

# MINIMIZING THE RISK OF INJURY IN HIGH SCHOOL ATHLETICS

Guidelines from the  
*National Athletic Trainers' Association*



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# Minimizing the Risk of Injury in High School Athletics

Guidelines from the National Athletic Trainers' Association

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## Introduction

Athletics are an important part of the high school experience for many students. Sports can provide a positive learning environment that will help student-athletes in many aspects of their lives. And like pep rallies, Friday night football and cross-town rivalries – injuries are an inevitable part of high school athletics regardless of the preventive measures taken. Students can, however, reduce their risk of injury by following several basic steps. One of the most important is proper overall conditioning, which can also enhance rehabilitation and shorten the “down time” of athletes.

The following guidelines have been developed based on interviews with a number of certified athletic trainers around the country. This listing is not all-inclusive, but is designed to provide guidance.

In addition to these general guidelines, the National Athletic Trainers' Association encourages all athletes to develop the specific skills involved in their sport and to be aware of the rules governing their athletic endeavors.

It is essential to remember that medical, legal, financial and professional standards, limitations and requirements change continually and vary from place to place, person to person and setting to setting. These guidelines must not, therefore, be taken to represent uniformly applicable national standards.

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## General Guidelines

- Every student-athlete should receive a pre-participation physical exam, including a general exam and an orthopedic exam. The general exam should include checks on height, weight, blood pressure, pulse, respiration, eye, ear, nose, chest and abdomen. The orthopedic exam should focus on joint flexibility, joint range of motion and a re-examination of past bone and joint injuries.
- Athletes should work with athletic trainers and coaches year-round to ensure they maintain their condition with appropriate exercises and nutrition. In addition, athletes should engage in appropriate conditioning programs for a minimum of six weeks before the start of daily practice.

- Athletes should focus on developing muscular strength and endurance, cardiovascular fitness and flexibility.
- Good nutritional practices incorporate the basic food groups: grains, fruits and vegetables, dairy, and meat/poultry/fish. Athletes' diets should be high in complex carbohydrates while also including essential proteins and fats.
- Athletes practicing or playing in warmer climates should become acclimatized to high levels of activity in hot weather. Practice should be held early in the morning or late in the afternoon.
- Limit workouts and practices to no more than two hours.
- The night before an event, athletes should hydrate with electrolyte fluids to reduce the risk of dehydration.
- Fluid breaks should be offered at least every 45 minutes, and athletes should be entitled to unrestricted amounts of fluids to help prevent dehydration and other forms of heat-related illness.
- All athletes should use appropriate equipment that fits properly. This equipment should be checked before and after each use to ensure that it is in proper working condition, and replaced or repaired immediately if any problems are noted.
- Appropriate protective equipment should be worn in all practices as well as during competitions.
- Shoes should fit appropriately and provide the necessary support for each individual sport.
- Foot diseases, such as athlete's foot, should be treated immediately and fully to avoid more extensive problems.
- Mouth guards should be used in all collision sports, including ice hockey, football and rugby; and recommended for all sports where contact could occur, including basketball, baseball, lacrosse, soccer, etc. Not only do they help to prevent dental injuries, but they can also absorb shocks from blows to the jaw or head and reduce the severity of these blows.
- Players should stretch properly before and after workouts of any kind.
- A minimum 15-minute warm-up period before any game or practice, and an appropriate cool-down period afterward, is recommended. Athletes should also warm up for five minutes during any prolonged breaks in activity (including half time, between periods, etc.).
- Ice should be available on the sidelines of every game and practice to apply to appropriate injuries.
- Injuries involving bones or joints should be examined by a licensed physician.
- All injuries should be evaluated immediately.
- Parents should be aware of who is responsible for injury care at their child's school. Parents should ask if this person is qualified to handle all injuries and provide proper instruction and rehabilitation, as well as whether he or she is available for both practice and games.
- Every school with an athletic program should have a written emergency plan which is reviewed regularly and addresses every level of medical care for injured athletes.

