

School Safety: Athletics Supervision



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OSHAcademy Course 570 Study Guide

School Safety: Athletics Supervision

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This study guide is designed to be reviewed off-line as a tool for preparation to successfully complete OSHAcademy Course 570.

Read each module, answer the quiz questions, and submit the quiz questions online through the course webpage. You can print the post-quiz response screen which will contain the correct answers to the questions.

The final exam will consist of questions developed from the course content and module quizzes.

We hope you enjoy the course and if you have any questions, feel free to email or call:

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Course Introduction

The numbers of young athletes keep growing at a rapid pace. They can now compete at the grade school level, in recreation departments, and at the high school level. Proper supervision of athletes allows coaches to better understand the individual needs and capabilities of the participants. However, many coaches and administrators overlook the importance of this aspect of their jobs. Such oversight can lead to incidents that result in charges and lawsuits against coaches, schools, and organizations.

Besides supervision, there are many other things coaches need to be aware of before taking the field or court. This course looks at several important topics, including concussions and other health risks, weight room and athletic field safety.

Module 1: Coaching Safety

Concussions

Each day throughout the United States, hundreds of thousands of young athletes head out to playing fields, ice, and gymnasiums to practice and compete in many different sports. Many agree that sports are a great way for kids to stay healthy. However, medical researchers have discovered young athletes, especially kids and teenagers, often don't know their limitations, even if they have a concussion. Therefore, it is the coaches' responsibility to help recognize and make the call to take the athletes off the field or court if they think the player may have a concussion.

Understanding Concussions

A concussion is a type of traumatic brain injury caused by a bump, blow, or jolt to the head. Concussions can also happen if a hard blow to your body causes your head and brain to move rapidly back and forth. This sudden movement can cause the brain to bounce around or twist in the skull, causing stretching and damage to the brain cells and creating chemical changes in the brain.

These chemical changes can make the brain more susceptible and vulnerable to other injuries. During this time, the brain is more sensitive to any increased stress or injury, until it fully recovers.

Since you cannot "see" a concussion, like with a broken limb, CAT scans and MRIs are normal with most concussions.

Potential Consequences of Concussions

Concussions affect people differently. Most athletes with a concussion recover fairly quickly, but some will have symptoms for days or even weeks. A more serious concussion can last for months or longer.

If athletes do not give their brain enough time to recover, it can be dangerous. A second concussion that occurs before the brain completely recovers from the first can slow recovery or increase the chance for long-term problems.

Danger Signs

As a coach, your first job is to be ready to jump in when a player seems "off." Remember, you cannot see a concussion, and there isn't just one indicator of a concussion. Recognizing a concussion requires coaches to watch for different signs and symptoms. As a coach, you need

to make sure and ask others to report if they see any of the following things happen to the athletes:

1. A forceful bump, blow, or jolt to the head or body that results in fast movement of the head.
2. Any concussion signs or symptoms. This could include a change in the athlete’s behavior, thinking, or physical functioning.

Athletes who show or report one or more of the symptoms below, or even just don’t “feel right” after a bump, blow, or jolt to the head or body, may have a concussion.

| SIGNS OBSERVED BY COACHING STAFF | SYMPTOMS REPORTED BY ATHLETES |
|---|--|
| Appears dazed or stunned | Headache or “pressure” in head |
| Confused about assignment/position | Nausea or vomiting |
| Forgets an instruction | Balance problems or dizziness |
| Unsure of game, score, or opponent | Double or blurry visions |
| Answers questions slowly | Sensitivity to noise |
| Shows mood, behavior, or personality changes | Concentration or memory problems |
| Can’t recall event prior or after hit or fall | Feeling sluggish, hazy, foggy, or groggy |

Signs and symptoms of a concussion mostly show up soon after the injury. However, you may not see the full effect of the injury for possibly hours or even days. For example, an athlete may only seem confused or dazed immediately afterwards, but an hour or so later they may not even remember the event.

You must assess the player and make sure someone supervises him or her for least two hours after you suspect a concussion.

