wear a tooth and mouth protector (intraoral), which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the posterior teeth of any readily visible color, other than completely clear or white.
19. Wrestling - NFHS	<p>1. Wrestlers shall wear wrestling ear guards, which provide:</p> <ul style="list-style-type: none"> a) adequate ear protection; b) no injury hazard to the opponent; and, c) an adjustable locking device to prevent it from coming off or turning on the wrestler's head. <p>2. Each contestant who has braces or has a special orthodontic device on his or her teeth shall be required to wear a tooth and mouth protector. A tooth and mouth protector (intraoral) shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and cover the teeth and all areas of the braces or special orthodontic device with adequate thickness. This would include upper and lower teeth if devices are present on both.</p>	<p>1. It is recommended that wrestlers wear a tooth and mouth protector (intraoral), which shall include an occlusal (protecting and separating the biting surfaces) and a labial (protecting the teeth and supporting structures) portion and covers the posterior teeth of any readily visible color, other than completely clear or white.</p> <p>2. Any protective equipment which is hard and/or abrasive must be covered and properly padded with a closed-cell, slow-recovery foam padding no less than ½-inch thick.</p> <p>3. All parts of a pad must fit snug against the wrestler's body. Loose pads are prohibited.</p> <p>4. Taping or strapping which substantially restricts the normal movement of a joint shall be prohibited. The taping of fingers and/or thumb is not a violation.</p>

MEDICAL GUIDELINES

"ASSESSMENT OF BODY COMPOSITION"

When Teams' licensed physician of medicine or osteopathic medicine (MD or DO), Coaches, or athletic trainers make recommendations to student-athletes relative to ideal playing weights, it is important that the recommendations be based on the assessment of the student-athletes' body composition and not simply on measures of body weight. Determining ideal weight based on height-weight measurements alone could lead to the potentially dangerous situation of individuals with little body fat being asked to lose weight. Not only will performance be affected, but the student-athletes' health may be compromised.

The most common methods to assess body composition in athletics are likely to be hydrostatic weighing and skin-fold measurements. If done by trained personnel using standard operating procedures, the results obtained can be reliable and useful. While hydrostatic weighing is considered the "gold standard" of the indirect measures, one must realize that the assumptions supporting this method have not yet been verified in humans. Furthermore, skin-fold measurements, even when done by trained personnel and according to standard operating procedures, are usually within only three percent (3%) to five percent (5%) of the body-fat values obtained by hydrostatic weighing. Thus, one needs to be extremely careful in the application of body-composition test results.

In summary, it is important that trained individuals use standard procedures to assess body composition before making recommendations relative to the modification of body weight in student-athletes. Further, one needs to recognize that the indirect assessment of body composition, even by trained individuals, is not without potential error; thus, care should be taken in the application of those results.

Pursuant to National Federation Wrestling Rule 1-3-1, the recommended minimum body fat should not be lower than seven percent (7%) for males or 12 percent (12%) for females.

PIAA Wrestling Weight Control Program

Pursuant to the Weight Control Program adopted by PIAA: 1) the deadline for a PIAA member senior high school to enter its complete varsity wrestling schedule into the National Wrestling Coaches Association (NWCA) Optimal Performance Calculator (OPC) is one week prior to the first assessment (**Friday, October 21, 2011**) (see **NOTES 1 and 2**) prior to the participation by any student in interscholastic wrestling, the Minimum Wrestling Weight (MWW) at which the student may wrestle during the season must be (a) certified to by an Authorized Medical Examiner (AME), and (b) established **NO EARLIER THAN** six weeks prior to the first Regular Season Contest day of the wrestling season (**Friday, October 28, 2011**) and **NO LATER THAN** the Monday preceding the first Regular Season Contest day of the wrestling season (**Monday, December 5, 2011**) (see **NOTE 2**). This certification shall be provided to and maintained by the student's Principal, or the Principal's designee.

In certifying to the MWW, the AME shall first make a determination of the student's Urine Specific Gravity/Body Weight and Percentage of Body Fat, or shall be given that information from a person authorized to make such an assessment ("the Assessor"). This determination shall be made consistent with National Federation of State High School Associations (NFHS) Wrestling Rule 1, Competition, Section 3, Weight-Control Program, which requires, in relevant part, hydration testing with a specific gravity not

greater than 1.025, and an immediately following body fat assessment, as determined by the National Wrestling Coaches Association (NWCA) Optimal Performance Calculator, Scholastic Edition (together, the "Initial Assessment").

NOTES:

1. Any subsequent additions or substitutions to a PIAA member senior high school's complete varsity wrestling schedule must be approved by that school's PIAA District Wrestling Chairman.

2. For senior high school wrestlers coming out for the Team AFTER the Monday preceding the first Regular Season Contest day of the wrestling season the OPC will remain open until January 15th and for junior high/middle school wrestlers coming out for the Team AFTER the Monday preceding the first Regular Season Contest day of the wrestling season the OPC will remain open all season.

3. Any athlete who disagrees with the Initial Assessment may appeal the assessment results one time by having a second assessment, which shall be performed prior to the athlete's first Regular Season wrestling Contest and shall be consistent with the athlete's weight loss (descent) plan. Pursuant to the foregoing, results obtained at the second assessment shall supersede the Initial Assessment; therefore, no further appeal by any party shall be permitted. The second assessment shall utilize either Air Displacement Plethysmography (Bod Pod) or Hydrostatic Weighing testing to determine body fat percentage. The urine specific gravity testing shall be conducted and the athlete must obtain a result of less than or equal to 1.025 in order for the second assessment to proceed. All costs incurred in the second assessment shall be the responsibility of those appealing the Initial Assessment. Where the Initial Assessment and/or a second Assessment establishes a percentage of body fat below 7% for a male or 12% for a female, the student must obtain an AME's consent to participate.

For all wrestlers, the MWW must be certified to by an AME.

To reduce or eliminate "clerical errors", it is **required** that each head wrestling Coach initial the MWW of **each** of his wrestlers before the school's Principal certifies to the eligibility of the school's wrestlers.

A two (2)-pound growth allowance is authorized on **Sunday, January 15, 2012** for both junior high/middle school and senior high school wrestlers.

The deadline for senior high school wrestlers to establish their MWW is Friday, February 17, 2012.

"BLOOD-BORNE PATHOGENS AND INTERSCHOLASTIC ATHLETICS"

While risk of one athlete infecting another with HIV/AIDS during competition is close to non-existent, there is a remote risk that other blood borne infectious diseases can be transmitted. For example, Hepatitis B can be present in blood as well as in other body fluids. Procedures for reducing the potential for transmission of these infectious agents should include, but not be limited to, the following:

1. The bleeding must be stopped, the open wound covered and if there is an excessive amount of blood on the uniform, it must be either cleaned with an appropriate solution or completely changed before the athlete may participate.
2. Routine use of gloves or other precautions to prevent skin and mucous-membrane exposure when contact with blood or other body fluids is anticipated.

3. Immediately wash hands and other skin surfaces if contaminated (in contact) with blood or other body fluids. Wash hands immediately after removing gloves.
4. Clean all contaminated surfaces and equipment with an appropriate disinfectant before competition resumes. Typically a bleach/water solution is used or a broad spectrum cleaner designed to kill MRSA, HIV, and Hep-B.
5. Practice proper disposal procedures to prevent injuries caused by needles, scalpels and other sharp instruments or devices.
6. Although saliva has not been implicated in HIV transmission, to minimize the need for emergency mouth-to-mouth resuscitation, mouthpieces, resuscitation bags, or other ventilation devices should be available for use.
7. Athletic trainers/Coaches with bleeding or oozing skin conditions should refrain from all direct athletic care until the condition resolves.
8. Contaminated towels should be properly disposed of/disinfected.
9. Follow acceptable guidelines in the immediate control of bleeding and when handling bloody dressings, mouth-guards and other articles containing body fluids.
10. Proper disposal of all bio-hazardous waste, including blood-soaked bandages and dressings, contaminated towels or uniforms, etc. should be performed, using specifically designed bags/boxes marked as "bio-hazardous," which are typically provided by and disposed of by an outside company. This can often be coordinated with the school nurse's office.

"BURNERS" (BRACHIAL PLEXUS INJURIES)

"Burners" or "stingers" are so named because the injuries can cause a sudden burning pain and numbness along the forearm and hand. This sensation is caused by a neurological injury to a specific group of upper extremity nerves. The majority of burners occur in football; however, burners may also occur in a variety of other sports, including basketball, field hockey, soccer, wrestling and some field events in track.

Faulty technique often causes a brachial plexus injury, particularly with blocking and tackling in football. Teaching the proper techniques and regularly performing neck and upper body strengthening exercises are essential for prevention. Coaches, parents and student-athletes should be warned about poor techniques and advised of the need to strengthen the neck and upper body muscles.

Student-athletes who suffer burners will be unable to move the affected arm from their side and will complain of burning pain, and potentially, numbness traveling from the injured side of the neck through the shoulder down the arm and forearm, and sometimes into the hand. Weakness may be present in the muscles of the shoulder, elbow and hand. Burners can vary in severity. If numbness persists and/or if upper extremity weakness is present, a medical evaluation should be performed before any further participation by the student-athlete.

Recurrent burners are not uncommon. Medical personnel should pay special attention to this condition. Although rare, risk of permanent nerve injury exists for those with recurrent burners. Therefore, participants should report every occurrence to their athletic trainer or Team licensed physician of medicine or osteopathic medicine (MD or DO). Any player with persistent pain, burning, numbness and/or weakness should be kept out of competition and sent for further evaluation.

The most important concern for student-athletes with recurrent burners is to stress the importance of reporting all symptoms to the attending medical personnel during the Practice or Contest situations and receiving an appropriate, thorough physical evaluation with particular attention to strength and sensory changes. Any worsening of the symptom complex should provoke a more thorough investigation of the neck and spinal cord region.

"COLD STRESS"

Cold exposure, while not typically life-threatening, will certainly impair performance and affect one's well being. Conditions created by such exposure include frostbite and hypothermia. While frostbite, which is the freezing of superficial tissues of the face, ears, fingers and toes is rare, hypothermia, which is a significant drop in body core temperature, is a potential medical emergency.

