



The Coach's Guide to
**YOUTH
SOCCER INJURY
MANAGEMENT**



TABLE OF CONTENTS

Preface – How To Use This Guide

Disclaimer

The On-Field Evaluation Method

The On-Field Evaluation – Four Steps To Use For Every Injury
Basic Sideline Management - RICE
Sideline First Aid Kit

Soccer Core Concepts- What Every Soccer Coach Must Know

Abrasions and Lacerations
Ankle and Foot Injuries
Concussion
Contusion (Bruise)
Fractures
Knee Injuries
Sprains
Wrist, Hand, and Finger Injuries

Other Injury Management Topics for Soccer

Blisters
Eye and Nose Injuries
Heat Illness
Hip and Groin Injuries
Insect Bites and Stings
Mouth and Tooth Injuries
Muscle Cramps
Muscle Pulls and Strains
Neck and Back Injuries
Shoulder Injuries

Preface: Why You Need **SIDELINE SPORTS** Doc and How To Use This Guide

Each year, the number of young children and adolescents participating in organized sports activity increases, and unfortunately so do the number of injuries. Most of these injuries are managed with simple treatment and rest, but occasionally there will be a situation needing quick decisions at the time of injury. How does a coach or parent decide whether an injury is mild, serious, or something in between? Will you know how to make this decision on the field, during a game, and possibly with a highly emotional player (and parent) looking on? Some leagues provide basic injury management training to their coaches, but surprisingly, many others have no formal requirements at all for sideline safety training.

Sideline Sports Doc's goal is to teach you how to recognize a mild injury, a moderate injury, or a severe injury. In the medical world this is called "triage", and the severity of the injury allows you to determine whether a young athlete should sit out, or whether he or she might be able to return to play after some simple treatment. Sideline Sports Doc is not going to teach you how to diagnose and provide the final treatment for an injury. Leave that to the professionals, such as a physician or an athletic trainer. In fact, the less you try to act like a trained professional, the safer you will be.

This guide is designed to be a clear, concise, and practical method bringing decades of sideline team physician experience to you. By learning a few basic and universal principles, you will confidently be able to address common injury situations and safely monitor return to play. By following these principles, you will be able to improve player safety, minimize chances of making an injury worse, and positively contribute to your player's enjoyment of the game.

The best way to learn the material is to listen to the mp3 audio and follow along with the text and photos in the pdf. We've designed the content so that you can listen to all the key concepts in about an hour.

The cornerstone of Sideline Sports Doc is our **On-Field Evaluation Method**. The method shows you the **four critical steps you must take each time a player is injured, regardless of the type of injury**. Read this chapter carefully and know the principles very well. You should also be familiar with the term "RICE" and how to use this in an injury situation. Proceed then to the **Core Concepts for Soccer**. These are **key injury topics that each soccer coach absolutely must know**. If you know these management principles you will be able to handle almost all of the injuries you will encounter in youth soccer. Finally, it would be a good idea during the preseason to read through and familiarize yourself with the remaining injury topics.

Wishing you and your players good health and success,

Dev Mishra, M.D.

Founder, Sideline Sports Doc

Clinical Assistant Professor of Orthopedic Surgery,
Stanford University

DISCLAIMER

This Site Does Not Provide Medical Advice

The material contained on this site is for informational purposes only and is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Reliance on any information provided by Sideline Sports Doc, or its employees, affiliates, sponsors, or others appearing on the site at the invitation of Sideline Sports Doc, is solely at your own risk.

Sideline Sports Doc does not recommend or endorse any specific treatments, physicians, procedures, opinions or other information that may be mentioned on the site. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition. Never disregard professional medical advice or delay in seeking it because of something you have read on this site.

If you think you or someone else may have a medical emergency, call your physician, local emergency medical provider, or 911 immediately.

Terms and Conditions, End User License Agreement

Sideline Sports Doc, LLC authorizes you to download and/or print a single copy of the material on the Sideline Sports Doc site solely for your personal, noncommercial use if you include the following copyright notice: "Copyright ©2014, Sideline Sports Doc, LLC. All rights reserved" and other copyright and proprietary rights notices that are contained in the content. Any special rules, terms and conditions for the use of certain software and other items accessible on the Sideline Sports Doc Site may be included elsewhere within the site and are incorporated into these Terms and Conditions by reference.

The information on the site (the "Content") is protected by copyright under United States laws. Title to the Content remains with Sideline Sports Doc, LLC, or its licensors. Any use of the Content not expressly permitted by these Terms and Conditions is a breach of these Terms and Conditions and may violate copyright, trademark, and other laws. Content and features are subject to change or termination without notice in the editorial discretion of Sideline Sports Doc, LLC. All rights not expressly granted herein are reserved to Sideline Sports Doc, LLC, and its licensors.

If you violate any of these Terms and Conditions, your permission to use the Content automatically terminates and you must immediately discontinue using and destroy any copies you have made of any portion of the Content.

Initial Evaluation Of An On-Field Injury: **FOUR STEPS TO USE EVERY TIME**

KEY POINTS:

The key to evaluating any type of on-field injury is to use a consistent approach and to do it calmly and quickly. The same approach should be used for an injury on the practice field or during a championship game. All trained medical professionals will use the same method you are going to learn below, although they might have some personal variations depending on their experience. Your priority is to ensure the safety of the young athlete. You should not try and treat the injury beyond very simple sideline management (see chapter on “RICE”), leave that to a trained professional!

When the referee waves for a member of the coaching staff to come on to the field to evaluate an injured player, what should the coach do? The first step (and probably the most important step), in evaluating an on-field injury is determining whether an injury is:

- **Mild** (remove the player to the sideline; possible return to play that day);
- **Moderate** (remove the player to the sideline; should not return to play that day); or
- **Severe** (player should be evaluated immediately by trained professionals in the local Emergency Department- usually this will mean that you should not move the player to the sideline. Stay with the player on the field and wait until qualified emergency personnel arrive to transport the player.)

This simple method is convenient in determining whether an injured player can return to play or if additional evaluation and treatment is necessary. In each of the sections in this handbook, specific guidelines will help you classify an injury.

In order to determine whether the injury is mild, moderate, or severe, stick with the same approach every time.

Use this four-step sequence:

- **What's the story?**
When a trained physician or athletic trainer evaluates an injured player they will always “take a history”, which means they will listen to the player to determine what happened. Was there contact with the ground, another player? Was it a twisting or other type of injury with no contact involved? The history helps you to know where to look and generally what to expect. Beware of words used by the player such as “pop”, “crack”, or “I felt it tear”. These may indicate a serious injury.
- **What does it look like?**
What do you see when you look at the injured area? Is there any swelling, bleeding, bruising or an obviously broken bone? Immediate swelling or bruising is a sign that you should consider this a severe injury. A visible deformity such as an obviously misshapen limb means a serious injury.



INITIAL EVALUATION OF AN ON-FIELD INJURY: FOUR STEPS TO USE EVERY TIME

- **What does it feel like?**

As you carefully feel the injured area, does the player experience pain or can you feel any swelling?



Pain is sometimes unreliable, as some athletes will complain of little pain even with a severe injury, whereas some young athletes can magnify a minor injury with complaints of severe pain. It is always the safest to assume the pain is real and treat any complaint of severe pain as a severe injury.

- **Can they move on their own?**

Ask the player to move the injured body part (except the neck, refer to special precautions in the Neck and Back Injuries chapter) on his or her own without your assistance. This is an incredibly useful thing in a young athlete and sometimes overlooked. If they can't move the injured area on their own you may provide gentle assistance, but never force the player to move. Inability to move an injured area is generally a sign of a more severe injury. In contrast, immediate full motion with little pain is usually a sign of a mild injury.



It is important to emphasize again that once you've gotten past the "look" and "feel" parts of the evaluation, the player's own movement of the injured area is extremely useful in classifying the injury. Most mild injuries will allow the player to move the area on their own (called "active motion"). If you need to gently assist the movement (called "active assisted motion"), that typically means a more moderate injury. If the player cannot move the area at all on their own and all movement must be supplied by you (called "passive motion"), be cautious as you may be dealing with a severe injury.

A player moved to the sideline should be re-evaluated after several minutes. Some players with mild injuries may recover and be able to return to play the same session. For example, if a player is kicked in his ankle but has no limp or soreness a few minutes later, he may be able to return to play. However, if a player twists an ankle and walks off the field but five minutes later is unable to move the ankle at all, cannot put any weight on it, or has a lot of swelling, the injury is probably more severe.

In an actual on-field injury, especially during a game, you may be dealing with an emotional player, a referee who wants to move the game along, or possibly even an emotional parent. Be consistent. Be calm. Be quick. Remember that at that moment your responsibility is for the health of the injured player.

In the following sections we will give you specific guidelines and recommendations to help you determine whether an injury is mild, moderate, or severe; and whether a player can safely return to play during the game, or whether they should seek additional care from "a qualified medical provider.

Decisions to keep players out of training or a game can sometimes be met with complaints from the player, teammates, or parents. Remember that from the medical standpoint you will never be faulted for being cautious and keeping a player on the sideline if you are unsure. And if you're really unsure, get on your cell phone and call for qualified help. It's better to sit an athlete down for a few days rather than return them to play too soon and then losing them for the season. So, I leave you with an old saying I learned from one of my first teachers in sports medicine:

"When In Doubt, Keep Them Out"

BASIC SIDELINE MANAGEMENT - RICE

KEY POINTS:

- “RICE” stands for Rest, Ice, Compression, Elevation. It’s the basic sideline management for most shoulder, arm, and lower extremity injuries.
- Always keep the young athlete’s health in mind. Do not return the athlete to play if you have any questions about the injury and management. Seek qualified medical assistance when you are in doubt, and hold the player out. Better to sit the player out for a few days than to lose the player for the season.