Medical Emergency

If the signs or symptoms get worse, you should consider it a medical emergency. In uncommon cases, a dangerous blood clot may form on the brain in an athlete who has suffered a concussion. This blood clot can then squeeze the brain against the skull. Call emergency medical providers or take the athlete to the emergency department right away if after a bump, blow, or jolt to the head or body, he or she exhibits one or more of the following danger signs:

-) one pupil larger than the other
-) drowsiness or inability to wake up
-) a headache that does not go away or gets worse
-) weakness, numbness, or decreased coordination
-) repeated vomiting or nausea
-) slurred speech
-) convulsions or seizures
-) inability to recognize people or places
-) increasing confusion, restlessness, or agitation
-) unusual behavior
-) loss of consciousness

Watch this [informative video](#) about the types of concussions and when to visit the emergency room with concussion symptoms.

Suspecting a Concussion

Pulling someone from a game or practice can be tough, but if you suspect a concussion, it is necessary to keep them safe. Here are some steps to follow:

Remove the athlete from play. If an athlete has experienced a bump or blow to the head or body, you must look for signs and symptoms of a concussion. When in doubt, you should sit them out.

Make sure the athlete sees a health care professional who is experienced in evaluating for a concussion. Do not try and judge the severity of the injury on your own.

Inform the parents or guardians of the incident. Give them the Centers for Disease Control [fact sheet](#) on concussions for parents. This fact sheet can help parents monitor for signs or symptoms that appear to worsen once the athlete is at home or returns to school.

Keep the athlete out of the play the day of the injury. Wait until an experienced health care professional says it is okay for the athlete to return.

Returning to Play

Concussions affect each person differently. Most athletes with a concussion recover quickly; however, some will have symptoms that last for days and possibly weeks. A more serious concussion can last for months or even longer.

The return to sports should be gradual. Athletes should only return under the supervision of a knowledgeable health care professional.

A licensed health care professional should monitor both the physical and cognitive activities—such as concentration and learning—until they give you and your athlete the green light.

Hidden Threats for Student Athletes

There are several other hidden threats for student athletes, besides concussions. One [study](#) says a young athlete dies from a cardiac incident once every three days in the United States. Moreover, in hot months, heat stroke often causes the death of a young athlete every other day on average.

Heat Stroke

One of the most preventable and treatable causes of death among student athletes is heat stroke, which is often brought on by intense activity in extreme temperatures. Researchers at the University of North Carolina found 31 high school football players died of heat stroke complications between 1995 and 2009. In 2011, six high school players died.

Here are some common signs of heat stroke:

-) confusion
-) irrational behavior
-) collapsing

To avoid heat stroke, take the following precautions:

-) Slowly get acclimated to the heat. Start with shorter workouts and then gradually increase the intensity and duration of the workouts.
-) Be fit. In other words, get in shape before pushing even harder in extreme heat.
-) Hydrate before, during and after workouts.
-) Rest in the shade.
-) Use cold wet towels or mist.

Sudden Cardiac Arrest

Sometimes sudden cardiac arrest happens in seemingly healthy athletes. In these cases, it often means the athlete has an undiagnosed condition, such as an enlarged heart or [cardiomyopathy](#).

Many health professionals suggest athletic teenagers and young adults be screened for potential heart problems. The American Heart Association recommends a 12-point screen test that looks at family and personal history, as well as a physical exam. If a health professional finds those problems sooner than later, it may help prevent catastrophic cardiac events.

Module 1 Quiz

Use this quiz to self-check your understanding of the module content. You can also go online and take this quiz within the module. The online quiz provides the correct answer once submitted.

1. _____ and _____ are normal with most concussions.
 - a. Rest, x-rays
 - b. CAT scans, MRIs
 - c. Surgery, bedrest
 - d. Cat scans, x-rays

2. What could happen if a second concussion happens before recovery?
 - a. Long-term problems
 - b. Death
 - c. Slow recovery process
 - d. Both A and C are correct

3. According to one study, a young athlete dies from cardiac incident once every _____ in the United States.
 - a. 5
 - b. 7
 - c. 3
 - d. 14

4. Which of the following is a common sign of heat stroke?
 - a. Confusion
 - b. Death
 - c. Headache
 - d. Rational behavior

5. When should you visit an emergency room with a concussion?

- a. One pupil is larger than the other
- b. A headache that started, but went away
- c. Slurred speech
- d. Both A and C are correct

Module 2: Weight Room Safety

The school weight room can be a popular place for both athletes and general students to stay in shape. Safety is just one of the most important considerations for operating a weight training facility.