- Every school should be encouraged to develop an Injury Protection Manual, which answers any questions a parent may have about the way an injury is to be handled and who will be primarily responsible. The school should distribute this manual to all athletes' parents.
  - The athletic department should be encouraged to have an Emergency Medical Authorization Card on file for every athlete. This card gives parental permission for emergency medical care if it is required. The card should include name, address, parents' home and work phone numbers, etc.
  - the athletic department should be encouraged to have parents sign a waiver that indicates they are aware of the inherent risk of injury to their children.
  - Coaches should be certified in first aid and CPR and, where possible, earn a state- or nationally-approved certificate to coach specific sports.
  - all individuals involved in the athletes' health and safety – including athletic trainers, coaches, physicians, emergency medical personnel (paramedics and EMTs), school administrators and parents – should be encouraged to maintain cooperative relationships.
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## **Football-Specific Guidelines**

- Intentional spearing of opponents should be discouraged.
  - Blocking below the waist should be minimized during practice.
  - Block and tackle with the head up to reduce the risk of neck injuries.
  - In addition to total strengthening and conditioning, football-specific conditioning exercises should strengthen the neck to allow players to keep their head firmly erect while making contact during blocks and tackles.
  - Make sure the practice and playing areas are safe. Look for holes, broken glass and other hazards on and around the practice field, game field and blocking sleds.
  - Ample fluid replacement should be available at all times.
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## **Basketball-Specific Guidelines**

- Players should focus on conditioning exercises for the total body, including upper and lower extremities.
- Players should focus on good warm-up and stretching prior to any ballistic movements.
- Footwear should fit properly to minimize the risk of ankle- and foot-related injuries.
- Replace footwear when the shock absorption is no longer adequate.

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## Soccer-Specific Guidelines

- Players should be encouraged to wear appropriate shin guards during practice and play.
- Provide fluids on the sidelines throughout practice and games. Although soccer requires non-stop play with no time outs, athletes should be encouraged to come to the sidelines or touch line where they can replenish fluids without penalty.
- Warm up for approximately 15 minutes, beginning for half that time without a ball. Warm-up exercises should include light jogging and stretching. Without these warm-ups, the explosive action of shooting can result in strained muscles.
- Adhere to the rules of the game when tackling.
- Although soccer does not provide time outs, injuries should be evaluated immediately to ensure the athlete is not worsening the injury.

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## Baseball/Softball-Specific Guidelines

- Most injuries in baseball and softball involve the throwing arm and shoulder, but these injuries usually result through a gradual process. Athletes should not abuse the throwing arm by overusing it.
- Players should incorporate conditioning and stretching exercises for the shoulder into their overall program.
- It is to the player's advantage to warm up and cool down the throwing arm properly to minimize the risk of injuries.
- Condition all shoulder muscles, emphasizing muscles in the back of the shoulder that are required to stop the pitching motion. Muscles in the front of the arm are naturally stronger – shoulder injuries can result from weaker muscles in the back.

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## Track and Field-Specific Guidelines

- Stretching is key to minimizing the risk of injury in every event.
- conditioning programs should concentrate on muscular strength, muscular endurance and flexibility. Individual event training should be emphasized.
- All athletes involved in running events should work to maintain year-round cardiovascular endurance.
- Before and after each event, athletes should warm up and cool down, stretch and hydrate with fluids.
- Special attention should be paid to the nutritional needs of the endurance athlete.

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## Wrestling-Specific Guidelines

- Depleting food and fluid to make a particular weight class may be detrimental to the health and safety of the athlete. Body composition and weight loss should be closely monitored.
- Wrestlers should be encouraged to wear protective headgear that provides ear protection.
- Wrestlers should be encouraged to wear protective knee pads.
- To reduce the risk of skin diseases, wrestlers should shower before and after workouts; wash their workout clothes daily; dry their skin adequately; clean mats daily; avoid wearing street shoes on wrestling mats or wrestling shoes off the mats; wipe headgear down with alcohol pads after each use; and conduct daily total body skin inspections.
- Wrestlers with open wounds, broken skin or diseases of the skin should be discouraged from participating until the skin is healed or the wrestler has been cleared to participate by a licensed physician. If allowed to wrestle, the athletes should have the affected skin covered to prevent cross-contamination.
- Proper strength and conditioning regimes should be encouraged.

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## Volleyball-Specific Guidelines

- An overall strength base with emphasis on leg, back and posterior shoulder (rotator cuff) strengthening during pre-season is vital.
- Proper equipment should include volleyball-specific shoes and knee pads for shock absorption.
- A proper warm-up and stretching program should emphasize the shoulder, low back and legs. Do not start spiking before warm-up stretching for the shoulder. After stretching, start throwing a volleyball easily, gradually increasing intensity until the muscles are warm.
- Advanced drills and conditioning, such as plyometrics or jump training, should not be conducted unless the athlete has been tested and can demonstrate balance, flexibility and strength.
- Ample fluid replacement should be available at all times.

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Send comments and suggestions to [webmaster@nata.org](mailto:webmaster@nata.org).