



SAFETY

Care of Common Ice Hockey Injuries



OBJECTIVES

- To assist coaches in identifying and providing first aid for the different medical conditions commonly associated with ice hockey
- To identify items in a well-stocked first aid kit
- To identify procedures that you should follow when an injury occurs
- To identify information that you should have about your players in case they become injured

INTRODUCTION

Chris has the puck and one defenseman to beat. A fake leaves the defenseman out of the play. Only the goalkeeper is left. As Chris skates toward the goal, the goalkeeper begins to leave the goal area and approach the play. Chris momentarily loses control of the puck and everyone is uncertain as to who will get to play the puck first. Both Chris and the goalkeeper skate full speed toward the puck and each other. They arrive simultaneously, both out of control. There is a violent collision, and Chris lies motionless on the ice. The referee, sensing the likelihood of injury, immediately signals Chris' coach onto the ice to tend to the downed player.

Watching from the bench, the first, and normal, reaction of a coach is to be frightened by the possible outcome of this violent collision. The sinking feeling in the stomach and the "Oh, no" message sent out by the brain when Chris went down have been felt by most coaches at some point in their careers.

If this, or some similar situation confronted you, what would you do? Are you prepared to act appropriately? As coach of a youth ice hockey team, it is your obligation to be able to deal with such an emergency. Before your first practice, you should:

- obtain medical information on your players
- establish emergency procedures
- prepare to provide first aid

You must not rely on the likelihood that a serious injury will not occur to the players on your team as an excuse for not being prepared to handle an emergency situation.

MEDICAL INFORMATION

The completed Athlete Medical History Form should be in your possession whenever your players are under your supervision. Hopefully, the need to use this information will never arise. But, if an injury does occur, the information on this form will help you and qualified medical personnel respond quickly to an emergency.

EMERGENCY PROCEDURES

As the coach of an injured player, you are responsible for the actions taken until the player is placed in the care of competent medical personnel, parents, or guardians. Parents and players expect you to know how to proceed. The following sequential steps should be taken in an emergency:

1. Take charge of the situation.
2. Determine the nature of the injury.
3. Start emergency procedures if necessary.
4. Transfer care to a medical professional.

Step 1: Take Charge

Establish immediate control over the situation by having your assistant coach take charge of all uninjured players. If you do not have an assistant coach, send the players to a designated area within range of your

voice and vision until the injury situation is resolved. This simple action establishes control, clears the area of potentially harmful distractions, and facilitates a quick response to emergency situations.

Step 2: Determine the Nature of the Injury

Upon reaching an injured player, you should perform a visual analysis of the situation. Is the player breathing? conscious? bleeding? Ask the player questions to find out what happened and where the pain is located. This information will help you determine whether the injury is serious and requires emergency measures or whether it is an injury that can be properly cared for without emergency procedures.

Step 3: Provide Emergency Care

Most emergency situations can be appropriately handled if you remember the ABC's of emergency care, as advocated by the American Red Cross.

A = Airway

B = Breathing

C = Circulation

Remembering the ABC's will remind you of how to proceed in a life-threatening situation.

It is beyond the scope of this chapter to provide the complete information necessary to handle all emergencies. To familiarize you with what is involved and to encourage you to obtain appropriate first aid and CPR (cardiopulmonary resuscitation) instruction, the ABC's and bleeding are briefly outlined. More complete information on artificial respiration is available through your local chapter of the American Red Cross.

The ABC's

Open the Airway

Always check the airway to make sure it is free of any items that may impede breathing. In ice hockey, the mouth guard can obstruct the airway and should be removed immediately. The primary method advocated for opening the airway is the jaw thrust or chin lift method. The American Red Cross and American Heart Association provides materials and training for developing this skill.

Restore Breathing

Once the airway is open, check to see if the player is breathing. Is the chest moving up and down? Are there sounds of breathing? Can you feel exhaled air at the mouth or nostrils? If breathing is not taking place, begin artificial respiration. The procedures taught by the American Red Cross and American Heart Association are the standards to follow when attempting to restore breathing.

Restore Circulation

If the heart has stopped beating, circulation should be restored via CPR. Cardiopulmonary resuscitation is a valuable skill to learn and maintain because you are coaching a sport in which the temporary interruption of cardiopulmonary function could occur. The techniques of CPR are beyond the scope of this manual. **You are encouraged to attend one of the many American Red Cross or American Heart Association CPR courses that are regularly offered in nearly every local community that sponsors youth hockey.** Call your local American Red Cross or your local hospital for more information.