An important aspect of a successful weight training program is proper use and care of equipment. The health and welfare of the athlete are at stake. There are also legal liabilities of those who operate the facility. This module will take a closer look at some important guidelines for anyone who handles the facility.

Scenario

Two football players were working out at a local fitness center where they were both members. They were both experienced weightlifters and had performed the lifts using the same weights numerous times before. One was using 50 pound dumbbells while the other was stretching on the ground. After he was done with his set, he dropped them to the ground.

His friend's hand happened to be right below the dumbbells, and one of them landed on his left hand severing his left ring finger instantly. The football player who lost his finger was rushed to the emergency room, but doctors were unable to re-attach his severed finger due to the amount of trauma to the area. The young man brought suit against the fitness center for negligence and failure to supervise properly. He is seeking more than \$200,000 in damages.

Weight Room Injuries

Injuries from weightlifting, such as the one in the scenario above, have increased at a steady pace in recent years. The major causes of injury from free weights come from the following:

-) strains
-) lifting too much
-) improper lifting techniques
-) incorrectly secured weights
-) dropping, hitting, or pinching yourself or another individual with weights

From 1990 to 2007, there were more than 970,000 weight training-related injuries throughout the United States. Youths between the ages of 13 to 24 experienced 47% of the injuries.

Storing Weights

Weight room supervisors must know how to properly use and store weights. This is critical to prevent injuries. Here are some important things to remember:

1. Make sure weight plates, bars, and dumbbells are placed securely on racks.
2. Examine weight locks. If they have become worn, they may slide off and cause weights to fall.
3. Require weights to be re-racked after every use. Make sure supervisors check for and pick up weights off the floor.
4. Return all equipment, as well as mats, dumbbells, bars, plates, weight belts, and collars to its designated place.
5. Make sure all weight stack machines have pins in place, and they are in good condition.
6. Require all supervisors and athletes to wear proper footwear. No flip flops or sandals.

Maintenance Concerns

Keeping the equipment safe is necessary to prevent injuries among students. Here are a few things to keep in mind during inspections:

Inspect all of your weight room equipment for broken or malfunctioning parts. Cables, clamps, pulleys, bearings, weight plates, swivels, bars, and benches should be thoroughly reviewed during a periodic inspection. Inspections should happen more frequently if the weight room is used all the time.

Maintain written records of inspections, broken equipment, and repairs. The form should include both the inspector and the date and time of the inspection.

Clean and disinfect all equipment padding and fabric on a regular basis. There have been many cases of ringworm and other skin diseases transmitted by weight equipment padding that is either in poor condition or isn't cleaned regularly.

Lubricate all moving equipment joints regularly.

On a quarterly basis, inspect and retighten all bolted frames. If the frames are removed for some reason, check all joints for stability before allowing the equipment to be used.

Cover the weight room floor with shock absorption mats. This will prevent damage to flooring from free weights banging the floor.

Instruction Concerns

For the safety of weight room users and supervisors, it is necessary to post clear, concise, and accurate rules and regulations and always provide students with a written instruction sheet for each lift. Visual reminders, like wall charts, help reinforce proper lifting techniques. If proper training hasn't happened, don't let anyone try their maximum weight lift or lift more weight than they can safely handle.

If the weight room supervisor or instructor does not have previous weight training background, schools should consider providing this training to keep lifters safe.

Supervision Concerns

As we've mentioned, there are specific safety concerns to be aware of in the weight room. Here are a few supervisor concerns to be aware of:

-) No student should be left alone in the weight room without supervision.
-) Students should not be given a key to the weight room if a qualified instructor isn't available.
-) Instructors and supervisors should not be lifting weights when they are on duty.
-) Do not allow too many lifters in the weight room at any one time. There are inherent dangers of free weights and machines; therefore, your school should determine the maximum number of lifters at one time.
-) Consider having participants sign a waiver to provide liability protection to the school district. It is important, however, to understand that the waivers don't hold up in the court of law. They are just used to indicate the individual involved in the activity understands the risks that are inherent to the activity.