Remember again that this guide is not meant to turn you into an athletic trainer or team physician; it is here to help you make basic management choices, and to determine whether an injured player can safely return to play or whether he should sit out. Fortunately, most injuries in youth soccer can be handled with simple measures. Throughout this guide, you will see the phrase “RICE”, which represents the steps in providing first aid and basic care to an injured player:

R • Rest

I • Ice

C • Compression

E • Elevation

When you first evaluate the injured player, go through the On-Field Evaluation Steps: ***What’s the story? What does it look like? What does it feel like? Can they move on their own?*** You will occasionally be called on to the field only to find that the player has had a truly minor injury and after a minute or two will be able to continue play. This is especially common in the younger age groups. For any injury that requires the player to come off the field, you can provide basic initial treatment by using “RICE”.



Have the player **Rest** and avoid using the injured part. There are different degrees of rest that are appropriate for different injuries at different stages of recovery. Usually, rest initially means removing the player from the field and evaluating them on the sideline.



Ice not only makes your player comfortable by easing pain, it also reduces swelling and inflammation. Ice should initially be applied for 20 minutes out of each hour. It’s best to have a plastic bag, thin towel or cloth between the ice and skin, try not to apply the ice directly on the skin. Commercially available “instant cold” packs can be carried in your sideline bag. Hold them in place by using an elastic wrap. Continue the intermittent icing for the first 48 hours after the injury. Heat used during this time may increase swelling and should be used cautiously.



Compression helps to keep swelling to a minimum. Apply an elastic wrap snugly but not too tight. If the wrapping is too tight you can limit the blood circulation in the area

past the injured part. Ideally, you should wrap the entire exposed limb from the most distant point to an area above the injury. For example, an ankle injury should be wrapped starting at the toes to several inches above the ankle.



Elevation also helps to minimize swelling by using gravity to remove excess fluid from the injured area. The most effective elevation is with the injured part higher

than the level of the heart. For example, in treating an ankle injury, support the knee and lower leg on a sports bag or backpack while the athlete is lying down to elevate the ankle above the chest.

Look for Red Flags. For experienced professionals, we always look for what are called “red flags”, which means situations that are out of the ordinary and require special care. In each section that follows, we will point out Red Flag situations of which you should be aware.

Possible Return to Play Or Sit Out will be individually determined based on the specific injury, which is covered in each of the following sections. If you are in doubt, hold the player out. The decision to hold a player from play will sometimes be tough, and you may get some complaints from the player, teammates, or parents. But no medical professional will ever fault you for holding a player out of a training session or game if it is done in the best interest of the player. Always keep the young player’s health in mind. It’s better to sit a player out for a few days than to lose that player for the season!

SIDELINE FIRST AID KIT

KEY POINTS:

- Make sure you actually have a first aid kit for all practices and games
- Your cellular phone is an essential item

Every youth soccer coach should have a very basic sideline first aid kit. You should have this at each training session or match. Remember that this is not meant to be used for comprehensive treatment, but only for immediate sideline first aid. The supplies below should get you through almost any minor to moderate situation and are easily obtained from your local drug store.

One of the most essential items is your cellular phone. If you have any doubts about the severity of the medical situation, use your phone to call the local emergency medical personnel for help. If you are with a travel team or often play outside of your local region, it is advisable to enter the emergency phone number of the away location into your cell phone in advance. Local emergency numbers are best since calling 911 may result in a delay.

Keep your supplies in a brightly colored bag (red is a popular color for this) so that you can find it quickly.

Here are the absolute bare minimum supplies:

- Instant cold packs (have several of these!)
- Adhesive bandages of assorted shapes and sizes
- Blister care (see the section on “blister care” in this book for details)
- ACE bandages (3 inch and 4 inch sizes)
- Disposable non-latex gloves (use when you are looking at a cut or abrasion)
- Alcohol based gel hand sanitizer (for your own hands)
- Antibiotic ointment (individual packets or a tube of Bacitracin® works well)
- Sterile gauze bandages



- Sterile gauze roll
- Sterile saline bottle (to gently wash dirt or grass from a cut)
- Saline rinse bottle and Hibiclens® bottle (very effective and not painful to clean an abrasion or cut)
- Athletic tape (1 inch and 2 inch sizes)
- Paramedic scissors
- Hydrogen peroxide- to get blood off a uniform
- Plastic bags to dispose of used gauze, etc.

Here are a few extras that are nice to have:

- Foam underwrap
- Finger splints (popsicle sticks work well)
- CPR instructions and plastic ventilation mask
- Watertight bags to keep items dry

ABRASIONS AND LACERATIONS

KEY POINTS:

- For minor scrapes and cuts: clean the area, put pressure to stop bleeding, cover it, and usually the athlete may return to play in the same game or training session
- Deep cuts, or any bleeding that does not completely stop should be referred immediately to the local emergency room
- Bleeding must be completely stopped and the area covered for return to play

An abrasion is a break in the skin that is usually caused by something scraping the skin surface. These very common injuries are sometimes called a “turf burn” or a “rug burn”. Abrasions can range from very minor injuries that do not bleed at all to those that are deeper and may bleed quite a bit. A laceration (otherwise known as a “cut”) is more of a sharp cutting of the skin. Again, these can range from minor and superficial wounds that require little treatment to cuts that are deep and require stitches

Evaluating the Injury:

What’s the story?

- Typical history of contact against a rough surface or a sharp object

What does it look like?

- A break in the skin, either a scraped area or a sharp cut
- Bleeding

What does it feel like?

- Using disposable gloves lightly push on the area surrounding the abrasion or cut. It should not be painful. If it is painful, consider this a possible serious injury, such as a bone fracture.



Can they move on their own?

- Have the athlete move the injured area to make sure there is no evidence of a more serious injury.

Basic Sideline Injury Management:

- Use disposable gloves when treating any open wound. This also applies to handling bloody dressings (such as gauze or tissues), equipment, or uniforms. Most abrasions can be easily handled by gently rinsing the area with saline solution, or cleaning with Hibiclens® and a gauze pad, and then covering with a non-sticking dressing such as a large Band-Aid®. A larger area such as on the hip may require a larger sterile dressing, and then wrapping the upper leg with a large elastic wrap.
- Superficial lacerations may be handled in the same way. Pressure over the cut may be needed to stop any bleeding. Deeper lacerations require medical evaluation and possibly suturing.
- Medical personnel should evaluate serious lacerations as soon as possible.

Red Flags:

▶ **Methicillin Resistant Staph Aureus (MRSA)**

Staphylococcus aureus, often called “staph” is a type of bacteria commonly found on the skin or in the nose of healthy people. MRSA, which stands for Methicillin-Resistant Staphylococcus Aureus, is staph that is resistant to some commonly used antibiotics. MRSA has emerged in the community and can cause infections in otherwise healthy people. MRSA can be difficult to treat, and can spread from player to player through skin to skin contact of cuts or abrasions that are not healed. When treating a cut or abrasion, you can reduce the risk of any infection by making sure your own hands are clean with a gel hand sanitizer, wear disposable gloves, and follow the Basic Sideline Injury Management principles above.

▶ **HIV/hepatitis virus**

While children and adolescents may be exposed to blood that is contaminated with certain diseases, such as hepatitis and HIV, the risk for passing these diseases on to teammates or others is exceptionally small. Use disposable gloves at all times when handling anything that is bloody.

▶ **Excessive Bleeding**

If there is a deep cut that is bleeding excessively, rinse the area with saline, or gently clean with Hibiclens®, apply several gauze pads, and apply firm pressure with your gloved hand. Have someone call 911 for assistance from emergency personnel.

▶ **Jewelry**

Jewelry, especially pierced jewelry, is a special concern. A piece of jewelry can be risky to other players or teammates by creating a sharp surface that can cause a cut or abrasion on contact. A necklace or jewelry pierced through a body part can be accidentally ripped out, causing a jagged cut in the player wearing the jewelry. No necklaces, earrings, or rings should be worn during training or matches.

Play or Sit Out?

For minor abrasions and lacerations, the player may return to play as soon as the wound is properly cleaned and covered. For major injuries, especially lacerations that require stitching, return to practice or competition would need to be approved by the treating physician. Players should not return to the playing field with blood on their uniform.

ANKLE AND FOOT INJURIES

KEY POINTS:

- Young athletes with ankle sprains often return to play too soon, and are at risk of turning a minor sprain into a major injury
- Beware of the following signs of a possible significant injury: “I heard a pop”, “I felt it tear”, “I heard a crack”, immediate bruising or swelling, complaints of severe pain, inability to move the ankle or bear weight
- Truly minor injuries may return to play if the ankle is pain free, with normal ability to jog, sprint, cut, and jump.

Injuries to the ankle and foot are the most common lower extremity injuries in soccer, and a mild contusion or bruise is the most common type of injury in youth soccer. Ankle sprains are also very common. Although rare, fractures can occur, and include ankle growth plate fractures, toe fractures, and a fracture to a bone on the outside of the foot called the 5th metatarsal.