Hypothermia may occur in any geographical setting. A wet and windy spring or fall exposure may present as serious a condition as a severe winter exposure. High wind speed interacting with ambient temperature significantly affects body cooling. When the body surface or protective clothing is wet (whether from sweat, rain or snow), body cooling is even more rapid.

Cold exposure affects every system of the body. The combination of cold air, deep breathing and exercise can trigger an asthma attack (bronchospasm). For most individuals, the exchange of cold air when breathing heavily is not of itself dangerous, but can lead to prolonged coughing, chest tightness, and discomfort. Drying of the mouth, a burning sensation in the throat, and irritation of the nasal passages are common problems when breathing extremely cold air.

The risk of joint and musculoskeletal injuries can increase when exercising in the cold. Most physiological factors of performance, such as strength, power, endurance and aerobic capacity are reduced by a drop in muscle temperature or body core temperature.

Early recognition of cold stress is important. Shivering is a means for the body to generate internal heat and serves as an early warning sign of cold stress. Excessive shivering can contribute to fatigue and makes motor skill tasks more difficult. Other signs include a burning sensation of the ears and nose, and tingling or numbness in fingers and toes. As cold exposure is prolonged, a victim may exhibit sluggishness, poor judgment and become disoriented. A lack of interest in anything except getting warm is another indication of cold stress.

Prevention of cold stress is primarily a matter of dressing properly to control the climate next to the skin. Inadequate nutrition and dehydration can significantly decrease cold tolerance. To prevent cold problems, student-athletes should be instructed as follows:

Layer Clothing

Several thin layers are warmer than a single heavy garment. Layers can be added or removed depending on activity level to ventilate the skin surface.

Cover the Head

Because heat loss from the head and neck may be as much as fifty percent (50%) of one's total heat loss, the head should be covered during cold-stress conditions.

Protect the Hands

Hand covering should be worn whenever there is the slightest risk of frostbite. Mittens are preferred to gloves for warmth.

Stay Dry

Water, whether from perspiration or rain, significantly increases body-heat loss. Keep feet dry; a vapor barrier next to the skin, even something as simple as a plastic bag, can lower heat loss. To avoid a wet underlayer of material next to the skin during or following exercise, it is best to use a fabric that will wick perspiration away from the skin. Cotton is a poor choice for socks, gloves, or underwear because once wet, it loses insulating properties. Polypropylene, wool, or other fabrics wick moisture away from the skin and retain insulating properties when wet.

Stay Hydrated

Dehydration affects the body's ability to regulate body heat and increases the risk of frostbite. Fluids are as important in cold weather as in the heat.

Warm Up Thoroughly

Warm up thoroughly. Keep warm throughout the competition or Practice to prevent a drop in body temperature. Time the warm-up so that it leads almost immediately to the competition. Immediately add clothing to retain body heat upon leaving competition. Do not allow your body to cool rapidly.

Warm Incoming Air

When breathing severely cold air, warm incoming air with a scarf over the mouth and nose whenever possible, to prevent bronchospasm.

Never Use Alcohol, Nicotine and Other Drugs

Alcohol, nicotine and other drugs that cause vasodilation or vasoconstriction of skin vessels are of particular concern in cold stress.

Never Train Alone

An injury such as a sprained ankle while training on isolated trails could lead to severe cold exposure.

Avoidance of cold injury is usually a matter of recognizing the potential for cold stress and dressing appropriately for protection. There is a great deal of individual variation in tolerance to cold. Good nutrition, appropriate warm-up procedures and preventive measures, and early recognition of cold stress will minimize problems. Considerations for canceling a Practice or event should include all these factors as well as specific environmental conditions.

"CONCUSSION"

(By Matthew L. Silvis, MD)

Introduction:

Concussion is a common injury estimated to affect 1.6-2.3 million athletes per year at all levels of sport. Previous estimates relied upon loss of consciousness (LOC) as a defining symptom of concussion. We now know that LOC occurs in < 10% of all concussions. Abandoning LOC as a part of the definition of concussion has led to a dramatic increase in the number of concussions reported per year.

Definition:

The 3rd International Conference on Concussion in Sport defines concussion as a "complex patho-physiological process affecting the brain, induced by traumatic biomechanical forces." Concussion may be caused by a direct or indirect (i.e. force transmitted from upper body to head) blow. The symptoms of concussion are typically short lived and reflect an underlying functional disturbance to the brain, not structural. Therefore, standard cranial imaging (CT, MRI) is normal in concussion.

Signs and Symptoms:

Signs and symptoms of concussion are highly variable and individualized. No two concussions are exactly alike. In fact, some clinicians feel that a threshold exists for concussion that varies between individuals, influenced by a variety of familial and clinical factors. Concussion signs and symptoms can be categorized as somatic, affective, and cognitive.

Somatic	Affective	Cognitive
Headache	Personality changes	Difficulty remembering
Fatigue	Emotional disturbances	Loss of consciousness
Dizziness	Irritability	Disorientation
Balance problems	Sadness	Difficulty concentrating
Nausea	Nervousness	Delayed verbal response
Vomiting		Delayed motor response
Visual disturbances		Abnormal speech (slurred)
Light sensitivity		Feeling mentally foggy
Sound sensitivity		Grogginess
Sleep difficulties		
Numbness or tingling		

Sideline Evaluation:

Sideline evaluation is critical to proper management of an athlete with a concussion. The immediate on-the-field assessment should focus on airway, breathing, and circulation as well as a focused neurologic assessment (mental status, neurological deficits, and cervical spine status). This assessment determines initial disposition (i.e. whether the athlete needs to be emergently transported to the hospital or further assessed on the sideline). The sideline assessment allows for a more detailed history and exam. The Pocket SCAT2 card can aid a licensed physician of medicine or osteopathic medicine (MD or DO) in this assessment. The history should focus on the mechanism of injury and somatic, affective, and cognitive signs/symptoms. The physical examination should focus extensively on the neurological exam, specifically assessing mental status and evaluating for neurologic deficits. Memory function is best assessed by asking specific sport related questions (i.e. What venue are we at today?)

Which half is it now? Who did we play last? What was the score?). Serial exams should take place every 5 minutes until the athlete reaches their baseline.

Guidelines:

Over the past 20 years, > 20 grading scales have been published to guide management of concussion (i.e. American Academy of Neurology Concussion Grading Scale, Cantu Evidence-Based Grading System for Concussion, Colorado Society Guidelines). These guidelines were abandoned as they relied heavily on LOC as a predictor of recovery. Concussion should be viewed as present or not, recognizing that the majority will resolve in a short period of time (7-10 days).

Complications:

Complications of concussion can be quite serious especially if an athlete returns to play prematurely while still symptomatic. Second impact syndrome is a lethal, poorly understood, rare complication of concussion and occurs when a symptomatic athlete returns to play and has a second head trauma. This “second impact” causes brain swelling and herniation resulting frequently in death. Far more common is the prolonged recovery noted in post-concussion syndrome. With cumulative concussions, athletes have been noted to have repeat concussions with less impact and prolonged recoveries, sometimes leading to early retirement from contact sports.

Return to Play:

An athlete with a diagnosed concussion should not be allowed to return to play on the day of injury. No athlete should return to play until cleared by a licensed physician of medicine or osteopathic medicine (MD or DO) comfortable with current concussion management principles.

Return to play after a concussion should not occur until an athlete is asymptomatic off medications with an unremarkable physical examination and neurocognitive testing (if available). A stepwise progression is recommended beginning with light aerobic exercise and advancing every 24 hours through the following stages: sports specific exercise, non-contact training drills, full contact Practice, and competition. If symptoms recur at any point during this stepwise progression, the athlete should return to the previous level and wait for 24 hours before attempting further advancement. This protocol is individualized frequently depending on the needs of the athlete and demands of the sport. A more conservative approach is needed when dealing with young athletes with developing brains (athletes < 18 years of age) as little is known in regard to the long term effects of concussion in this age group.

Prevention:

Prevention of concussion in contact sports is limited. The health claims of many products (specialized football helmets, headgear in soccer, custom designed mouth guards) have limited scientific support and remain an active area of study and not without significant debate in the medical community.

Concussion evaluation, management, and prevention are all very active areas of intense research. Athletes, parents, Coaches, and clinicians should periodically refer to the PIAA Web site for updates.

References:

Guskiewicz KM, *et al.* National Athletic Trainers' Association position statement: management of sport-related concussion. *J Athl Train* 2004; 39 (3): 280-297.

Kissick J, Johnston KM. Return to play after concussion. *Clin J Sport Med* 2005; 15 (6): 426-431.

McCrorry P, et al. Consensus statement on concussion in sports: 3rd international conference on concussion in sport held in Zurich, November 2008. *Clin J Sport Med* 2009; 19: 185-200.

McKeag DB, Kutcher JS. Concussion consensus: raising the bar and filling in the gaps. *Clin J Sport Med* 2009; 19 (5): 343-346.

Meehan WP, Bachur RG. Sport-related concussion. *Pediatrics* 2009; 123: 114-123.

"EATING DISORDERS--ANOREXIA AND BULIMIA"

Many student-athletes face a different paradox in their training regimes. They are encouraged to eat to provide the necessary energy sources for performance, yet they often face self or Team-imposed weight restrictions. Emphasis on low body weight or low body fat may benefit performance only if the guidelines are realistic, the caloric intake is reasonable, and the diet is balanced. The use of extreme weight-control measures can jeopardize the health of the student-athlete and possibly trigger behaviors associated with defined eating disorders.

Although anorexia and/or bulimia are much more prevalent in females, eating disorders also occur in males.

Eating disorders are often an expression of underlying emotional distress that may develop long before the individual becomes involved in athletics. It has been suggested that stress, whether it be from participating in athletics, striving for academic success, or pursuing social relationships, may trigger psychological problems, such as eating disorders, in susceptible individuals. Eating disorders can be triggered in such individuals by a single event or comments from a person important to the individual. In athletics, such triggering mechanisms may include offhand remarks about appearance or constant badgering about a student-athlete's body weight, body composition or body type.