Module 2 Quiz

Use this quiz to self-check your understanding of the module content. You can also go online and take this quiz within the module. The online quiz provides the correct answer once submitted.

- 1. From 1990 to 2007, youths accounted for _____ of injuries in a weight room.**
 - a. 35%
 - b. 47%
 - c. 15%
 - d. 55%

- 2. On a _____ basis, inspect and retighten all frames.**
 - a. quarterly
 - b. annually
 - c. weekly
 - d. daily

- 3. When should weights be re-racked?**
 - a. At the end of the day
 - b. At the end of the workout
 - c. After every use
 - d. In between sets

- 4. When is a good time to workout alone, without supervision?**
 - a. Never
 - b. Only if you have to
 - c. Always
 - d. Rarely

5. Which of the following is a major cause of injury from free weights?

- a. Incorrectly secured weights
- b. Using a spotter
- c. Improper lifting techniques
- d. Both A and C are correct

Module 3: Athletic Event Safety

There have been a significant number of violent incidents at school athletic events throughout the nation in recent years. These events include assaults, riots, fighting, shootings, and stabbing incidents.

Experts say the success of school athletic event security can be linked to strategies associated with the following categories:

-)] adequate staffing and supervision
-)] planning of security strategies
-)] thoughtful emergency preparedness planning

Safety Risks

Most school athletic events do not pose a large security threat, especially at the middle school level. They attract smaller crowds of spectators and involve less emotional rivalries. On the other hand, large high school football and basketball games can draw much larger crowds, be highly competitive, and require high levels of security. There may also be a lower level of adult supervision, mobility, and visibility. This causes some serious safety concerns at the high school level.

Security Strategies

Advanced planning for athletic events is very important, including more funding. For example, hiring off-duty police officers, paying overtime to school security personnel, installing surveillance cameras, and other measures cost money. There are some practical strategies school personnel can do to increase security. Here are a few ideas:

-)] Provide adequate adult supervision and staffing. Take a look at the anticipated crowd size, history of events at the facility, and other related considerations.
-)] Events with larger crowds should hire sworn law enforcement officers. However, school districts with their own school police should be given priority in security guards, since they tend to know the students who may be attending the event.
-)] Deploy police, security personnel, and school staff to provide adequate coverage to the event. For example, place them at ticket booths, entrance and exit points, parking lots, and common areas, such as restrooms and concession stands.

-) Maintain separate locker rooms for home and visiting teams. Also, have team buses pick-up and drop-off at opposite sides of the playing facility.
-) Create a detailed plan for parking lots, which includes traffic flow and parking lot staffing needs. Tells students in advance to coordinate pick-ups outside of the parking lots on the perimeter of the grounds.
-) Establish a code of sportsmanlike conduct and teach players, coaches, cheerleaders, band members, students, and parents the expectations before the game.

Emergency Preparedness

Emergency preparedness planning is essential because incidents can occur, even with the best laid-out security plans. Here are some helpful tips to be prepared:

-) Establish written emergency guidelines. Test and exercise the plan to make sure they work in a crisis.
-) Administrators and safety personnel from both schools who are involved in an event should coordinate information in advance. They should review security procedures and written emergency guidelines.
-) School administrators and safety personnel should coordinate with emergency medical personnel in advance of the event. For example, during large events, some schools will have an ambulance on stand-by on-site before, during, and after a game.
-) Evacuation plans should be clear, and staff members who have roles and responsibilities in an event of an emergency should be trained.
-) Have detailed plans on how to manage the “post-crisis” aftermath in the hours and days following an incident or event.

For more helpful information regarding developing a school crisis plan, see [OSHAcademy course 575 School Safety: Crisis Planning](#).

Requiring photo ID could be key to safer environments for fans at high school sports events. Take a look at this [article](#) from USA Today.

Bleacher Safety

Many athletic fields have bleachers, and they can pose serious safety risks if they are not properly taken care of. The United States Consumer Product Safety Commission (CPSC) says there were an estimated 19,200 bleacher-related injuries requiring emergency care in 1998. Of those injuries:

-) 58% involved falls.
-) 23% involved a fall from bleachers.
-) 35% resulted from a fall into or on the bleachers.