Evaluating the Injury:

What's the story?

- These injuries will start with a sudden onset of pain and can occur with or without contact. If the player tells you “I heard a pop”, “I heard a crack”, or “I felt a tear”, it often means there is a torn ligament or a broken bone, and the athlete should not return to play until properly evaluated.
- The player should be able to tell you the general way in which the pain started.

What does it look like?

- The first evaluation of an ankle contusion or sprain immediately after injury will usually show a normal appearing ankle. A moderate or severe sprain can become swollen within the first few minutes after injury.



Stepping on Another Foot is a Common Way to Injure an Ankle

- An ankle or toe fracture might show an obvious deformity.

What does it feel like?

- Areas of localized tenderness- should be mild tenderness for a mild injury.
- Evolving areas of swelling- mild injuries will have little to no swelling right after the injury.
- A “step-off” or area of irregularity in the smoothness of a bone can be a sign of a fracture.

- If there is significant tenderness or pain with light touch, take this seriously and consider this a moderate or severe injury requiring proper medical evaluation

Can they move on their own?

- Ask the player while lying down or seated to move the ankle on her own.
- If she is comfortable with active motion, gently move her foot and ankle back and forth with your hands.
- If she is comfortable with the above two tests, you may assist her to stand and to walk to the sideline.

Treating The Injured Area:

- Apply RICE as soon as possible. Swelling and stiffness in ankle sprains and contusions can set in quickly!
- Superficial lacerations may be handled in the same way. Pressure over the cut may be needed to stop any bleeding. Deeper lacerations require medical evaluation and possibly suturing.
- Medical personnel should evaluate serious lacerations as soon as possible.

Red Flags:

- ▶ A visible deformity is a red flag indicating the need for emergency treatment. Apply RICE and have the player transported to the nearest emergency room. With mild to moderate pain it is possible to transport by private car (parents). If you are alone, or if pain is severe, call 911 for proper transport.
- ▶ Rapid blue discoloration of the foot, or a feeling of coolness in the foot is also a red flag requiring emergency evaluation.
- ▶ If the player is unable to bear any weight on the injured foot or ankle, medical evaluation is recommended.

Play or Sit Out?

- The most common ankle injury is direct impact from another player's foot, resulting in a contusion. Many of these will be mild, and the player will often be able to

return to training or game in the same session. Once the player feels comfortable, have him do a jog, then sprint, cut, and jump. If he comfortably passes each test he may return to play.

- If the player has mild to moderate pain, he should sit out. Apply RICE and recommend that he be evaluated by a physician for any pain lasting more than 2 days.
- Severe pain, or any of the red flag conditions should be evaluated urgently in the local emergency department.

CONCUSSION

KEY POINTS:

- **All** athletes with a suspected concussion should be removed from play and should not be allowed to return to play until evaluated and cleared by a physician
- Most concussions will not have a loss of consciousness. An athlete does not need to be unconscious to have a concussion.
- Suspect a concussion if there has been contact (head-to-head, ball-to-head, head-to-body or head-to-ground) and the athlete appears confused, dazed, or just not at usual behavior
- The coach does not make a diagnosis of concussion. The coach must only suspect a concussion and then send the young athlete to a physician for proper diagnosis and treatment.
- A concussion properly managed from the start should allow a young athlete to return to play in a reasonably short number of days, but a mis-managed concussion can lead to a lifetime of problems.

In some ways, the coach's job in managing a suspected concussion on the field is a really easy one: **if you think a player has had a concussion, remove the player from the field and keep her out of the practice or game. The coach must only suspect a concussion, you do not have to make a diagnosis.** She should not return to practice or play that day. From the medical professional's standpoint a concussion is actually pretty simple: we suspect a concussion, remove the athlete from play, perform proper testing, wait for symptoms to resolve, and then start a return to play protocol. A concussion is an alteration in brain function. A concussion can also occur if a sudden force is applied elsewhere on the body and transmitted to the head. The most common sign the coach will see after a concussion is confusion (a "ding" or "bell rung"), and common complaints from the player will include headache, inability to recall events, or light-headedness. In more severe incidents there may be loss of consciousness (the player is "knocked out"). But we'd like to emphasize again that most sport related concussions will not have a loss of consciousness. While there remains

a tendency to minimize the potential severity of a concussion there is a growing base of very solid scientific evidence that even so-called "mild" concussions can be serious injuries resulting in prolonged symptoms.

Evaluating the Injury:

What's the story?

- History of a collision or blow to the head (head-to-head, ball-to-head, head-to-body, or head-to-ground)
- The athlete may complain of a headache, blurred vision, or of "being in a fog".



What do you see?:

- Any local injury such as a cut on the head or forehead or a bruise.

- Signs of confusion, inability to recall events before the game and during the game.
- Imbalance on walking.
- Is he acting unusually or different than his normal behavior? Does he seem overly upset or emotional? Does he seem bored or “out of it”?

Basic Sideline Injury Management:

- Remove the player from the training session or game and do not let her play again that day.
- Treat any abrasions or cuts as outlined in this book.



Red Flags:

New evidence points to even “mild” concussions as potentially serious injuries that demand great care. With that in mind, and also given that most coaches or parents are not medically trained, the following should be done:

- ▶ If the athlete is **unconscious**, do not move her, call emergency transport or 911 immediately.
- ▶ If you are **concerned for a spine injury**, do not move the athlete, call emergency transport or 911 immediately.
- ▶ If the athlete is responsive but appears to be confused, you should suspect a concussion, remove the player from the game or practice and s.
- ▶ Someone should observe the player on the sideline for developing or worsening symptoms of confusion, headache, nausea, vomiting, or light-headedness.
- ▶ If any of those symptoms worsen, the player should be transported to the nearest Emergency Room immediately.
- ▶ If symptoms don’t worsen and yet don’t resolve by the end of the practice or game, recommend to the parents to have him seen by a physician that day.

- ▶ For players whose symptoms do resolve by the end of the practice or game, he should still be evaluated by a physician to be cleared for return to soccer.

Play or Sit Out?:

- There may be pressure from the player, teammates, or parents to keep a player with a suspected concussion in the game. You need to do what’s in the best interest of the player’s health and remove the player, then have the player evaluated by a physician.
- When the player has been evaluated by a physician she should receive a written clearance to return to play.
- If there are any questions about an athlete’s readiness for play while at practice, re-refer the athlete back to the physician for evaluation.

CONTUSIONS

KEY POINTS:

- Players with mild contusion to the leg or ankle are treated with RICE and may return to play if there is no pain or swelling, only mild soreness, and normal ability to jog, sprint, cut, and jump
- Make sure your players are actually wearing shinguards during training
- Watch out for contusions to the chest, abdomen, back, or testicles

“Contusion” is another term for a bruise. The player will give you an obvious history of contact, and in youth soccer this will most often occur from a direct kick to a body part with the cleated foot of another player. Contusions can also occur from the player falling and hitting the ground or with contact from another player’s knee or elbow. The most common locations are the shin, ankle, thigh, and calf. The impact of the cleat with the player’s body part will cause tiny blood vessels in the skin and muscle to break, and as a result there will be some bleeding into the surrounding tissue. This will lead to the familiar black and blue discoloration. There will likely also be noticeable swelling in the area. This is a common, usually minor injury that responds well to RICE.

Evaluating the Injury:

What’s the story?

- Typical history of a direct blow, usually from another player’s foot or elbow.
- Complaints of pain over area of the blow.



A typical bruise on the shin

What does it look like?

- Swelling (mild is typical; if there is moderate or severe swelling it is more than a mild injury)
- Discoloration (mild, moderate, severe)

- Scrapes, cuts or bleeding

What does it feel like?

- Feel gently for areas of tenderness (mild is typical; if it is severe pain there may be a fracture).

Can they move on their own?

- See if the player can move the injured area:
 - with little pain (mild injury);
 - with more difficulty, perhaps requiring slight assistance (moderate injury); or
 - with extreme pain or not at all (severe injury).

Basic Sideline Injury Management:

- Apply RICE as necessary.

Red Flags:

A severe contusion in certain areas of the body is a much more serious problem:

Cardiac (heart):

With impact over the heart just to the left of the sternum (breast bone), a life threatening condition called commotio cordis can occur, which causes the heart to go into an irregular rhythm and can cause sudden death.

- There may be no symptoms prior to sudden unconsciousness.
- In case of sudden unconsciousness, activate your

emergency action plan, have someone call 911, apply an AED (Automated External Defibrillator) if one is available, and begin CPR immediately! Acting quickly is critical to chances of survival.

Spleen:

- A blow to the upper abdomen under the left rib cage (including a fall onto his own left elbow) causes the injury.
- Player experiences belly pain, is reluctant to move, and there is extreme tenderness to the touch in that area.
- Immediately refer the player to the local emergency room or physician.

Kidney:

- A blow to either side of the back, near the bottom of the rib cage, can cause kidney damage.
- The player and her family should watch for blood or red discoloration in the urine.
- Refer to a physician if any blood or other change appears during urination or the player suffers severe lower back pain on either side of the spine.

Testicular:

- For players hit or kicked in the testicles, red flag signs would include pain lasting more than 30 minutes, any swelling in the testicles, or blood in the urine. These are all red flags indicating the need for urgent evaluation.

Prevention for soccer players:

Make sure your players have proper shin guards, and actually wear them. There is a tendency as players get older to avoid shin guards during training sessions and for the shin guards to become smaller and smaller.