Eating disorders often experienced by student-athletes and their warning signs include:

Anorexia Nervosa--Self-imposed starvation in an obsessive effort to lose weight and to become thin.

Warning signs--Drastic loss in weight, a preoccupation with food, calories and weight, wearing baggy or layered clothing, relentless, excessive exercise, mood swings, and avoiding food-related social activities.

Bulimia--Recurring binge eating usually followed by some method of purging such as vomiting, diuretic or laxative abuse, or intense exercise.

Warning signs--Excessive concern about weight, bathroom visits after meals, depressive moods, strict dieting followed by eating binges, and increasing criticism of one's body.

Bulimarexia--Anorexia nervosa with the practice of one or more bulimic behaviors.

It is important to note that the presence of one or two of these warning signs does not necessarily indicate the presence of an eating disorder. Absolute diagnosis should be done by appropriate professionals.

Anorexia and bulimia lead to semi-starvation and dehydration, which can result in loss of muscular strength and endurance, decreased aerobic and anaerobic power, loss of coordination, impaired judgment and other complications that decrease performance and impair health. These symptoms may be readily apparent or they may not be evident for an extended period of time. Many student-athletes have performed successfully while experiencing an eating disorder. Therefore, diagnosis of this problem should not be based entirely on a decrease in athletic performance.

Coaches, athletic trainers and supervising physicians must be watchful for student-athletes who may be prone to eating disorders, particularly in sports in which appearance or body weight is a factor in performance. Dentists should also look for erosion of tooth enamel caused by the high levels of acid in vomit. Decisions regarding weight loss should be based on the following recommendations to reduce the potential of an eating disorder:

1. Weight loss should be agreed upon by both the Coach and the student-athlete with consultation with appropriate medical and nutritional personnel;
2. A responsible and realistic plan should be developed by all individuals involved, and
3. Weight-loss plans should be developed on an individual basis.

If a problem develops, thorough medical evaluation of the student-athlete suspected of an eating disorder is imperative. Once confirmed, behavior modification should emanate from professional guidance through nutritional, psychological and/or psychiatric counseling. Because eating disorders are a growing problem with serious health consequences, the establishment of professionally guided support groups, access to personal counseling and, if possible, an assistance hotline should be considered at every member school.

"PREVENTION OF HEAT ILLNESS"

Practice or competition in hot and/or humid environmental conditions poses special problems for student-athletes. Heat illness is a primary concern in these conditions. Although deaths from heat illness are rare, constant surveillance and education are necessary to prevent heat-related problems. The following practices should be observed:

1. Pursuant to ARTICLE V, HEALTH, Section 1, Preparticipation Physical Evaluation Necessary Before Pupil Begins Practice, of the PIAA By-Laws, identify any history of previous heat illness or heat-related condition in the student-athlete.
2. General conditioning provides only partial heat acclimatization. Therefore, student-athletes should be exposed gradually to hot and/or humid environmental conditions over a period of seven (7) to ten (10) days to provide better heat acclimatization. Each exposure also should involve a gradual increase in the amount of exercise that is undertaken over a period of days to weeks until the exercise intensity and duration is comparable to that likely to occur in competition. If conditions are extreme, training or competition should be held during a cooler time of the day.

3. When protective gear and clothing must be worn, frequent rest periods should be scheduled so that the gear and clothing can be loosened to allow evaporation of sweat and other forms of heat loss. During the acclimatization process, it may be advisable to use a minimum of protective gear and clothing and to Practice in T-shirts, shorts, socks and shoes. Excessive tape and outer clothing that restrict sweat evaporation should be avoided. Rubberized suits should never be used.
4. Regular measurements of environmental conditions are recommended, including the wet-bulb temperature, dry-bulb temperature and globe temperature. Thus, the potential impact of humidity, air temperature and solar radiation are assessed. Portable devices are available for making such measurements, and the person responsible for taking such measurements should identify those devices. A wet-bulb temperature higher than 75 degrees Fahrenheit or warm-weather humidity above 90 percent may represent dangerous conditions that are made more severe if the sun is shining. A wet-bulb globe temperature (WBGT) higher than 82 degrees Fahrenheit (28 degrees Celsius) suggests that all activity be curtailed or discontinued. An alternative guide is a Heat Index Chart.
5. Dehydration (hypohydration) must be avoided because it hinders performance and can result in profound heat illness. Cool water must be readily available. Student-athletes should be encouraged to drink as much and as frequently as comfort allows. For participation periods up to two (2) hours in duration (either Practice or competition), most weight loss represents water loss, and that fluid loss should be replaced as soon as possible. Cool water is the recommended fluid replacement during both Practice and competition. Electrolyte solutions are not needed and salt tablets should not be used. A normal, healthful diet will replace salt loss.
6. By recording the body weight of each student-athlete before and after workout or Practice, progressive hypohydration or loss of body fluids can be detected, and the potential harmful effects of hypohydration can be avoided. It is recommended that, for every pound of weight loss that occurs, sixteen (16) ounces of cool water should be consumed. Those who lose three (3) percent of their body weight or more over a period of several days should be medically evaluated.
7. Some student-athletes may be more susceptible to heat illness than others. Susceptible individuals include: those not heat-acclimatized, those in relatively poor physical condition, those with excess body fat, those who regularly push themselves to capacity, those with a history of heat illness and those with any febrile condition or other metabolic disorder.
8. Student-athletes should be informed of and monitored for signs of heat illness such as: light-headedness or unsteadiness, cramping, pale or flushed skin, nausea, excessive fatigue, and/or rapid and weak pulse. Signs of advanced heat illness are cessation of sweating, disturbance of vision, and/or incoherency.

Any form of heat illness should be treated as a medical emergency, requiring the prompt attention of a medical professional. Immediate evaluation and treatment is essential in order to prevent serious health consequences to the student-athlete.

"MEDICAL DISQUALIFICATION OF THE STUDENT-ATHLETE"

Withholding a student-athlete from activity. The member school's Team licensed physician of medicine or osteopathic medicine (MD or DO) has the final responsibility to determine when a student-athlete is removed or withheld from participation due to an injury, an illness, or pregnancy. In addition, clearance for that individual to return to activity is solely the responsibility of the member school's Team licensed physician of medicine or osteopathic medicine (MD or DO) or that physician's designated representative.

Procedure to medically disqualify a student-athlete during PIAA championships. The student-athlete's Team licensed physician of medicine or osteopathic medicine (MD or DO), if present, should examine the individual with an injury, an illness or pregnancy and make a recommendation to the student-athlete, to the individual's Coach, and to the PIAA-appointed sports medicine physician in charge (or a designated representative) as to the advisability of continued participation or disqualification. The final decision shall be made by the PIAA-appointed sports medicine physician in charge (or a designated representative). In the absence of a student-athlete's Team licensed physician of medicine or osteopathic medicine (MD or DO), the PIAA-appointed sports medicine physician in charge (or a designated representative) should examine the student-athlete with an injury, an illness, or pregnancy and make such a recommendation. The PIAA-appointed event manager (or a designated representative) should be responsible for administrative enforcement of the medical recommendation, if it involves disqualification. Where the Contest rules for a sport provide otherwise, the Contest rules shall control.

"MENSTRUAL DYSFUNCTION"

(By Thomas D. Kohl, MD)

Definitions:

1. Normal adult menstrual cycle
 - a. Mean interval of 28 days (7 days)
 - b. Duration of menses of 4 days (2-3 days)
 - c. Median blood loss is about 30 mL per month (with the upper limit of normal defined as 60-80 mL per month)
2. **Amenorrhea:** absence of menses; can be primary (no menses by age 16) or secondary (absence of three consequent menstrual cycles, after regular periods have been established)
3. **Oligomenorrhea:** infrequent, irregular bleeding at 45-day intervals

Irregular menstruation (i.e., amenorrhea and oligomenorrhea) prevalence in athletic women is 15% to 66%, depending on study methodology, in contrast to 2% to 5% in the normal population. Irregular menses is described in 12% of swimmers and cyclists, 20% of females involved in excessive exercise in general, 44% of ballet dancers, and 51% of endurance runners.

The cause was once believed to be related to the amount of exercise performed by the female athlete. Research has now shown that the issue is related to energy imbalance and lack of adequate caloric intake to support the normal body processes as well as the need for the amount of exercise. The threshold of energy availability appears to be 30

kcal/kg lean body mass per day. Strenuous training alone is not enough to disrupt menstrual cycles unless accompanied by dietary restriction [29], and cycles can be restored merely by increasing dietary intake. When the imbalance exists the body begins to move calories to vital work for life and away from non-vital functions like reproduction. When this occurs the female athlete loses the normal hormone production in the brain (pituitary gland) that leads to normal ovarian function and menstruation. This is termed hypothalamic amenorrhea. This should be a diagnosis of exclusion where other causes of amenorrhea in a young female should be investigated. Those possibilities include: pregnancy, drugs, stress, tumors, premature ovarian failure, as well as other more uncommon hormone problems.

The underlying health issue related to this dysfunction is a state of low circulating estrogen and its consequences on bone health. In females, progressive bone loss, or an increased bone resorption compared with bone formation, starts around age 20. One study of 200 amenorrheic young athletes found that the subjects had a mean reduction in bone mineral density (BMD) of 15% when compared with normally menstruating, age-matched controls (Davis). Despite resumption of normal menses, there is a loss of bone mass resulting from the period of low estrogen that is not reversible. This is of primary clinical concern because it is related directly to the risk of developing osteoporosis later in life and stress fractures during their athletic careers. Females with menstrual irregularities secondary to low levels of circulating estrogen are at risk for low peak bone mass and future development of osteoporosis.

Another reason to be alert for menstrual dysfunction is that it is often the earliest sign/marker for other health issues that contribute to low caloric intake, i.e. eating disorders. The combination of menstrual dysfunction, disordered eating, and osteopenia is termed The Female Athlete Triad. These issues are interrelated and often present together. However, not all 3 must be present to initiate a comprehensive evaluation and treatment plan.