Bleacher Hazards

Millions of spectators watch sporting events from many types of bleachers each year. School administrators need to be aware of the following hazards:

1. **Large Gaps:** Gaps of more than four inches between seatboards and footboards are considered unsafe. That is because small children can slip through them. The CPSC suggests using rigid materials to close the opening between these surfaces.
2. **Unsafe Guardrails:** If guardrails do not properly prevent falls, they need to be replaced. Also, guardrails are often fun climbing targets for children. If the bleacher guardrails are so tall that a child can pass under it, it is not safe.
 -) Guardrails should be used on any bleacher where the top row is 30 or more inches off the ground.
 -) The top surface of the guardrails should be no less than 42 inches from the highest point of the bleachers.
 -) Nowhere in the guardrails should a four-inch diameter sphere be able to pass through.
 -) Guardrails should discourage climbing in one of three ways:
 - o Only use vertical fill-ins between the top and bottom rails.

- If there are openings in the fill-ins that could provide a foothold for climbing, the widest measurement of the opening should be limited to 1.75 inches. Opening patterns that provide a ladder effect should be avoided.
 - Use solid surfaces to fill in spaces, but only use this if the visibility would not be significantly impaired.
- 3. Structural Problems:** Older bleachers not maintained correctly or have aged due to weather, overuse, or misuse may become structurally unsafe. Bleachers should be strong enough to handle a maximum load and be mechanically operational.
 - 4. Entrance & Exit:** Spectators must be able to enter and leave the bleachers in a safe manner. Aisles and walkways should have non-skid surfaces and be wide enough for spectators to reach exits in an emergency.

The area underneath the bleachers can be dangerous as well. For this reason, it is important to block off completely the space underneath them. If your facility has larger rows of outdoor bleachers that cannot be closed off completely, you may want to consider having someone supervise the area to keep kids away.

Action Plan

You need to inspect the bleachers on a regular basis. The CSPC guidelines recommend you inspect bleachers no less than four times a year. Take a closer look at the amount and type of use the bleachers experience before creating an exact inspection schedule. Along with the regular inspections, each school should hire an engineer to conduct a full structural inspection at least once a year.

During an inspection, you should identify any structural damage or issues that could make them unsafe. It often works well to create a checklist for inspections and then carry it out in a systematic manner.

Lightning Safety Precautions

Lightning storms can cause severe safety for both spectators and athletes. If you hear thunder, experts say, begin preparation for evacuation.

Before any practice or event, a specific person should be in charge of checking the weather forecast. Be aware of whether or not the National Weather Service has issued a thunderstorm warning or watch.

If you see lightning, you should consider suspending activities and heading for a designated safe location. At a minimum, by the time the “flash to bang” is 30 seconds, all individuals should have left the athletic site and reached a safe location. A safe location includes fully enclosed, substantial buildings or a vehicle with a metal roof and closed windows.

Personnel should not return to the practice or game area until at least 30 minutes have passed since the lightning flash or the sound of thunder. Each time someone sees lightning or hears thunder, you must reset the timer.

Module 3 Quiz

Use this quiz to self-check your understanding of the module content. You can also go online and take this quiz within the module. The online quiz provides the correct answer once submitted.

1. Where should you place security personnel at an athletic event?

- a. Parking lots
- b. Ticket booths
- c. Bathrooms
- d. Both A and B are correct

2. What percentage of injuries occurred when someone fell from the bleachers?

- a. 50%
- b. 33%
- c. 23%
- d. 12%

3. If there are openings in the bleacher fill-ins should be limited to _____.

- a. 1.75 inches
- b. 2.15 inches
- c. 1.50 inches
- d. 3.25 inches

4. Gaps of more than _____ inches between bleacher seatboards and footboards are considered unsafe.

- a. 5
- b. 2
- c. 4
- d. 1

5. During a lightning storm, by the time the “flash to bang” is _____, all individuals should have left the site and reached a safe location.

- a. 30 seconds
- b. 1 minute
- c. 15 seconds
- d. 45 seconds

Endnotes

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