Play or Sit Out?:

Occasionally, applying the RICE principles will allow a player with a minor contusion to return to play in the same training session or game. She should have very little soreness when you press on the area; she should have full motion and strength of the injured limb; and she should be able to sprint and cut without pain. If your player cannot pass each of those points she should sit out. If you suspect a moderate or severe injury she should sit out and referred for proper evaluation.

FRACTURES OR "BROKEN BONES"

KEY POINTS:

- Beware if the player tells you there was a “pop” or “crack” sound, there’s a lot of pain, immediate swelling, and the area is really tender to gentle pressure around it. Those are signs that should alert you to a possible bone fracture.
- A suspected fracture should be stabilized and RICE applied.
- Refer the player to the local emergency department for evaluation by a physician

A fracture is the proper medical term for “broken bone”. This can range from a tiny crack in the bone, to a very severe injury where the skin over the bone is broken, showing the exposed bone. Regardless of how severe the injury is it is still a fracture. A fracture can happen from any number of different causes, although in soccer the most common reason is direct contact. Twisting injuries can result in ankle fractures, a fall on the ground can cause a wrist or collar bone fracture, and there is a fracture that occurs from overuse called a “stress fracture”. For the purposes of this guide, the focus is on immediate basic evaluation and field management for fractures that occur from injuries on the field of play.

Evaluating the Injury:

What’s the story?

- The player will have a single injury event, although it often happens very quickly and he may not be able to give you a detailed description.
- Pain is the main complaint and will often be severe.
- The player may be able to describe a “pop” or a “crack” that he felt or heard.



You can improvise and make a splint out of whatever you have available

What does it look like?

- Abnormal alignment of a bone or a bump or bend where there should not be one.
- A break in the skin over the bump, possibly with the end of the bone visible, which indicates a very severe injury. There may be bleeding.
- There may be immediate swelling over the painful area.

What does it feel like?

- Press gently on the area to assess how painful it is. There will often be significant pain with light pressure. Wear gloves if there is any bleeding.

- You may be able to feel a hard lump indicating the end of a broken bone.
- There may be a grinding or grating sensation at the site of the break.

Can they move on their own?

- The player can make an attempt at gentle movement of the joint above and below the area, but he may not be able to do so. If the player cannot move the joints on his own, you should NOT attempt to move it for him.

Basic Sideline Injury Management:

- Keep the player calm.
- If the bone is obviously misaligned, you should call the local emergency number or 911 to arrange for immediate proper splinting and transport for treatment.
- If the bone is obviously misaligned and you do not have access to emergency services, immobilize the affected limb as well as you can and have the player transported by car to the nearest emergency facility. This is appropriate treatment for finger or wrist fractures. You can use popsicle sticks, cardboard pieces, a shin guard, or other items to immobilize the bone.
- If the bone looks properly aligned and the player is reasonably comfortable, apply RICE and have the player transported to the nearest emergency facility.

Red Flags:

- ▶ Any break in the skin over the suspected break indicates a more severe injury called an "open fracture". For immediate treatment, irrigate the skin with saline, cover it with a sterile gauze pad, splint it, and arrange for transport through qualified emergency services.
- ▶ Do NOT attempt to re-align an obviously misaligned bone. Splint it in place as it is.

Play or Sit Out?:

- Full return to play will require complete healing of the break, and will need to be cleared for play by the treating physician.
- Once the break is healed, the athlete will usually need to go through a period of reconditioning to prepare for running, jumping, cutting, and pivoting. The reconditioning period will be very short for injuries to the hand or wrist, but can take several weeks (or even months) for recovery after an ankle or leg fracture.

KNEE INJURIES

KEY POINTS:

- RICE is the basic sideline management for most knee injuries. Don't let the young athlete with a knee injury return before they are really ready; the mild injury may become much worse.
- The player may return to play if there is no pain, full motion of the knee, and normal ability to sprint, cut, and jump.
- Beware of a "pop", immediate swelling, or inability to bear weight on the leg and refer these for proper medical evaluation
- Beware also of a knee injury that occurs without any contact. This could be a ligament tear or kneecap injury. Refer these for proper medical evaluation.

Knee pain in soccer is very common and in the young athlete there tends to be two very different scenarios. The first and most common, involves an ongoing and very annoying dull pain in the front of the knee. In girls, this pain is frequently caused by the changing alignment of the knee cap as the pelvis grows. For boys, this often is a condition called "tendonitis", in which stresses across the soft tissues in the knee increase with rapid bone growth. The second scenario involves sudden onset of pain during training or a game. This sudden onset of pain can happen from a sprain to the ligaments, injury to the knee cartilage, or a fracture around the knee joint.

Evaluating the Injury:

What's the story?

- Has the pain been going on for a long time or was there a sudden onset during play?
- If there was a sudden start to the pain, was it from direct contact or was it a non-contact injury?
- Beware of a description of a "pop" or "crack" as those often mean a significant injury has occurred



- Beware also of knee injuries that occur without contact. This often happens with knee ligament injuries (such as the ACL) or knee cap dislocations.

What does it look like?

- In player-to-player or player-to-ground injuries, look for cuts or abrasions.
- If swelling or bruising becomes evident in the first several minutes, this is a sign of a potentially serious injury.
- Obvious deformity, such as a knee cap completely out of position or the knee bent at an unnatural angle signals a severe injury.

What does it feel like?

- Feel the knee gently for areas of pain or tenderness. You can classify this as mild, moderate, or severe.
- Significant pain with your light pressure is a sign of a possible serious injury.

Can they move on their own?

- Usually, the player with a sudden onset of knee pain will be lying down when you are called on to evaluate. Have him stay down and after he is calm enough to follow your directions, ask him to attempt to move the injured knee on his own.
- If the knee moves well on its own, with two hands hold the lower leg and gently flex and extend the player's knee for him. If there is no pain or mild pain, proceed to the next step.
- With no pain or mild pain on movement, assist the player to stand and then have the player attempt to walk to the sideline.

Basic Sideline Management:

- The typical mild injury (without any of the red flags noted below) should be treated on the sideline with RICE.
- An obvious deformity should not be set back in place unless you have specific training to do so! Instead, call local emergency services or 911 for transport, and while you are waiting apply RICE and keep the player calm.

Red Flags:

- ▶ A studs-up tackle to the knee joint is a very dangerous play and will almost always result in a severe injury.
- ▶ If the player reports a "pop" associated with immediate pain, this is usually a sign of a more severe injury.
- ▶ A player unable to bear weight on the injured leg is a red flag needing proper evaluation by a physician.

Play or Sit Out?:

- In any of the red flag situations, the player should be transported to the emergency room.
- If a player having chronic pain reports to you that she cannot run, then have her sit out, apply RICE, and recommend that she be evaluated by her physician. These players will often need a prolonged period of rest and rehabilitation before they can return successfully to play.
- Occasionally, a player with a mild injury will recover after sitting out for some time with RICE applied. That player can return to the training session or game 20 minutes after the ice is removed if he has no pain, full motion of the knee, and normal ability to sprint, cut, and jump.

SPRAINS

KEY POINTS:

- These extremely common injuries can get much worse if the young athlete is returned to play before healing. Better to sit an athlete for a few days than lose the player for the season.
- Watch out for these signs of a possible moderate/severe injury: complaints of a “pop” or “tear”, immediate swelling, significant pain with your light touch, a sense of instability on joint movement by the player.
- The player can return to training when the joint is pain free, has normal motion, normal strength, good agility, and the player is able to sprint and cut with confidence.

A sprain refers to a stretching or tearing of a ligament. A ligament is the tough tissue that connects a bone to a bone and gives stability to a joint. The most common places for sprains in soccer players are the ankle and knee. This chapter provides a broad overview of sprains, with detailed descriptions in specific chapters [such as “Ankle” and “Knee”]

Evaluating the Injury:

What’s the story?

A sprain will almost always happen from a specific incident: either from contact or by twisting the joint. The player should be able to tell you when it happened, he may have heard or felt a “pop”. Beware of the descriptions “pop” or “tear” as these often mean something in the joint is torn. The initial injury will usually cause some pain and sometimes a feeling that the injured joint will not support the leg on walking.

What does it look like?

- Swelling in the injured area [can be mild, moderate or severe]. A mild injury will usually have little to no swelling a few minutes after injury. If you already see swelling a few minutes after injury, this is a sign of a possible moderate to severe injury.



“rolling” the foot over another foot can cause an ankle sprain

- An obviously misshapen joint, which can mean that the joint is completely out of place [called a “dislocation”].

What does it feel like?

- Tenderness or pain [mild, moderate or severe]. A complaint of severe pain when you apply light pressure should be taken seriously; this could mean an underlying bone fracture or other significant injury.

Can they move on their own?

- See if the player can move the injured area on his own.
- If the player can move the injured part with little pain, see if he can put any weight on the leg and walk to the sideline.

Basic Sideline Management:

- If the player is unable to walk off the field, assist the player off to a sideline bench.
- Apply RICE on the bench (see chapter on “RICE”)
- If you suspect a severe injury, refer the player to the local Emergency Room or local specialist immediately (see also the Red Flag warnings below).