The treatment goal for females with menstrual irregularities is the reestablishment of an appropriate hormonal environment and body weight for the maintenance of bone health. This may be achieved by the re-establishment of a regular menstrual cycle. This is best accomplished by an evaluation by a licensed physician of medicine or osteopathic medicine (MD or DO) well versed in the complexity of this situation. The evaluation and treatment often includes a team of expert healthcare professionals including: sports medicine physicians, gynecologists, nutritionists, psychologists, exercise physiologists, and athletic trainers.

General guidelines should include:

1. Full medical evaluation, including an endocrine work-up, if necessary; (LICENSED PHYSICIAN OF MEDICINE OR OSTEOPATHIC MEDICINE [MD or DO]).

This would include a comprehensive history focused on menstrual history, medication and other drug use, family history, exercise training history, nutritional history, and psychological history. A thorough physical examination including vital signs, BMI assessment, inspection for signs of eating disorders, and sexual maturation staging in adolescents. Laboratory evaluation may be indicated and would include complete blood cell count (CBC), chemistry profiles (electrolytes, magnesium, phosphorus, transaminases, albumin, protein, serum urea nitrogen/creatinine), and select hormones (pregnancy, thyroid function tests and other sex steroid hormones, depending on

physical findings). An EKG may be indicated if eating disorders or electrolyte abnormalities are found. Athletes with recurrent stress fractures and prolonged amenorrhea (> 6 months) should be screened with at least a baseline DEXA, keeping in mind that normal athletes, particularly those participating in weight-bearing sports, will have BMD measurements 12% to 15% higher than sedentary women.

There is some controversy about the prescribing of estrogen in the form of OCPs and HRT to amenorrheic athletes. A review of the literature from 2006 showed the 10 studies of OC and other hormone replacement in this population, seven showed a positive effect on BMD, two showed no effect, and one case report showed a negative effect on BMD. There is limited evidence in anorexic premenopausal women for any positive effect. If amenorrhea is prolonged (> 6 months), then hormonal therapy - usually in the form of combined oral contraceptives - should be considered to protect BMD.

2. Nutritional counseling (NUTRITIONIST)

- a. Eating disorders AND disordered eating (PSYCHOLOGIST).
- b. Total caloric intake vs. energy expenditure, looking at the quality of the diet consumed (percentage of protein, fats, and carbohydrates); and
- c. Calcium intake of 1,200 to 1,500 milligrams a day with 400-800IU of vitamin D.

3. Review of training program/exercise habits with decrease in exercise if over training is a concern (ATHLETIC TRAINER/EXERCISE SPECIALIST).

4. Routine monitoring of diet, menstrual function, weight-training schedule, and exercise habits (ENTIRE TEAM).

5. Counseling with emphasis on possible stress factors and decrease performance due to energy concerns in the student-athlete's competitive environment (ENTIRE TEAM).

SUGGESTED READING:

Lebrun, Constance Marie. [The Female Athlete Triad: What's a Doctor to Do?](#) **Current Sports Medicine Reports**. 6(6):397-404, December 2007.

Nattiv A, Loucks AB, Manore MM, et al.: American College of Sports Medicine revised position stand on the Female Athlete Triad. **Med Sci Sports Exerc** 2007, 39:1867-1882.

Liu SL, Lebrun CM: Effect of oral contraceptives and hormone replacement therapy on bone mineral density in premenopausal and perimenopausal women: a systematic review. **Br J Sports Med** 2006, 40:11-24.

"NUTRITIONAL ERGOGENIC AIDS"

Student-athletes continue to search for critical nutritional ingredients that will give them a competitive edge. A nutritional ergogenic aid is defined as any foodstuff or dietary procedure that either improves or is thought to improve physical performance.

Proper nutrition, like training, requires careful long-term planning with specific competitive objectives in mind. There are no shortcuts to sound nutrition, and the use of suspected or advertised ergogenic aids, including but not limited to creatine and other nutritional supplements, may be detrimental. For additional information, student-athletes should contact their family physician.

Obviously, the serious and potential fatal effects of anabolic androgenic steroids and their related compounds precludes their use entirely.

SEIZURE DISORDER

(By Michael Cordas, Jr., DO)

DEFINITIONS – Seizure disorders are states characterized by sudden, repetitive, and stereotyped alterations of behavior which are presumed to be due to a paroxysmal discharge of cortical or subcortical neurons. They may be primarily generalized seizures, secondary generalized seizures, partial seizures, provoked, or unprovoked seizures.

There are approximately 375,000 persons between the ages of 5 and 24 years of age who have seizure disorders. Of these approximately 250,000+ attend normal schools and many of them could very easily participate in competitive sports.

Seven percent (7%) of patients with seizure disorders will die as a result of accidents, however only five percent (5%) of these deaths can be attributed to injuries sustained during a seizure. The risk for drowning while bathing in the sea or swimming in a pool is four times greater for children with seizures than their peers. Injuries sustained during seizures may be fractures of the humeral head, femoral trochanter, clavicle and ankle, vertebral compression fractures, shoulder and hip dislocations, and head and cervical spine injury.

Regular exercise program have been show to have a beneficial effect on seizure control. Seizures occurring during exercise or in the immediate post-exertional period have been reported, but rarely. There have been no reports of status epilepticus triggered by exercise. There appears to be no evidence that pharmacokinetics and anti-convulsive drugs are altered by a regular exercise program, although research in this field is limited. Sports related injuries do not appear to be increased in a person with seizure disorder. Patients with seizures including those who because of physical or mental handicaps are unable to participate in regular competitive sports should be encouraged to participate in exercise programs and games including Special Olympic programs.

It appears that seizures during Contests or Practice would pre-dispose the person to a serious injury, although confirmatory data to support this is lacking, with the exception of swimming. Single or cumulative head blows may adversely affect seizure control, and may cause an early post-traumatic seizure, although this does not seem to be much of a concern. Obviously, because of inherent dangers, boxing should be excluded.

It is important to judge each case by its own merits comparing the potential risks versus the benefits in regards to seizure disorders. What may be good for one athlete may not be good for another.

Committees on Children with Handicaps and Sports Medicine of the American Medical Association recommend that children be allowed to participate in physical education and interscholastic athletics including contact and collision sports provided there is proper medical management, good seizure control, and proper supervision. It appears that certain situations of sports where a dangerous fall could occur, such as rope climbing activities, parallel bars, and high diving should probably be avoided. Swimming is certainly acceptable although it must be supervised.

It is important to understand that persons with seizure disorders whose seizures are controlled can and should lead full lives without any personal restrictions.

It has been recommended in the past that an athlete be seizure-free on anti-convulsive drugs for at least one year. However, this appears to be a little over conservative. The athlete must be compliant, obviously, in taking anti-convulsant medications as documented by several recent therapeutic blood levels. It is recommended that an athlete be free of seizures for three months to participate in collision or contact sports. It is also recommended that an individual with a seizure disorder, such as epilepsy, even though he or she has been free for two years or longer, should be maintained on anti-convulsives during his or her competitive career.

Obviously, if a seizure occurs during competition or Practice, the athlete should be taken to an emergency room.

Obviously, the criteria for participation in sports other than contact or collision sports should not be as strict as with contact or collision sports, and the occurrence of an occasional seizure should not preclude participation unless it occurs during a sport in which there is increased risk for injury such as gymnastics or swimming.

An athlete may participate if: 1. There is no evidence of progressive neurological disease seen. 2. There are no neurological abnormalities particularly in motor and coordination skills that could hinder performance. 3. The athlete is seizure-free off anti-convulsive medications for one year or longer.

In closing, it is understood that athletes with seizure disorders should not be stopped from participation in any modality of exercise that they may choose to participate. However, it also must be noted that the health and safety of this athlete is a concern of the Committee on Sports Medicine, and therefore, the above recommendations are provided. These recommendations were obtained from the team physician's handbook by Mely, Washington, and Shelton.

"SICKLE CELL TRAIT"

(By Matthew L. Silvis, MD)

Sickle cell trait (SCT) is a condition in which an athlete has inherited one gene for normal hemoglobin and one gene for sickle hemoglobin. SCT is common, present in > 3 million Americans (estimated at 1 in 12 Blacks and 1 in 2,000-10,000 Whites). This condition is more prevalent in athletes whose ancestors come from malarial regions of the world where this trait is protective including: Africa, South or Central America, Caribbean or Mediterranean countries, India, and Saudi Arabia. SCT is usually benign. Most individuals with this condition lead normal, healthy lives and can have exceptional athletic careers at all levels of sport.

However, SCT can cause red blood cells to change shape during intense or prolonged exertion from "coiled shaped" to "quarter-mooned shaped." This can lead to blocked blood vessels and damaged muscle (including the heart). This damage can result in two fatal conditions: fulminant exertional rhabdomyolysis (explosive muscle breakdown) and exercise-associated sudden death.

No SCT athlete should ever be disqualified. Simple precautions may prevent complications of sickling in athletes with SCT and enable these athletes to excel in their

sport. In fact, the NCAA Division I Legislative Council decided recently that all Division I student-athletes must be tested for SCT, show proof of a prior test, or sign a waiver for the upcoming 2011-2012 academic year so that athletes with SCT can be identified and precautions put in place.

Coaches and athletes should remember to allow frequent and adequate rest, acclimatization, cooling down time, and hydration especially in early season practices. This is not only helpful for athletes with SCT, but is recommended for all athletes. Any athlete felt to be having health difficulties with Practice should be identified by Coaches and/or other athletes immediately and be evaluated by the school's ATC or other medical professional such as an MD or DO. Quick identification in these situations may save a life or a prolonged absence from the season. All schools should establish Practice safety guidelines consistent with national standards to protect not only athletes with known medical concerns but also those with unknown medical concerns. As a group of athletes, Coaches, and sports medicine healthcare providers, our best defense is to know all possible risks and prevent injuries or other tragedies before they occur.