Red Flags:

- ▶ If the joint is obviously out of position, you should NOT attempt to put it back in place or “set” it. The best course of action would be to call local emergency services or 911 and get qualified personnel to splint the joint and transport the player for treatment.
- ▶ If the player is experiencing severe pain even if the joint looks normally aligned, it may mean that there is a broken bone rather than a sprain. This player should have the RICE principles on the sideline, and then be referred immediately to the Emergency Room.

Play or Sit Out?:

- In almost all instances of sprains in youth soccer players, your best option is to have the player sit out the remainder of the practice or game and re-evaluate in 2-3 days.
- The player can return to training when the joint is pain free, has normal motion, normal strength, good agility, and the player is able to sprint and cut with confidence.
- Recommendations for specific injuries are found in the Knee and Ankle sections.

WRIST, HAND AND FINGER INJURIES

KEY POINTS:

- A mild injury to the wrist or hand, in which the player regains full pain-free motion after a brief period of time sitting out, can allow resumed play in the same session.
- A mild injury to the fingers can resume play by taping the injured finger to the adjacent non-injured finger.
- An injury you would classify as moderate should sit out; apply RICE, and have the player evaluated in the next day or two by a physician. Use some common sense and hold the player out if you are unsure about the injury.

Injuries to the wrist, hand, and fingers in soccer occur through direct contact, either when the athlete falls to the ground or when a ball gets kicked into the hand. Rarely, an injury can occur if a player on the ground is stepped on by a cleated player. The most common injuries are wrist sprain, wrist or finger fracture, and sprained or dislocated finger.

Evaluating the Injury:

What's the story?

- Since these injuries involve contact, the player should generally be able to tell you what happened to cause the injury. With a bone fracture the player may tell you there was a "crack" or "pop" at the time of injury.

What does it look like?

- Look for any obvious swelling, cuts or abrasions in the skin. Immediate swelling is a sign of a potentially serious injury.
- Look for any obvious deformity or misalignment of the bones.



What does it feel like?

- If you are dealing with a sprain or fracture, there will be tenderness at the site of injury as you gently press on the area. Classify this as mild, moderate or severe. Fractures will often have significant pain with your light touch- watch out for this.
- In a dislocated wrist or finger, there will be an obvious misalignment of the joint, where one part of the joint will look obviously out of position compared to the other joints in the fingers, or to the other wrist.

Can they move on their own?

- As with all other injuries, the safest thing to do is ask the player to move the injured area on her own. If the pain is in the hand, ask her to make a fist. In mild injuries, the player will almost always be able to perform some movement with minimum discomfort, moderate injuries will produce more discomfort, and in a potentially severe injury the player will usually be unwilling to attempt any movement.

Basic Sideline Management:

- RICE is the first line of treatment for all wrist, hand, and finger injuries.
- An injury to the finger that appears to be mild can be treated by taping the injured finger to a non-injured finger next to it.

Red Flags:

- ▶ An obvious deformity, significant pain, numbness in the fingers, or discoloration of the hand or fingers are all red flags indicating a potentially serious injury. The player should be transported immediately to the local emergency department for further evaluation and treatment.

Play or Sit Out?:

- A mild injury to the wrist or hand, in which the player regains full pain-free motion after a brief period of time sitting out, can allow resumed play in the same session.
- A mild injury to the fingers can resume play by taping the injured finger to the adjacent non-injured finger.
- An injury you would classify as moderate should sit out; apply RICE, and have the player evaluated in the next day or two by a physician.
- An injury you would classify as severe should have RICE applied on the field and be transported immediately for proper care.

BLISTERS

KEY POINTS:

- Small blisters (less than half inch) can simply be covered with a Band-Aid®
- Larger blisters can be drained, leaving skin on top in place, and covered
- Beware of a blister that is not in an area of contact (chest, back, arms) and refer these for physician evaluation

A blister is a fluid-filled bubble that appears on the skin in areas of friction. This is an extremely common problem in soccer players, and typically appears on the back of the heel, or the inside of the big toe. The most common reason blisters happen in youth soccer is from playing in cleats that don't fit well; either they are too small or too big for the foot. As a result, an area of skin becomes irritated from the excessive pressure or rubbing, and fluid forms between the inflamed skin layers. If a blister does occur, it can usually be treated simply with minimal down-time from play.

Evaluating the Injury:

What's the story?

The player will usually report a blister after a practice or game. If the athlete reports an insect bite or sunburn (see Red Flags), this is not a typical blister and should be treated differently.

What does it look like?

The blister will have a thin layer of skin on top, with fluid underneath the skin. The surrounding skin should be normal color, or can be just slightly red from the rubbing. The thin layer of skin on top of the fluid should not be painful to the touch (most of the time there is no sensation at all in this thin layer). The pain from a blister comes from the very sensitive skin underneath the fluid- try not to press too hard on this area. Sometimes the blister has already broken, and the thin layer of skin is partially or fully torn off, leaving an open wound.



A blister on the bottom of the footEAnd one on the heel

What does it feel like?

You can gently press on the top of the blister and it should have a soft spongy feeling, like it is filled with fluid (which of course, it is!).

Basic Sideline Injury Management:

Small blisters (less than a half-inch in size) can simply be covered with a Band-Aid® or a flexible blister pad, available from your local drug store. Small blisters will usually heal on their own with no treatment needed.

Larger blisters will often be bothersome for the player and can cause them to sit out of training and games. The fastest way to get these athletes safely back on the field is to drain the blister:

- Clean your hands with an alcohol based gel sanitizer, and let dry.

- Clean a needle or small pointed scissors with gel sanitizer, then use it to gently puncture the edge of the blister. Press the fluid in the blister toward the hole you made. Wash the blister after you have drained it, and pat it dry with clean gauze.
- Leave the thin skin covering over the blister in place and gently smooth it flat over the tender skin underneath.
- Apply an antibiotic ointment.
- Cover with a Band-Aid® or blister pad.
- If the top layer of skin has completely torn off the blister leaving an open wound, treat this as an abrasion [see the chapter on Abrasions and Lacerations].

Blister Prevention Tips:

- Wear the best fitting cleats or shoes.
- To choose the best fitting pair of cleats, try them on in the late afternoon or evening with an appropriate pair of socks.
- When possible, change socks between practices or games.
- Use foot powder if needed during practices or games.
- Avoid wet socks.
- Socks need to fit properly too, since socks that are either too small or too big can also create blisters.

Red Flags:

- ▶ A blister that appears in an area without contact or friction from cleats or clothing could be a sign of a problem that needs evaluation from a physician. Examples include blisters from sunburn on the arms, insect bites, poison oak or poison ivy, blisters around the mouth, or multiple blisters on the back or trunk [chicken pox!]. Increasing redness or red streaks surrounding the blister could be signs of an infection and should be evaluated by a physician.

Play or Sit Out?:

For the common blister on the heel or foot, the athlete can return to play as soon as the blister is treated, covered properly, and the athlete feels comfortable wearing their cleats. Any Red Flags requiring medical treatment will need to be cleared by the treating physician.

EYE AND NOSE INJURIES

KEY POINTS:

- Bloody noses are common. Using a gloved hand and a gauze pad, pinch the nose to stop the bleeding. The athlete can usually return to play after the bleeding is stopped.
- Significant eye or nose pain should be evaluated urgently by a physician.
- Players with eye injuries may return to play if the vision is normal and eye movement is pain free.

Eye and nose injuries in soccer occur during direct contact with an opponent or the soccer ball hitting the player's face. The impact of the soccer ball against the eye can cause bleeding into the front chamber of the eye and decrease in vision. Cuts can also occur, typically along the eyebrow margin. Fractures of the bones that make up the eye socket are also seen in soccer. Bloody noses may occur from injury or from dry weather conditions and allergies. The latter typically do not bleed as much as the bloody noses from trauma.

Evaluating the Injury:

What's the story?

- The player will report getting hit in the face and experiencing pain in the eye and blurry or decreased vision, or wiping the nose on the field and noting blood.
- If an athlete has sustained a hit to or near the head, it's important to evaluate for the possibility of a neck injury and/or concussion.

What does it look like?

- A broken nose or nasal fracture may have the appearance of an "S" shape or appear crooked.
- Nasal fractures typically bleed significantly, but not always.
- The nose and regions around the eyes may become quickly swollen or discolored, making it difficult to determine the extent of the injury.

- The athlete may be covering her eye, unable to open her eye due to pain, and the eye may be tearing.



What does it feel like?

- There will be pain and tenderness when you gently press on the bones around the eye socket, or over the nose. Severe pain with light touch indicates a possible severe injury, such as a bone fracture.

Basic Sideline Injury Management:

- "Setting" or straightening of nose fractures should only be performed by a physician.
- To control bleeding, use a clean cloth, paper towels, or gauze, to cover the nose. Firmly pinch the soft part of the nose just beneath the hard bridge of the nose and hold for at least 3-5 minutes; if the bleeding continues, hold for another 5 minutes.
- Have the player sit upright and lean slightly forward to avoid blood draining down the back of the throat. Do not have him put his head down between the knees; this will increase the bleeding. An ice pack over the lower forehead may help to decrease the blood flow to the nose. To reduce pain and swelling after the bleeding has stopped, place an ice pack directly over the nose.