Specifically for athletes with SCT, the National Athletic Trainers' Association recommends the following guidelines:

- 1.) All athletes with SCT who begin to develop symptoms (e.g., cramping, pain, weakness, fatigue, shortness of breath) should stop exercise immediately and report to their athletic trainer and Coach. Symptoms of suspected sickling can occur after just 2-3 minutes of sprinting or similar sustained exertion.
- 2.) Preventive measures include: decreasing exercise intensity, encouraging a slow build-up of conditioning activities, allowing for frequent rest and recovery periods, and increasing opportunities for hydration. The goal is to make exercise easier. If athletes with SCT are allowed to set their own pace, they seem to do fine.
- 3.) All athletes with SCT should avoid timed serial sprints and sustained exertion for > 2-3 minutes without a break.
- 4.) Environmental heat stress, dehydration, asthma, and illness predispose athletes with SCT to sickling. Exercise should be adjusted for heat stress, hydration encouraged, asthma controlled, and illness considered a contraindication to exercise in athletes with SCT.
- 5.) Pennsylvanian athletes with SCT who plan to exercise and/or compete at altitude should be closely monitored when new to altitude (~ 5,000 ft.). Training effort should be reduced and oxygen should be readily available.

While the PIAA does not mandate SCT screening of student athletes, parents can request screening from their child's pediatrician or family physician. For more information on SCT in athletes, visit www.ncaa.org.

References:

- Anzalone ML, *et al.* Sickle cell trait and fatal rhabdomyolysis in football training: a case report. *Med Sci Sports Exerc* 2010; 42 (1): 3-7.
- Connes, P, *et al.* Physiological responses of sickle cell trait carriers during exercise. *Sports Med* 2008; 38 (11): 931-946.
- NATA Consensus Statement: Sickle cell trait and the athlete, June 2007.
- NCAA 2009-2010 Sports Medicine Handbook: The student-athlete with sickle cell trait, June 2008.

"SKIN INFECTIONS IN WRESTLING"

Data indicates that skin infections are associated with at least ten percent (10%) of the time-loss injuries in wrestling. It is recommended that qualified personnel examine the skin over the entire body, and the hair of the scalp and pubic areas of all wrestlers before any participation in the sport.

Open wounds and infectious skin conditions that cannot be adequately protected should be considered cause for medical disqualification from Practice or competition. Categories of such skin conditions and examples include:

1. Bacterial skin infections
 - a. impetigo;
 - b. erysipelas;
 - c. carbuncle;
 - d. staphylococcal disease;
 - e. folliculitis (generalized);
 - f. hidradenitis suppurative;
2. Parasitic skin infections
 - a. pediculosis;
 - b. scabies;
3. Viral skin infections
 - a. herpes simplex;
 - b. herpes zoster (chicken pox);
 - c. molluscum contagiosum and
4. Fungal skin infections --
 - tinea corporis (ringworm)

NOTE: Current knowledge indicates that many fungal infections are easily transmitted by skin-to-skin contact.

Besides identification of infected individuals and their prompt treatment, prevention can be aided through proper routine cleaning of all equipment, including mats and shared common areas, such as locker rooms.

If at anytime (weigh-ins or otherwise), a referee observes a skin infection in the athlete, the following shall apply:

If it is questionable as to whether a skin infection is communicable or not, the wrestler will be required to have a current licensed physician of medicine or osteopathic medicine (MD or DO) signed document stating the skin infection is no longer communicable. Any new skin infection occurring after the licensed physician of medicine or osteopathic medicine's (MD or DO) note has been written should be examined by the licensed physician of medicine or osteopathic medicine (MD or DO) and a new note may be required. For the safety of all wrestlers, it is recommended that Coaches use a similar guideline before allowing wrestlers to return to Practice. As a further precaution against skin infections, wrestlers should shower after each Practice or competition with an antibacterial soap.

Of additional concern with regard to skin infections are the equipment and clothing used by wrestlers. As mentioned earlier, Practice and competition mats should be cleaned with a disinfectant cleaner immediately prior to each use. Each wrestler's Practice uniform, including headgear, should be cleaned daily using an antibacterial soap or cleaner. Wrestlers who are suspected of being infected, or who have just returned to participation after being infected, should have their Practice uniform and any towels they may have used laundered separately to reduce the risk of contamination.

NFHS MEDICAL RELEASE FORM FOR WRESTLER TO PARTICIPATE WITH SKIN LESION(S)

The National Federation of State High School Associations' (NFHS) Sports Medicine Advisory Committee has developed a medical release form for wrestlers to participate with skin lesion(s), which the PIAA Sports Medicine Advisory Committee recommended to the PIAA Board of Directors that it adopt, effective immediately. (**NOTE:** The PIAA Board of Directors accepted that recommendation at its meeting of Thursday, July 24 and Friday, July 25, 2008.) The NFHS Sports Medicine Advisory Committee conducted a survey among specialty, academic, public health, and primary care physicians and reviewed extensively the literature available on the communicability of various skin lesions at different stages of disease and treatment. No definitive data exists that allows the NFHS Sports Medicine Advisory Committee to absolutely predict when a lesion is no longer shedding organisms that could be transmitted to another. Another finding from the survey was the significant differences that exist among physicians relating to when they will permit a wrestler to return to participation after having a skin infection.

Neither NFHS nor the NFHS Sports Medicine Advisory Committee presumes to dictate to professionals how to practice medicine. Neither is the information on this Form meant to establish a standard of care. The NFHS Sports Medicine Advisory Committee does feel, however, that the guidelines included on the form represent a summary consensus of the various responses obtained from the survey, from conversations, and from literature. The NFHS Sports Medicine Advisory Committee also feels that the components of the form are very relevant to addressing the concerns of Coaches, parents, wrestlers, and physicians that lead to the research into this subject and to the development of this form.

GOALS FOR ESTABLISHING A WIDELY USED FORM:

1. Protect wrestlers from exposure to communicable skin disorders. Although most of the skin lesions being discussed generally have no major long term consequences and are not life threatening, some do have morbidity associated with them and student-athletes should be protected from contracting skin disorders from other wrestlers or contaminated equipment such as mats.
2. Allow wrestlers to participate as soon as it is reasonably safe for them and for their opponents and/or teammates using the same mat.
3. Establish guidelines to help minimize major differences in management among physicians who are signing "return to competition forms". Consistent use of these guidelines should protect wrestlers from catching a skin disease from participation and should protect them from inequalities as to who can or cannot participate.
4. Provide a basis to support physician decisions on when a wrestler can or cannot participate. This should help the physician who may face incredible pressure from many fronts to return a youngster to competition ASAP. This can involve any student athlete who never wins a match or the next state champion with a scholarship pending.

IMPORTANT COMPONENTS FOR AN EFFECTIVE FORM:

1. Inclusion of the applicable NFHS Wrestling Rules so physicians will understand that covering a contagious lesion is not an option that is allowed by Rule. Covering a non-contagious lesion after adequate therapy to prevent injury to lesion is acceptable.
2. Inclusion of the date and nature of treatment and the earliest date a wrestler can return to participation. This should minimize the need for a family to incur the expense of additional office visits as occurs when a form must be signed within three days of wrestling as some do.
3. Inclusion of a "bodygram" with front and back views should clearly identify the lesion in question. Using non-black ink to designate skin lesions should result in less confusion or conflict. Also including the number of lesions protects against spread after physician visit.
4. Inclusion of guidelines for minimum treatment before returning the wrestler to action as discussed above. This should enhance the likelihood that all wrestlers are managed safely and fairly.
5. Inclusion of all of the components discussed has the potential to remove the referee from making a medical decision. If a lesion is questioned, the referee's role could appropriately be only to see if the Coach can provide a fully completed medical release form allowing that wrestler to wrestle.

**NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS SPORTS MEDICINE ADVISORY COMMITTEE
MEDICAL RELEASE FOR WRESTLER TO PARTICIPATE WITH SKIN LESION**

Student's Name: _____ Age: _____ Grade: _____

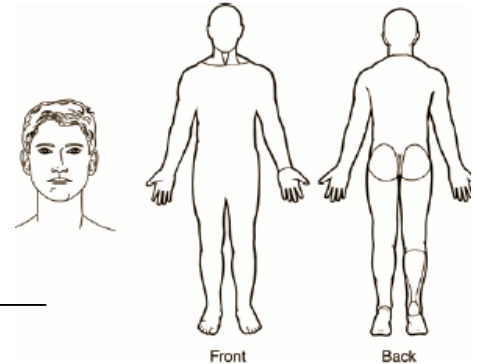
Enrolled in _____ School

Diagnosis: _____

Mark Location AND Number of Lesion(s) Below:

Location AND Number of Lesion(s): _____

Medication(s) used to treat lesion(s): _____



Date Treatment Started: ____ / ____ / ____ Form Expiration Date: ____ / ____ / ____

Earliest Date Above-Named Student May Return to Participation: ____ / ____ / ____

Treating Physician's Name (print/type): _____ License # _____

Address: _____ Phone: () _____

Treating Physician's Signature: _____ MD/DO (circle one) Date of Exam: ____ / ____ / ____

NOTE TO TREATING PHYSICIAN'S: Non-contagious lesions do not require treatment prior to return to participation (e.g. eczema, psoriasis, etc.). Please become familiar with NFHS Wrestling Rules 4-2-3, 4-2-4, and 4-2-5, which provide as follows:

"ART. 3 . . . If a participant is suspected by the referee or Coach of having a communicable skin disease or any other condition that makes participation appear inadvisable, the Coach shall provide current written documentation as defined by the NFHS or the state associations, from a licensed physician of medicine or osteopathic medicine (MD or DO) stating that the suspected disease or condition is not communicable and that the athlete's participation would not be harmful to any opponent. This document shall be furnished at the weigh-in for the dual meet or Tournament. The only exception would be if a designated on-site meet licensed physician of medicine or osteopathic medicine (MD or DO) is present and is able to examine the wrestler either immediately prior to or immediately after the weigh-in. Covering a communicable condition shall not be considered acceptable and does not make the wrestler eligible to participate."