- For eye injuries, try to visualize the eyeball to see if there are any obvious injuries or redness. Do not attempt to forcibly open the eyelids.
- If the athlete can open her eyes, see if she can track your finger movement (up-down-side to side) without pain. Also ask her if her vision is normal (have her read something) and whether she is seeing double vision. Lightly apply ice over the affected area.
- Do not attempt to remove a contact lens in the presence of eye trauma.
- Do not let the athlete blow his nose. If there is a fracture of the eye socket, it may lead to eye infections. Blowing the nose may also disrupt the blood clot and the nose may start to bleed again.
- As with any injury, a quick but calm response from you is important to keep the athlete calm, especially in the presence of blood

Red Flags:

- ▶ Do not move the athlete if you suspect a head or neck injury, and call for emergency medical transport or 911. If a concussion is suspected, hold the athlete from play and seek further evaluation by a physician.
- ▶ If a broken nose is suspected and the athlete is in significant pain, having trouble breathing, or the bleeding is extensive or doesn't stop, seek medical care immediately.
- ▶ Seek medical care immediately if:
 - there is any persistent eye pain (with or without eye motion)
 - increased redness of the white (conjunctiva) of the eye associated with pain
 - bulging of the eye and swelling of the tissues surrounding the eye
 - the vision remains blurry, there is a loss of vision, or double vision
 - floaters (black spots or lines) or flashes of light appear
 - the eye tearing does not stop

Play or Sit Out?:

- Bleeding must stop completely in order for the athlete to return to play. If there is any fresh blood on the uniform, it must be removed with hydrogen peroxide or a clean uniform put on before return to play.
- If the vision is normal, with pain-free eye range of motion, the athlete may return to play.

HEAT ILLNESS

KEY POINTS:

- A good hydration strategy will go a long way towards minimizing the chance of heat illness.
- A young athlete with suspected heat illness will typically respond to cooling and re-hydration in around 15 minutes.
- Beware of hot skin. This is a possible sign of heat stroke, and is a medical emergency.

“Heat Illness” is a broad term used for a range of problems such as dehydration, cramping, dizziness, heat exhaustion and a very serious problem called heat stroke. Young athletes are at a higher risk than adults for developing heat illnesses. Children absorb heat faster than adults, they don’t sweat as much (sweat helps the body cool), they take longer to get conditioned to exercising in warmer weather and often they don’t feel the need to drink fluids before or during exercise. Fortunately, there are a number of simple steps that can greatly reduce the risk of heat illnesses when playing in hot weather.

Evaluating the Injury:

What’s the story?

- Most young athletes will first start to show signs of heat-related illness through dehydration. The athlete may come off the field complaining of being tired, having leg cramps or feeling light-headed. On a hot day, be suspicious of the athlete with poor performance. They might not tell you anything- be alert.

What does you see?

- Decreased performance
- Fatigue
- Skin that ranges from pale or sweaty to cool and clammy. If the skin is hot it’s a red flag!
- Possibly irritable

- Nausea
- Headache
- Light-headedness
- May have difficulty paying attention or following directions.



Basic Sideline Injury Management:

- Get the athlete off the field and let her lie down in a cool, shaded place.
- Elevate the legs above the level of the head.
- Provide a sports drink (not carbonated, no caffeine).
- Loosen any tight fitting clothing and remove socks.
- If the player doesn’t start to feel better within 10-15 minutes, seek medical help.
- Prevent future dehydration (see below).

Red Flags:

- ▶ Young athletes should respond within 10-15 minutes from re-hydrating. You should see them “perk up” and get back towards their normal attitude and appearance. If an athlete does not improve, it may signal more severe dehydration and they should be evaluated in the emergency department of the local hospital.
- ▶ “Heat Stroke” is a medical emergency. In heat stroke, the athlete will have very hot skin that can be wet or dry, a change in normal behavior (confused, irritable), vomiting, and even seizures or loss of consciousness; the athlete will look in obvious trouble. If you have any suspicion of this, call local emergency services or 911 immediately.
- ▶ If you have called for emergency help, start cooling the athlete by applying ice packs to the armpits, groin, or neck. If ice is not available, squirt cold water over the head and trunk.

Play or Sit Out?:

- Once the athlete suffering from dehydration and mild heat illness has started to re-hydrate with fluids, he should return to his normal appearance and attitude in 10-15 minutes and with proper fluids should be able to return to play later that day.
- If the athlete has not fully recovered, it may signal a more significant problem and a physician should be consulted before the athlete returns to play.

Tips to Prevent Dehydration and Heat Illness:

- Sports drinks are an excellent choice for hydration. Young athletes can usually find a flavor they like, and the electrolytes (like sodium chloride) will stimulate thirst, help the body hold onto fluid, reduce the chance of cramping and possibly improve performance.
- Avoid carbonated sodas and any drinks with caffeine or high fructose corn syrup.
- Low-fat chocolate milk is another good after-game alternative.
- The athlete should have 12-16 ounces of fluid up until about 30 minutes before a game or practice (remember that most sports drinks come in 20 ounce bottles).
- Keep sipping sports drinks or water during the practice or match.
- Start re-hydrating within 20 minutes of the conclusion of the practice or match. Research shows that the first 20 minutes are the most efficient time to start refueling. Try to take in 20 ounces within this window of time.
- Gradually increase the duration and intensity of training the first two weeks of practice to allow time for acclimatization, especially if practice is starting in late summer.
- Wear lightweight, light-colored clothing when training in warm weather.



HIP AND GROIN INJURIES

KEY POINTS:

- Listen for the words “tear”, “pull”, or “pop” in the player’s description of the injury- this often indicates a torn structure which can be a serious injury.
- These injuries have a high chance of recurring, so be certain the young athlete is really ready to play before returning: no pain, full movement, normal agility, normal sprinting
- Severe pain at rest or with the athlete’s own movement should be evaluated in the emergency department for a possible hip fracture

Injuries to the hip and groin are common in soccer and most tend to be grouped by the age of the player. In the very young player, hip and groin injuries tend to be mild tendon or muscle strains. In the 11-17 year old age group a large percentage will also be tendon or muscle strains but a type of fracture through one of the growth plates around the hip and pelvis can also occur. In older players, stress fractures, sports hernias, and hamstring tears can happen. Getting kicked in the groin or getting hit in the groin by the ball is of course a risk at any age group. Using basic field evaluation principles, your job is only to decide safe return to play or sit out.



Evaluating the Injury:

What’s the story?

- In the young athlete, the complaint will be of a sudden onset of pain, often in the middle of a sprint or run.
- For a tendon or muscle strain, the typical complaint will be a “pulling” or “tearing” sensation with pain.
- For a growth plate fracture, the typical complaint is a sudden “pop” while sprinting or kicking, with pain in the hip or pelvis.
- In the teenager or older adolescent, a stress fracture might include a scenario where the athlete has been feeling some pain for several days (usually

not reported to the coach or parent), followed by a sudden increase in pain.

- If the player has been kicked or hit in the groin he will usually let you know!

What does it look like?

- In most instances, the area will look normal when evaluated on the field shortly after the pain starts.
- There may be some mild bruising or swelling, but these will typically not show up until hours later.

What does it feel like?

- Gentle pressure on the injured area will produce mild, moderate, or severe soreness.

Can they move on their own?

- The best first test is to have the player move the injured hip on her own. If she is lying down, have her do this while lying down.

- If she is comfortable moving the hip on her own, the next test should be for you to gently move the hip using your hands. Grab the lower leg, keep her knee bent, and gently flex the hip up towards the player's abdomen. If that is pain free, then gently rotate the hip by moving the foot side to side.
 - If the player is comfortable moving on her own, comfortable with you moving the hip, you may then have her attempt to stand to see if she can walk to the sideline. Support the player if there is some discomfort or a limp.
 - Elevate the legs above the level of the head.
 - Provide a sports drink (not carbonated, no caffeine).
 - Loosen any tight fitting clothing and remove socks.
 - If the player doesn't start to feel better within 10-15 minutes, seek medical help.
 - Prevent future dehydration (see below).
- ▶ For male players hit or kicked in the testicles, red flag signs would include pain lasting more than 30 minutes, any swelling in the testicles, or blood in the urine. These are all red flags indicating the need for urgent evaluation.

Play or Sit Out?:

- Occasionally a player with a very minor injury will recover on the sidelines. They may resume play if they are pain free on movement and able to sprint and cut without any difficulty on the sideline.
- More commonly, the player will still have some soreness, and if so, he should sit out the session and should not return to training until he is completely pain free. For a hamstring strain this may take several weeks, and if there is a growth plate injury or stress fracture it can take several months.
- A player with a mild to moderate amount of pain who is not improving over the course of 2-3 days should be evaluated by a sports medicine specialist.

Basic Sideline Management:

- Apply RICE.
- For a player that has been hit or kicked in the groin, have the player lie down on the back, flex his hips and bend his knees. The player will usually be able to walk to the sideline for rest after a few minutes. Most referees will be sympathetic to this injury and will usually allow the player time to recover before asking him to go to the sideline

Red Flags:

- ▶ Severe pain at rest, or severe pain on attempted movement are red flags indicating a potential severe injury such as a complete hip fracture. Keep the player lying down and as comfortable as possible, call emergency medical transport or 911 and have the player transported to the emergency room.
- ▶ For a male or female player that has been hit or kicked in the groin, any blood in the urine is a red flag and should be evaluated in the emergency room.

INSECT BITES AND STINGS

KEY POINTS:

- These common, minor injuries will usually need nothing more than ice to manage.
- Watch out for a severe allergic reaction to a bite or sting: any swelling around the mouth or difficulty breathing. If the player has a known allergy and has provided an EpiPen, use it! Otherwise call for emergency transport immediately.

Insect and spider bites usually cause minor swelling, redness, pain, and itching. These mild reactions are common and may last from a few hours to a few days. Problems can occur if the player is allergic to a sting (such as a bee sting), or if the bite contains a venom that will cause a potentially severe reaction (such as a black widow spider or brown recluse spider). The bite can also become infected, especially if the player scratches it excessively.

Evaluating the Injury:

What's the story?

The player will almost always know that she's been stung, and will complain of pain at the site of the sting. One exception is a tick bite, which might be painless.

What does it look like?

A raised bump or area of redness where the sting occurred.

What does it feel like?

Feel gently with your fingertip over the area. A stinger might still be present at the site of the sting.

Basic Sideline Management:

If the stinger is present, it can be gently removed with your fingernail or a pair of tweezers. Clean the site of the sting or bite with cool water and Hibiclens®, then cover with a sterile bandage or Band-Aid®. Ice can be applied to reduce pain, itching, and swelling.

Red Flags:

- ▶ There are two types of serious problems from insect and spider bites or stings: a severe allergic reaction and a toxic reaction to venom.



Severe allergic reactions (called “anaphylaxis”) are not common but can be life threatening and require emergency care. Occasionally, one of your players will already have an identified bee sting allergy, and the parents in that case should provide an injectable form of a medication called epinephrine (an EpiPen®) for emergency use at all practices and games. If known, this will be noted on the preseason medical forms, and the coaching staff should have been taught how to use the device. Most of the time, however, the player will not know whether they are allergic to stings.

Signs and symptoms may include:

- Coughing, wheezing, difficulty breathing, or feeling of fullness in the mouth or throat.
- Swelling of the lips, tongue, ears, eyelids, palms of the hands, soles of the feet, and mucous membranes.
- Light headedness and confusion.
- Shock (total shut down of the heart and lung systems).
- If the sting or bite is accompanied by difficulty

breathing or/and swelling around the lips, call local emergency transport or 911 immediately, and use the epinephrine kit (if the player has one). Time is critical- start quickly, and get help fast.

A “venom” is a toxic substance released by an insect or spider. The venom can produce symptoms beyond the local site of the bite. For the black widow spider, body-wide effects can take place, such as muscle cramps, headache, abdominal cramping, difficulty breathing, swelling of the lips and tongue, dizziness, and vomiting. For the brown recluse spider, the venom can produce a severe tissue reaction causing damage to skin and muscle.

- Body reactions to venom can come on slowly and take several minutes to become known to an observer. If the athlete is showing any signs of problems throughout the body, or if extensive redness, swelling, blisters, or a blue halo around the bite appears in the limb where the bite occurred, call local emergency transport or 911 immediately. These reactions can be successfully treated by trained personnel, but time is critical- the sooner the better.

Play or Sit Out?:

The common bite or sting should not produce any long-lasting effects, and the player can resume play as soon as he or she feels comfortable enough to do so.

MOUTH AND TOOTH INJURIES

KEY POINTS:

- Players with minor cuts can return to practice or play the same day, as long as the bleeding has completely stopped. It's a good idea to notify the player's parents.
- A player whose wires or braces have come loose needs to be evaluated by the player's orthodontist before returning to play and should strongly be advised to play with a mouth guard.
- Be careful with loose teeth. A dentist should evaluate a player with a loose tooth before the player can return to play. This player may need to be fitted for a mouth guard to protect the tooth from further injury during play.

Most youth soccer injuries to the mouth and teeth occur from ball to face, elbow to face or head to face contact. Typically, these injuries are minor cuts that can be treated with direct pressure. Players wearing braces should wear mouth guards. Injuries to the teeth can potentially cause long term or permanent problems and should be treated with care.

Evaluating the Injury:

What's the story?

- The player will give a history of direct contact, resulting in bleeding in the mouth or pain of the teeth.
- He may be able to describe the tooth feeling sharp, jagged, loose or chipped.

What does it look like?

- Bleeding, cuts, or swelling around the lips, tongue, or gums.
- A missing tooth
- An obviously chipped tooth
- A tooth bent out of place
- If the tooth has been knocked out of the mouth, find it! (very important).

What does it feel like?

- Wear a disposable glove and gently move the tooth back and forth to feel for any looseness compared to the other teeth.
- Examine the inside of the lips and gums with your gloved hand for any cuts. A gauze pad will help to wipe away blood in order to see the cut.



Can they move on their own?

- If there has been direct contact to the jaw, the player should be able to comfortably open and close the mouth on his own. Excessive pain on moving the jaw or inability to fully open the mouth could signal a jaw fracture or dislocation and should be evaluated by a physician.

Basic Sideline Management:

- If there is a bleeding cut on the lips or gums, use a gloved hand with a clean gauze pad to apply pressure to the area. This may take a minute or two, but is generally all that is needed to stop the bleeding. If the bleeding will not stop, pack the area with gauze and have the player transported to the nearest emergency room.

- If you notice an obviously loose or cracked tooth, be cautious: remove the player from play and have her evaluated urgently by her dentist. If the tooth is loose, it is at risk of being knocked out if more contact occurs. If the tooth is partially out of place, gently push it back into place and refer her to a dentist.



Bleeding and bruising above a loose tooth

- A tooth that has been completely knocked out can be “saved” with good success if it is replaced in its socket in the gums within five minutes. If the tooth has been located and if you are comfortable doing this, gently rinse the tooth with water to remove any dirt or debris, then replace it in its socket in the mouth. Refer the athlete immediately for further evaluation by a dentist. If you find the tooth but are not comfortable replacing it in the mouth, place the tooth in a container of milk or wrap it with a moist gauze. Have the player take the tooth to the nearest dentist or emergency room for them to replace it in the mouth.

Red Flags:

- ▶ If the player experiences pain or clicking when he moves his jaw, it could be a sign of a jaw fracture and should be evaluated by a physician.
- ▶ A tooth that has been knocked out of the mouth needs to be replaced in the mouth as soon as possible, ideally, within five minutes. After replacement, refer the player urgently to a dentist.
- ▶ Remember to evaluate any player hit in the mouth or face for a concussion.

Play or Sit Out?:

- Players with minor cuts can return to practice or play the same day, as long as the bleeding has completely stopped. The player’s parents should be notified.
- A dentist should evaluate a player with a loose tooth before the player can return to play. This player may need to be fitted for a mouth guard to protect the tooth from further injury during play.
- A player whose wires or braces have come loose needs to be evaluated by her orthodontist before returning to play and should strongly be advised to play with a mouth guard.

MUSCLE CRAMPS

KEY POINTS:

- A good hydration strategy reduces the chances of muscle cramps
- Cramps are typically managed with stretching and massage, hydration, occasionally RICE
- Once the cramp resolves, the player may return to play if pain free with normal strength, agility, and speed

Muscle cramps are painful, involuntary spasms or contractions of the muscles resulting in localized pain and inability to walk. In soccer players, calf cramps are most common and typically occur in hot weather. There are many other situations that pose a risk for muscle cramping including excessive sweating, dehydration, muscle fatigue, drinking large amounts of water or fluids that lack salt or electrolytes, and taking dietary supplements such as creatine.

Evaluating the Injury:

What's the story?

- The player will often be forced to sit or lie down suddenly because of tightness and pain in the calf or foot.
- This should be a non-contact injury.
- There should be normal sensation in the foot (no numbness or tingling).
- If the player also appears dazed, confused, or incoherent, this could be a sign of a significant Heat Illness requiring treatment (see chapter on Heat Illness).

What does it look like?

- The outward appearance may be normal, or the affected muscle will be bulging (contracted). If the calf is cramping, the foot will often be pointed downwards.



“rolling” the foot over another foot can cause an ankle sprain

What does it feel like?

- The involved muscles will be hard to the touch and painful.

Can they move on their own?

- Movement, either by the player or by you, will be initially painful. With a cramp, the player will not be able to move the cramping muscle on her own, but should be able to move it with your assistance.

Basic Sideline Management:

- For calf or foot cramps, perform gentle massage of the calf and foot muscles (if the cleat is removed). This is very effective in stopping the cramp and allowing for a decrease in pain.
- Gently and slowly stretch the calf muscles by bending

the foot up towards the sky and the toes towards the knee.

- Have the player immediately consume fluids, preferably a sports drink.

Red Flags:

- ▶ Numbness or tingling in the foot accompanied by a tight, painful calf is a red flag and should be evaluated immediately in the local emergency room.
- ▶ Confusion, dizziness, or headache accompanying cramping can be signs of Heat Illness (see chapter on Heat Illness).

Play or Sit Out?:

- Once the cramp resolves, the player should be tested by jogging, sprinting, cutting, and jumping. If they are pain free with normal agility and strength, they may return to play. Monitor him closely and continue to encourage fluids.
- If the cramping and tightness persists or happens again, apply RICE on the sideline and have the player continue to gently stretch.
- Red flag conditions should be evaluated immediately in the local emergency room

Muscle cramp prevention tips:

- On hot days or for intense practices and games, have your players drink sports drinks to replace fluid losses and replenish carbohydrates.
- Improve player fitness.
- Avoid muscle fatigue by varying drills during practice. Ensure adequate rest periods between consecutive games.
- Perform flexibility exercises before and after activity
- Ensure that your players are fully hydrated before practices and games.
- Have water or sports drinks on the sideline for all your players.