"ART. 4 . . . If a designated on-site meet licensed physician of medicine or osteopathic medicine (MD or DO) is present, he/she may overrule the diagnosis of the licensed physician of medicine or osteopathic medicine (MD or DO) signing the medical release form for a wrestler to participate or not participate with a particular skin condition."

"ART. 5 . . . A contestant may have documentation from a licensed physician of medicine or osteopathic medicine (MD or DO) only indicating a specific condition such as a birthmark or other non-communicable skin conditions such as psoriasis and eczema, and that documentation is valid for the duration of the season. It is valid with the understanding that a chronic condition could become secondarily infected and may require re-evaluation."

Once a lesion is not considered contagious, it may be covered to allow participation.

Below are some treatment guidelines that suggest **MINIMUM TREATMENT** before return to wrestling:

Bacterial Diseases (impetigo boils): To be considered "non-contagious," all lesions must be scabbed over with no oozing or discharge and no new lesions should have occurred in the preceding 48 hours. Oral antibiotic for three days is considered a minimum to achieve that status. If new lesions continue to develop or drain after 72 hours, CA-MRSA (Community Associated Methicillin Resistant Staphylococcus Aureus) should be considered and minimum oral antibiotics should be extended to 10 days before returning the athlete to competition or until all lesions are scabbed over, whichever occurs last.

Herpetic Lesions (Simplex, fever blisters/cold sores, Zoster, Gladiatorum): To be considered "non-contagious," all lesions must be scabbed over with no oozing or discharge and no new lesions should have occurred in the preceding 48 hours. For primary (first episode of Herpes Gladiatorum), wrestlers should be treated and not allowed to compete for a minimum of 10 days. If general body signs and symptoms like fever and swollen lymph nodes are present, that minimum period of treatment should be extended to 14 days. Recurrent outbreaks require a minimum of 120 hours or full five days of oral anti-viral treatment, again so long as no new lesions have developed and all lesions are scabbed over.

Tinea Lesions (ringworm scalp, skin): Oral or topical treatment for 72 hours on skin and 14 days on scalp.

Scabies, Head Lice: 24 hours after appropriate topical management.

Conjunctivitis (Pink Eye): 24 hours of topical or oral medication and no discharge.

Molluscum Contagiosum: 24 hours after curettage.

"WEIGHT LOSS--HYPOHYDRATION"

There are two general types of weight loss common to student-athletes who participate in interscholastic sports: loss of body water (at issue here) or loss of stored body lipid (fat) and body tissue. The loss of body water or the process of dehydration, which leads to a state of negative water balance (hypohydration), is brought about by withholding drinking fluids and carbohydrates, the promotion of extensive sweating, and the use of emetics, diuretics, or laxatives. The problem is most evident in those who must be certified to participate in a given weight classification, but it also is present in other athletic groups.

A clue to normal hydration is urine color. Well-hydrated athletes will urinate a dilute urine that is either light yellow (e.g., the color of lemonade) or clear. Ideally, fluid losses should be replaced after each Practice or competition, with consumption of 16 ounces of fluid for each 1 pound of weight lost over that timeframe.

There are no valid reasons for subjecting the student-athlete's body to a hypohydrated state, because of the variety of adverse physiological effects and possible pathology that accompany hypohydration. These include reduced strength and local muscular endurance, smaller plasma, and blood volume, modified cardiac functioning (including higher heart rate, smaller stroke volume, and lesser cardiac output), impaired thermoregulation, decreased kidney blood flow and filtration, reduced liver glycogen stores and loss of electrolytes

When hypohydration is extensive, attempts at rehydration usually are insufficient for body fluid and electrolyte homeostasis to be restored before competition. In **wrestling**, this is especially true between the official weigh-in and actual competition.

The practice of fluid deprivation (dehydration) should be discouraged. To promote sound practices, student-athletes and Coaches should be educated about the physiological and pathological consequences of hypohydration. The use of laxatives, emetics and diuretics should be prohibited. Similarly, the use of excessive food and fluid restriction, self-induced vomiting, vapor-impermeable suits (e.g., rubber or rubberized nylon), hot rooms, hot boxes and steam rooms should be prohibited.

Hypohydration constitutes an unnecessary potential health hazard that acts synergistically with poor nutrition and intense exercise to compromise health and athletic ability. The positive alternative would be to minimize weight loss and maintain a desired weight over the course of the competitive season. To implement these policies, the use of standard measures of percent body fat and body weight would be advisable to ascertain a reasonable weight status for the student-athlete. In **wrestling**, the official competition weigh-in should be scheduled an hour before match time.



Emergency Card for Athletes

- Emergency card/authorization for each athlete must accompany the athlete at all times.
- The card for each athlete should be carried in the first-aid kit for each sport.
- The card for each athlete should be readily accessible to the Coach, athletic trainer, or emergency personnel.
- Prior to the start of each sport, the card for each athlete should be reviewed by the Coach/trainer/athletic director or any other medical personnel for completeness.
- Include emergency phone numbers or significant medical history.

Please complete the information below prior to participation in each sports' season:

Name: _____
 Address: _____
 City, State, Zip: _____
 Telephone: _____
 Blood Type: _____

In case of accident or emergency, please contact:

Parent's/Guardian's Name _____ Relationship _____
 Address _____ Emergency Contact Telephone # () _____
 Secondary Emergency Contact Person's Name _____ Relationship _____
 Address _____ Emergency Contact Telephone # () _____
 Medical Insurance Carrier _____ Policy Number _____
 Address _____ Telephone # () _____
 Family Physician's Name _____, MD or DO (circle one)
 Address _____ Telephone # () _____

Pre-Existing Circulatory/Pulmonary Conditions: _____
 Diabetes: _____
 Inhalers: _____
 Allergies or Allergic Reactions: _____
 Medications Being Used: _____

Date of Tetanus Immunization: _____
 Have you ever had a concussion (i.e. bell rung, ding, head rush) or head injury? _____ Yes _____ No
 Other Pertinent Information: _____

Permission to Treat: _____
 Parent's/Guardian's Signature

GUIDELINES FOR MEDICAL COVERAGE FOR ATHLETIC EVENTS

The Governor's Council on Physical Fitness and Sports recommends the following guidelines for medical coverage for student-athletic events:

Equipment: Ice – O₂; Scalpel; Epinephrine; Benadryl; Airway; Endotracheal Tube; Soft Collar; Spine Board; H.Stats, Kelly, Tourniquet; Chest Tube; 18 Gauge Needles; Tape; Air Splint, Cellular Phone

Collision (opponents may displace opponents) Sports: Football, Ice Hockey (male), Lacrosse (male), Wrestling

Contest: Physician and at least one of the following:
Certified Athletic Trainer or Physician Assistant or Nurse Practitioner specifically trained in sports medicine

Access within 2 to 5 minutes of phone line activation of emergency system
(i.e. – ambulance – EMT + physician notification).

Practice: Certified Athletic Trainer or Physician Assistant or Nurse Practitioner specifically trained in sports medicine

Access within 2 to 5 minutes of phone line activation of emergency system
(i.e. – ambulance – EMT + physician notification).

Contact (opponents may not displace opponents) Sports: Baseball, Basketball, Competitive Cheerleading, Cross Country, Field Hockey, Ice Hockey (female), Gymnastics, Lacrosse (female), Soccer, Softball, Swimming and Diving, Track and Field, Volleyball, Water Polo

Contest & Practice: Certified Athletic Trainer or Physician Assistant or Nurse Practitioner specifically trained in sports medicine

Access within 2 to 5 minutes of phone line activation of emergency system
(i.e. – ambulance – EMT + physician notification).

Non-Contact Sports: Bowling, Golf, Rifle, Tennis

Contest & Practice: Coach Certified in CPR, first aid, and basic care of suspected injuries

Access within 2 to 5 minutes of phone line activation of emergency system
(i.e. – ambulance – EMT + physician notification).

**PIAA COMPREHENSIVE INITIAL
PRE-PARTICIPATION PHYSICAL
EVALUATION (CIPPE) FORM**

PIAA COMPREHENSIVE INITIAL PRE-PARTICIPATION PHYSICAL EVALUATION

INITIAL EVALUATION: Prior to any student participating in Practices, Inter-School Practices, Scrimmages, and/or Contests, at any PIAA member school in any school year, the student is required to (1) complete a Comprehensive Initial Pre-Participation Physical Evaluation (CIPPE); and (2) have the appropriate person(s) complete the first four Sections of the CIPPE Form. Upon completion of Sections 1, 2, and 3 by the parent/guardian, and Section 4 by an Authorized Medical Examiner (AME), those Sections must be turned in to the Principal, or the Principal's designee, of the student's school for retention by the school. The CIPPE may not be performed earlier than June 1st and shall be effective, regardless of when performed during a school year, until the next May 31st.

SUBSEQUENT SPORT(S) IN THE SAME SCHOOL YEAR: Following completion of a CIPPE, the same student seeking to participate in Practices, Inter-School Practices, Scrimmages, and/or Contests in subsequent sport(s) in the same school year, must complete Section 5 of this form and must turn in that Section to the Principal, or Principal's designee, of his or her school. The Principal, or the Principal's designee, will then determine whether Section 6 need be completed.

SECTION 1: PERSONAL AND EMERGENCY INFORMATION

PERSONAL INFORMATION

Student's Name _____ Male/Female (circle one)

Date of Student's Birth: ____/____/____ Age of Student on Last Birthday: ____ Grade for Current School Year: ____

Current Physical Address _____

Current Home Phone # () _____ Parent/Guardian Current Cellular Phone # () _____

Fall Sport(s): _____ Winter Sport(s): _____ Spring Sport(s): _____

EMERGENCY INFORMATION

Parent's/Guardian's Name _____ Relationship _____

Address _____ Emergency Contact Telephone # () _____

Secondary Emergency Contact Person's Name _____ Relationship _____

Address _____ Emergency Contact Telephone # () _____

Medical Insurance Carrier _____ Policy Number _____

Address _____ Telephone # () _____

Family Physician's Name _____, MD or DO (circle one)

Address _____ Telephone # () _____

Student's Allergies _____

Student's Health Condition(s) of Which an Emergency Physician Should be Aware _____

Student's Prescription Medications _____

SECTION 2: CERTIFICATION OF PARENT/GUARDIAN

The student's parent/guardian must complete all parts of this form.