MUSCLE PULLS AND STRAINS

KEY POINTS:

- Listen for the words “tearing”, “pop”, or “pulling” from the player, often meaning there’s been a muscle tear.
- Muscle pulls and strains have a high chance of getting worse if the player returns to play before full healing. Be cautious about return to play.
- The player may return to play with no pain, normal strength, normal agility and full power for sprinting, cutting, pivoting and jumping. In almost all instances, hold the player out of play at the time of injury and re-evaluate in a few days.

Muscle cramps are painful, involuntary spasms or contractions of the muscles resulting in localized pain and inability to walk. In soccer players, calf cramps are most common and typically occur in hot weather. There are many other situations that pose a risk for muscle cramping including excessive sweating, dehydration, muscle fatigue, drinking large amounts of water or fluids that lack salt or electrolytes, and taking dietary supplements such as creatine.

Evaluating the Injury:

What’s the story?

- The player gives a history of a “pop”, “tear”, or “pulling” sensation after a sudden change of speed or direction.
- Player complains of pain in the muscle when moving the area.

What does it look like?

- No swelling and no bruising (mild injury)
- Visible swelling or bruising (moderate or severe injury).

What does it feel like?

- There will usually be some pain or tenderness when you gently press on the area.

- You might feel a dent or gap in the muscle in a severe muscle tear.

Can they move on their own?

- The player should attempt to move the joint above and below the injured area on his own.
- If he can move the joints and has good strength with mild pain, it is most likely a mild injury.
- If he can move the joints but has some weakness and moderate pain it is most likely a moderate injury.
- If he has no ability to move the joints (with or without pain) it is classified as a severe injury and could represent a complete tear of the muscle or tendon.



Basic Sideline Management:

- Initial treatment with RICE
- These injuries have a high chance of recurring or getting worse if the player returns to play too soon. In almost all cases, the player should be removed from play, and will need to follow a gradual return to play process that can sometimes take several weeks.

Red Flags:

- ▶ Inability to move the joint above or below the injured area might indicate a severe injury (called a Grade III tear) to the muscle or a complete tear of a tendon. The player should be referred immediately either to the emergency room or local specialist's office.
- ▶ It is very rare for a young athlete to completely tear a tendon, however, it is more common for an adolescent to detach a small piece of bone from the area where the tendon attaches into the bone. This can occur in the front of the knee, high in the hamstrings near the pelvis, or in the front of the pelvis at the hip. Pain in these areas associated with minimal ability to move on his own should be a sign to refer for detailed evaluation.

Play or Sit Out?:

- The player may return to play if he has no pain, normal strength, normal agility and full power for sprinting, cutting, pivoting and jumping. In almost all instances, hold the player out of play at the time of injury and re-evaluate her in a few days. Red Flags should be referred immediately to a specialist.
- A player will be able to return to play if he can pass a "functional progression":
 - Walk without pain, no limp
 - Jog without pain, no limp
 - Run at moderate speed with no pain, no limp
 - Sprint with no pain
 - Agility drills with good form
 - Sport specific training with no pain, normal performance in practice
- Muscle pulls and strains can take a surprisingly long time to return normally to play, depending on the exact type of injury. Minor strains can be as short as a few days while severe injuries can occasionally take several months.

NECK AND BACK INJURIES

KEY POINTS:

- These injuries demand great care and the first and foremost thoughts should be for player safety
- Don't manipulate the neck or back for the player; they may attempt some movement on their own. If they are reasonably comfortable they may be assisted to the sideline.
- Any numbness or tingling of the arms or legs associated with neck or back pain after contact is considered a serious injury. Do not move the player; call 911 for transport and evaluation.

Neck and back injuries are uncommon during soccer practices and games, but if they do occur, they should be treated with care and caution. A strain injury to the muscles around the spine is the most common injury, as is a bruise to the lower back. The key issues are whether there has been an injury to a nerve or possibly a fracture. Occasionally, a player may jump high for a header and be “undercut” by another player, resulting in the higher player falling to the ground and landing on his back or neck.

Evaluating the Injury:

What's the story?

- A neck or back injury during soccer will almost always occur from contact and a fall from a height is a common way to cause injury.
- A player complaining of lower back pain over several practice or game sessions can be a sign that the player has a stress fracture in the spine.
- Numbness or tingling in the arms or legs indicates an injury to a nerve or disc and should be evaluated by a physician. The player should be able to describe whether she has neck or back pain, and any numbness or tingling.
- A condition called a stinger or burner can result in numbness or tingling in the arm but without any neck pain.



What does it look like?

- If the player is able to sit or stand, the neck and back should look normal.

What does it feel like?

- If the player is on the ground but fully able to cooperate with your instructions, you can carefully feel the neck or back with him lying down to check for any areas of tenderness.

Can they move on their own?

- **Do not move the player's neck for her if she is having pain!** If the player is able to do so, she may attempt to move the neck on her own. If she describes mild soreness, she may walk to the sidelines. With

anything more than mild soreness, the player should not be moved; call local emergency services or 911 for transport and proper evaluation.

- Similarly, for pain in the mid-back or lower back, do not attempt to manipulate the back. The player may attempt to sit up when she is calmer and more comfortable. If she feels moderate to severe pain, consider it a potentially serious injury and do not move the player. Call local emergency services or 911 for appropriate transport.
- In a burner or stinger, the player may have difficulty moving the affected arm but should have pain-free movement of the neck.

Basic Sideline Management:

- Your job on the sideline is not to treat or diagnose a back or spinal injury, it is simply to decide whether it is reasonable and safe for the player to move to the sideline on his own.
- If there is any numbness or tingling, or if the player is not able to move on his own with reasonable comfort, consider this a potentially serious injury. Do not move the player; have him remain lying on the field and call 911 for appropriate transport. Your main goal is to promote the safety of the young player and not allow any additional injury.

Red Flags:

- ▶ Any unconsciousness associated with an injury to the neck is considered a very serious injury. Do not move the player; call 911 immediately.
- ▶ Any numbness or tingling of the arms or legs associated with neck or back pain after contact is considered a serious injury. Do not move the player; call 911 for transport and evaluation.
- ▶ Any player that has moderate to severe pain could mean there has been a spinal bone fracture. Do not move the player; call 911 for transport and evaluation.

Play or Sit Out?:

- If a player has had a very minor injury and has recovered on the sideline to the point where she has absolutely no pain; full motion on her own; no numbness or tingling in the arms or legs; and normal ability to sprint, she may return to play.
- Any player you suspect has a more significant injury should sit out and be cleared for play by her doctor.

SHOULDER INJURIES

KEY POINTS:

- As with most injuries, the initial management involves RICE. The photo below shows a simple immobilization method for moderate or severe injuries.
- With a truly minor injury, it is possible that the player will sit on the bench for a time and then feel better. The player may return to play with no pain, full motion of the shoulder and normal strength.
- Do NOT attempt to “set” a broken bone or dislocation. Apply RICE and immobilize as well as you can, then have the player evaluated in the local emergency department.

Shoulder injuries in soccer occur most often from direct contact, usually player to ground, and less often player-to-player. Injuries from forcefully taking a throw-in do occur but are rare. The types of injuries that can occur are fractures (collar bone, upper arm bone), sprain (also called a shoulder separation), or a more severe injury called a shoulder dislocation (complete separation of the ball and socket portion of the joint).

Evaluating the Injury:

What's the story?

- Since most injuries occur by direct contact, the player should be able to give you a general description of how the injury happened. The player should be able to identify where the pain is greatest, and more often than not, point directly to the area of injury.

What does it look like?

- In a fracture, you will most likely see swelling, a deformity, bend, or mis-alignment of the bone. The collarbone is the most common site for a broken bone and the end of the collarbone is the most common site for a ligament injury.
- In a dislocated shoulder you will see the ball portion of the upper arm bone clearly lower and out of place from its normal position.



A “separated shoulder” – the end of the collarbone is visible

- With a small crack in the bone or with a minor injury, the shoulder will most likely look normal immediately after the injury. Swelling may appear later.

What does it feel like?

- Gently feel along the injured area for swelling, a step-off in the bone, or areas of tenderness. Do not push forcefully.

Can they move on their own?

- If the area looks normal and produces mild tenderness when you press on it, you can ask the player to move the shoulder joint on his own. Movement will produce mild, moderate or severe pain and can be used to help determine how severe the injury is.

Basic Sideline Management:

- With a mild to moderate injury, apply RICE.
- With a more severe injury, apply RICE and if possible, use an ACE wrap or arm sling to secure the arm to the player's chest. Have the player transported to the nearest emergency room for proper evaluation and treatment.

Red Flags:

- ▶ If there is an obvious deformity, DO NOT have the player attempt to move his arm.
- ▶ If there is an obvious dislocation, DO NOT attempt to "set" it yourself. If a parent on the sidelines has proper training (always handy to have a parent who is trained in sports medicine, an orthopedic surgeon, emergency doctor, or EMT as part of your team!), you could seek their assistance, but the best course of action would be to apply RICE and arrange for transport to the nearest emergency room.

Play or Sit Out?:

- With a truly minor injury, it is possible that the player will sit on the bench for a time and then feel better. If the player has no pain, full motion of the shoulder and normal strength, he may return to play.
- Any player with an injury with moderate to severe pain should sit out and be evaluated by qualified medical personnel.



Simple shoulder immobilization with an ice pack and two elastic wraps