A. I hereby give my consent for _____ born on _____ who turned _____ on his/her last birthday, a student of _____ School and a resident of the _____ public school district, to participate in Practices, Inter-School Practices, Scrimmages, and/or Contests during the 20____ - 20____ school year in the sport(s) as indicated by my signature(s) following the name of the said sport(s) approved below.

Fall Sports	Signature of Parent or Guardian
Cross Country	
Field Hockey	
Football	
Golf	
Soccer	
Girls' Tennis	
Girls' Volleyball	
Water Polo	
Other	

Winter Sports	Signature of Parent or Guardian
Basketball	
Bowling	
Girls' Gymnastics	
Rifle	
Swimming and Diving	
Track & Field (Indoor)	
Wrestling	
Other	

Spring Sports	Signature of Parent or Guardian
Baseball	
Lacrosse	
Girls' Soccer	
Softball	
Boys' Tennis	
Track & Field	
Boys' Volleyball	
Other	

B. Understanding of eligibility rules: I hereby acknowledge that I am familiar with the requirements of PIAA concerning the eligibility of students at PIAA member schools to participate in Inter-School Practices, Scrimmages, and/or Contests involving PIAA member schools. Such requirements, which are posted on the PIAA Web site at www.piaa.org, include, but are not necessarily limited to age, amateur status, school attendance, health, transfer from one school to another, season and out-of-season rules and regulations, semesters of attendance, seasons of sports participation, and academic performance.

Parent's/Guardian's Signature _____ Date ____/____/____

C. Disclosure of records needed to determine eligibility: To enable PIAA to determine whether the herein named student is eligible to participate in interscholastic athletics involving PIAA member schools, I hereby consent to the release to PIAA of any and all portions of school record files, beginning with the seventh grade, of the herein named student specifically including, without limiting the generality of the foregoing, birth and age records, name and residence address of parent(s) or guardian(s), residence address of the student, health records, academic work completed, grades received, and attendance data.

Parent's/Guardian's Signature _____ Date ____/____/____

D. Permission to use name, likeness, and athletic information: I consent to PIAA's use of the herein named student's name, likeness, and athletically related information in reports of Inter-School Practices, Scrimmages, and/or Contests, promotional literature of the Association, and other materials and releases related to interscholastic athletics.

Parent's/Guardian's Signature _____ Date ____/____/____

E. Permission to administer emergency medical care: I consent for an emergency medical care provider to administer any emergency medical care deemed advisable to the welfare of the herein named student while the student is practicing for or participating in Inter-School Practices, Scrimmages, and/or Contests. Further, this authorization permits, if reasonable efforts to contact me have been unsuccessful, physicians to hospitalize, secure appropriate consultation, to order injections, anesthesia (local, general, or both) or surgery for the herein named student. I hereby agree to pay for physicians' and/or surgeons' fees, hospital charges, and related expenses for such emergency medical care.

Parent's/Guardian's Signature _____ Date ____/____/____

F. Understanding of risk of concussion and head injury: I hereby acknowledge that I am familiar with the nature and risk of concussion and head injury while participating in interscholastic athletics, including the risks associated with continuing to compete after a concussion or head injury. Information relevant to concussion in high school sports is available on the PIAA Web site at www.piaa.org/piaa-for-sports-med.

Parent's/Guardian's Signature _____ Date ____/____/____

SECTION 3: HEALTH HISTORY

Explain "Yes" answers at the bottom of this form. Circle questions you don't know the answers to.

<p>1. Has a doctor ever denied or restricted your participation in sport(s) for any reason? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Do you have an ongoing medical condition (like asthma or diabetes)? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>3. Are you currently taking any prescription or nonprescription (over-the-counter) medicines or pills? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>4. Do you have allergies to medicines, pollens, foods, or stinging insects? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>5. Have you ever passed out or nearly passed out DURING exercise? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>6. Have you ever passed out or nearly passed out AFTER exercise? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>7. Have you ever had discomfort, pain, or pressure in your chest during exercise? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>8. Does your heart race or skip beats during exercise? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>9. Has a doctor ever told you that you have (check all that apply): <input type="checkbox"/> High blood pressure <input type="checkbox"/> Heart murmur <input type="checkbox"/> High cholesterol <input type="checkbox"/> Heart infection</p> <p>10. Has a doctor ever ordered a test for your heart? (for example ECG, echocardiogram) <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>11. Has anyone in your family died for no apparent reason? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>12. Does anyone in your family have a heart problem? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>13. Has any family member or relative been disabled from heart disease or died of heart problems or sudden death before age 50? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>14. Does anyone in your family have Marfan syndrome? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>15. Have you ever spent the night in a hospital? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>16. Have you ever had surgery? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <div style="border: 1px solid black; padding: 5px;"> <p>17. Have you ever had an injury, like a sprain, muscle, or ligament tear, or tendonitis, which caused you to miss a Practice or Contest? If yes, circle affected area below: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>18. Have you had any broken or fractured bones or dislocated joints? If yes, circle below: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>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: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> </div> <table border="0" style="width: 100%; font-size: small;"> <tr> <td>Head</td><td>Neck</td><td>Shoulder</td><td>Upper arm</td><td>Elbow</td><td>Forearm</td><td>Hand/ Fingers</td><td>Chest</td></tr> <tr> <td>Upper back</td><td>Lower back</td><td>Hip</td><td>Thigh</td><td>Knee</td><td>Calf/shin</td><td>Ankle</td><td>Foot/ Toes</td></tr> </table> <p>20. Have you ever had a stress fracture? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>21. Have you been told that you have or have you had an x-ray for atlantoaxial (neck) instability? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>22. Do you regularly use a brace or assistive device? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	Head	Neck	Shoulder	Upper arm	Elbow	Forearm	Hand/ Fingers	Chest	Upper back	Lower back	Hip	Thigh	Knee	Calf/shin	Ankle	Foot/ Toes	<p>23. Has a doctor ever told you that you have asthma or allergies? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>24. Do you cough, wheeze, or have difficulty breathing DURING or AFTER exercise? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>25. Is there anyone in your family who has asthma? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>26. Have you ever used an inhaler or taken asthma medicine? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>27. Were you born without or are you missing a kidney, an eye, a testicle, or any other organ? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>28. Have you had infectious mononucleosis (mono) within the last month? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>29. Do you have any rashes, pressure sores, or other skin problems? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>30. Have you ever had a herpes skin infection? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <div style="border: 1px solid black; padding: 5px;"> <p>CONCUSSION OR HEAD INJURY</p> <p>31. Have you ever had a concussion (i.e. bell rung, ding, head rush) or head injury? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>32. Have you been hit in the head and been confused or lost your memory? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>33. Do you experience dizziness and/or headaches with exercise? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> </div> <p>34. Have you ever had a seizure? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>35. Have you ever had numbness, tingling, or weakness in your arms or legs after being hit or falling? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>36. Have you ever been unable to move your arms or legs after being hit or falling? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>37. When exercising in the heat, do you have severe muscle cramps or become ill? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>38. Has a doctor told you that you or someone in your family has sickle cell trait or sickle cell disease? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>39. Have you had any problems with your eyes or vision? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>40. Do you wear glasses or contact lenses? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>41. Do you wear protective eyewear, such as goggles or a face shield? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>42. Are you unhappy with your weight? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>43. Are you trying to gain or lose weight? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>44. Has anyone recommended you change your weight or eating habits? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>45. Do you limit or carefully control what you eat? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>46. Do you have any concerns that you would like to discuss with a doctor? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>FEMALES ONLY</p> <p>47. Have you ever had a menstrual period? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>48. How old were you when you had your first menstrual period? _____</p> <p>49. How many periods have you had in the last 12 months? _____</p> <p>50. Are you pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
Head	Neck	Shoulder	Upper arm	Elbow	Forearm	Hand/ Fingers	Chest										
Upper back	Lower back	Hip	Thigh	Knee	Calf/shin	Ankle	Foot/ Toes										

#’s	Explain "Yes" answers here:

I hereby certify that to the best of my knowledge all of the information herein is true and complete.

Student's Signature _____ Date ____/____/____

I hereby certify that to the best of my knowledge all of the information herein is true and complete.

Parent's/Guardian's Signature _____ Date ____/____/____

SECTION 4: PIAA COMPREHENSIVE INITIAL PRE-PARTICIPATION PHYSICAL EVALUATION AND CERTIFICATION OF AUTHORIZED MEDICAL EXAMINER

Must be completed and signed by the Authorized Medical Examiner (AME) performing the herein named student's comprehensive initial pre-participation physical evaluation (CIPPE) and turned in to the Principal, or the Principal's designee, of the student's school.

Student's Name _____ Age _____ Grade _____

Enrolled in _____ School Sport(s) _____

Height _____ Weight _____ % Body Fat (optional) _____ Brachial Artery BP _____ / _____ (_____ / _____ , _____ / _____) RP _____

If either the brachial artery blood pressure (BP) or resting pulse (RP) is above the following levels, further evaluation by the student's primary care physician is recommended.

Age 10-12: BP: >126/82, RP: >104; **Age 13-15:** BP: >136/86, RP >100; **Age 16-25:** BP: >142/92, RP >96.

Vision: R 20/ _____ L 20/ _____ Corrected: YES NO (circle one) Pupils: Equal _____ Unequal _____

MEDICAL	NORMAL	ABNORMAL FINDINGS
Appearance		
Eyes/Ears/Nose/Throat		
Hearing		
Lymph Nodes		
Cardiovascular		<input type="checkbox"/> Heart murmur <input type="checkbox"/> Femoral pulses to exclude aortic coarctation <input type="checkbox"/> Physical stigmata of Marfan syndrome
Cardiopulmonary		
Lungs		
Abdomen		
Genitourinary (males only)		
Neurological		
Skin		
MUSCULOSKELETAL	NORMAL	ABNORMAL FINDINGS
Neck		
Back		
Shoulder/Arm		
Elbow/Forearm		
Wrist/Hand/Fingers		
Hip/Thigh		
Knee		
Leg/Ankle		
Foot/Toes		

I hereby certify that I have reviewed the HEALTH HISTORY, performed a comprehensive initial pre-participation physical evaluation of the herein named student, and, on the basis of such evaluation and the student's HEALTH HISTORY, certify that, except as specified below, the student is physically fit to participate in Practices, Inter-School Practices, Scrimmages, and/or Contests in the sport(s) consented to by the student's parent/guardian in Section 2 of the PIAA Comprehensive Initial Pre-Participation Physical Evaluation form:

CLEARED **CLEARED**, with recommendation(s) for further evaluation or treatment for: _____

NOT CLEARED for the following types of sports (please check those that apply):

COLLISION CONTACT NON-CONTACT STRENUOUS MODERATELY STRENUOUS NON-STRENUOUS

Due to _____

Recommendation(s)/Referral(s) _____

AME's Name (print/type) _____ License # _____

Address _____ Phone () _____

AME's Signature _____ MD, DO, PAC, CRNP, or SNP (circle one) Date of CIPPE ____/____/____

SECTION 5: RE-CERTIFICATION BY PARENT/GUARDIAN

This form must be completed not earlier than six weeks prior to the first Practice day of the sport(s) in the sports season(s) identified herein by the parent/guardian of any student who is seeking to participate in Practices, Inter-School Practices, Scrimmages, and/or Contests in all subsequent sport seasons in the same school year. The Principal, or the Principal's designee, of the herein named student's school must review the SUPPLEMENTAL HEALTH HISTORY.

If any SUPPLEMENTAL HEALTH HISTORY questions are either checked yes or circled, the herein named student shall submit a completed Section 6, Re-Certification by Licensed Physician of Medicine or Osteopathic Medicine, to the Principal, or Principal's designee, of the student's school.

SUPPLEMENTAL HEALTH HISTORY

Student's Name _____ Male/Female (circle one)

Date of Student's Birth: ____/____/____ Age of Student on Last Birthday: ____ Grade for Current School Year: ____

Winter Sport(s): _____ Spring Sport(s): _____

CHANGES TO PERSONAL INFORMATION (In the spaces below, identify any changes to the Personal Information set forth in the original Section 1: PERSONAL AND EMERGENCY INFORMATION):

Current Home Address _____

Current Home Telephone # () _____ Parent/Guardian Current Cellular Phone # () _____

CHANGES TO EMERGENCY INFORMATION (In the spaces below, identify any changes to the Emergency Information set forth in the original Section 1: PERSONAL AND EMERGENCY INFORMATION):

Parent's/Guardian's Name _____ Relationship _____

Address _____ Emergency Contact Telephone # () _____

Secondary Emergency Contact Person's Name _____ Relationship _____

Address _____ Emergency Contact Telephone # () _____

Medical Insurance Carrier _____ Policy Number _____

Address _____ Telephone # () _____

Family Physician's Name _____, MD or DO (circle one)

Address _____ Telephone # () _____

SUPPLEMENTAL HEALTH HISTORY:

Explain "Yes" answers at the bottom of this form. Circle questions you don't know the answers to.

- | | Yes | No | | Yes | No |
|--|--------------------------|--------------------------|--|--------------------------|--------------------------|
| 1. Since completion of the CIPPE, have you sustained an illness and/or injury that required medical treatment from a licensed physician of medicine or osteopathic medicine? | <input type="checkbox"/> | <input type="checkbox"/> | 4. Since completion of the CIPPE, have you experienced any episodes of unexplained shortness of breath, wheezing, and/or chest pain? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Since completion of the CIPPE, have you had a concussion (i.e. bell rung, ding, head rush) or head injury? | <input type="checkbox"/> | <input type="checkbox"/> | 5. Since completion of the CIPPE, are you taking any NEW prescription or non-prescription (over-the-counter) medicines or pills? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Since completion of the CIPPE, have you experienced dizzy spells, blackouts, and/or unconsciousness? | <input type="checkbox"/> | <input type="checkbox"/> | 6. Do you have any concerns that you would like to discuss with a physician? | <input type="checkbox"/> | <input type="checkbox"/> |

#'s	Explain "Yes" answers here:

I hereby certify that to the best of my knowledge all of the information herein is true and complete.

Student's Signature _____ Date ____/____/____

I hereby certify that to the best of my knowledge all of the information herein is true and complete.

Parent's/Guardian's Signature _____ Date ____/____/____

Section 6: CERTIFICATION BY LICENSED PHYSICIAN OF MEDICINE OR OSTEOPATHIC MEDICINE

This Form must be completed for any student who, subsequent to completion of Sections 1 through 4 of this CIPPE Form, required medical treatment from a licensed physician of medicine or osteopathic medicine. This Section 6 may be completed at any time following completion of such medical treatment. Upon completion, the Form must be turned in to the Principal, or the Principal's designee, of the student's school.

NOTE: The physician completing this Form must first review Sections 3 and 4 of the herein named student's previously completed CIPPE Form. Section 5 must also be reviewed if both 1) this Form is being used by the herein named student to participate in Practices, Inter-School Practices, Scrimmages, and/or Contests in a subsequent sport season in the same school year AND 2) the herein named student either checked yes or circled any Supplemental Health History questions in Section 5.

If the physician completing this Form is clearing the herein named student subsequent to that student sustaining a concussion or head injury, that physician must be sufficiently familiar with current concussion management such that the physician can certify that all aspects of evaluation, treatment, and risk of that injury have been thoroughly covered by that physician.

Student's Name: _____ Age _____ Grade _____

Enrolled in _____ School

Condition(s) Treated Since Completion of the Herein Named Student's CIPPE Form: _____

A. GENERAL CLEARANCE: Absent any illness and/or injury, which requires medical treatment, subsequent to the date set forth below, I hereby authorize the above-identified student to participate for the remainder of the current school year in additional interscholastic athletics with no restrictions, except those, if any, set forth in Section 4 of that student's CIPPE Form.

Physician's Name (print/type) _____ License # _____

Address _____ Phone () _____

Physician's Signature _____ MD or DO (circle one) Date _____

B. LIMITED CLEARANCE: Absent any illness and/or injury, which requires medical treatment, subsequent to the date set forth below, I hereby authorize the above-identified student to participate for the remainder of the current school year in additional interscholastic athletics with, in addition to the restrictions, if any, set forth in Section 4 of that student's CIPPE Form, the following limitations/restrictions:

1. _____
2. _____
3. _____
4. _____

Physician's Name (print/type) _____ License # _____

Address _____ Phone () _____

Physician's Signature _____ MD or DO (circle one) Date _____

Section 7: CIPPE MINIMUM WRESTLING WEIGHT

INSTRUCTIONS

Pursuant to the Weight Control Program adopted by PIAA, prior to the participation by any student in interscholastic wrestling, the Minimum Wrestling Weight (MWW) at which the student may wrestle during the season must be 1) certified to by an Authorized Medical Examiner (AME) and 2) established NO EARLIER THAN six weeks prior to the first Regular Season Contest day of the wrestling season and NO LATER THAN the Monday preceding the first Regular Season Contest day of the wrestling season (See NOTE 1). This certification shall be provided to and maintained by the student's Principal, or the Principal's designee.

In certifying to the MWW, the AME shall first make a determination of the student's Urine Specific Gravity/Body Weight and Percentage of Body Fat, or shall be given that information from a person authorized to make such an assessment ("the Assessor"). This determination shall be made consistent with National Federation of State High School Associations (NFHS) Wrestling Rule 1, Competition, Section 3, Weight-Control Program, which requires, in relevant part, hydration testing with a specific gravity not greater than 1.025, and an immediately following body fat assessment, as determined by the National Wrestling Coaches Association (NWCA) Optimal Performance Calculator (OPC) (together, the "Initial Assessment").

Where the Initial Assessment establishes a percentage of body fat below 7% for a male or 12% for a female, the student must obtain an AME's consent to participate.

For all wrestlers, the MWW must be certified to by an AME.

Student's Name _____ Age _____ Grade _____
Enrolled in _____ School _____

INITIAL ASSESSMENT

I hereby certify that I have conducted an Initial Assessment of the herein named student consistent with the NWCA OPC, and have determined as follows:

Urine Specific Gravity/Body Weight _____ / _____ Percentage of Body Fat _____ MWW _____

Assessor's Name (print/type) _____ Assessor's I.D. # _____

Assessor's Signature _____ Date ____ / ____ / ____

CERTIFICATION

Consistent with the instructions set forth above and the Initial Assessment, I have determined that the herein named student is certified to wrestle at the MWW of _____ during the 20____ - 20____ wrestling season.

AME's Name (print/type) _____ License # _____

Address _____ Phone () _____

AME's Signature _____ MD, DO, PAC, CRNP, or SNP Date of Certification ____ / ____ / ____
(circle one)

For an appeal of the Initial Assessment, see NOTE 2.

NOTES:

1. For senior high school wrestlers coming out for the Team AFTER the Monday preceding the first Regular Season Contest day of the wrestling season the OPC will remain open until January 15th and for junior high/middle school wrestlers coming out for the Team AFTER the Monday preceding the first Regular Season Contest day of the wrestling season the OPC will remain open all season.
2. Any athlete who disagrees with the Initial Assessment may appeal the assessment results one time by having a second assessment, which shall be performed prior to the athlete's first Regular Season wrestling Contest and shall be consistent with the athlete's weight loss (descent) plan. Pursuant to the foregoing, results obtained at the second assessment shall supersede the Initial Assessment; therefore, no further appeal by any party shall be permitted. The second assessment shall utilize either Air Displacement Plethysmography (Bod Pod) or Hydrostatic Weighing testing to determine body fat percentage. The urine specific gravity testing shall be conducted and the athlete must obtain a result of less than or equal to 1.025 in order for the second assessment to proceed. All costs incurred in the second assessment shall be the responsibility of those appealing the Initial Assessment.