Bleeding

Extensive bleeding should be controlled by applying direct pressure over the wound for 10 to 20 minutes without checking the wound. A sterile pad is preferred but, in an emergency, use whatever is available: a towel, a shirt, your hand, etc. The use of a tourniquet is ill-advised and should only be employed when one accepts the fact that its use may be trading the loss of a limb to save a life.

Step 4: Transfer Care to a Medical Professional

The usual culmination of providing emergency care is transferring that care to trained medical professionals (a physician and/or emergency medical technician, an EMT) and transporting the player to a medical facility. This action presumes knowledge of how this should be done.

We recommend that a call for assistance be made immediately upon determination that the injury is life-threatening. This should be completed by an assistant during the time that appropriate care is being administered to the player. To complete

this important task, the location of a phone must be known and the appropriate telephone number must be readily available. If you have the completed Medical History Form in your possession, you are prepared to act.

It is recommended that you contact parents as soon as possible. The information on the Medical History Form is useful to direct EMTs or others to the family's preferred physicians or hospitals. The Medical History Form must accompany the injured player to aid the medical professionals in their diagnosis for treatment of the problem(s).

Rehearsing emergency care procedures can be invaluable.

Immediate treatment of life-threatening injuries is extremely important. Being trained in basic first-aid and emergency procedures is invaluable and will give you more confidence when dealing with any type of injury. Each coach must develop his or her own emergency plan.

PROVIDE FIRST AID

If the player is seriously injured or has collapsed, have your assistant coach, a parent, or a responsible player take the list of emergency telephone numbers from the first aid kit and call an ambulance. You should stay with the injured player until help arrives.

Collapse

The single most important determinant of survival is the time from collapse to defibrillation. Each minute of delay decreases the chance of survival by 10 percent.

Most patients will survive if defibrillation is achieved in less than three minutes.

Sudden Cardiac Arrest

Sudden cardiac arrest is a condition in which the heartbeat stops suddenly and unexpectedly. It is caused by life-threatening arrhythmias or electrical disturbances in the heart's electrical system.

The only effective way to treat cardiac arrest is through a defibrillator, a piece of equipment that

delivers an electrical shock or current to the heart through the chest.

Cardiac arrest is usually reversible if defibrillation occurs within the first few minutes after collapse or loss of the pulse. The sooner the shock is delivered, the better the chance of survival.

The sequence of events that must happen for a victim to survive and recover from a cardiac arrest are:

- **Early Access** – Someone suspects that the victim is in sudden cardiac arrest and calls for help.
- **Early CPR** – A person trained in cardio-pulmonary resuscitation keeps the victim's blood flow to the vital organs until defibrillation can occur.
- **Early Defibrillation** – A person trained in defibrillation shocks the victim as quickly as possible.
- **Early Advanced Care** – Medical personnel provide advanced cardiac care, which can include airway support, medications and hospital services.

The Automatic External Defibrillator (AED) is a portable, light, easy-to-use medical device designed specifically for first responders with minimal training. The coach is the one most likely to be on the scene and respond to the emergency. The AED has a built-in computer that analyzes the heart rhythm and determines if the heart requires a shock.

1. The operator turns on the AED once it is established or thought that the victim does not have a pulse.
2. The operator then attaches the electrodes to the chest of the victim.
3. The machine interprets the heart rhythm of the victim.
4. The operator simply follows the voice prompts and instructions on the screen.

If a shock is necessary, the voice will tell the operator to press the shock button. The AED will not allow a shock to be given unless the victim requires it. An AED should be present in every hockey arena.

Aids for Proper Care

If the injury is less serious and does not require assistance from trained medical personnel, you may be able to move the player from the ice to the bench area and begin appropriate care. Two important aids to properly care for an injured player include a first aid kit and ice.

First Aid Kit

A well-stocked first aid kit does not have to be large, but it should contain the basic items that may be needed for appropriate care. The checklist below provides a guide for including commonly used supplies. You may wish to add and subtract from the kit on the basis of your experience and/or local policies or guidelines.

First Aid Kit Checklist

- _____ plastic tape – 2 rolls
- _____ sterile gauze pads – 4 pads
- _____ sling – 1
- _____ Band-Aids, assorted sizes – 20
- _____ foam rubber/moleskin
- _____ disinfectant
- _____ zip lock plastic bags for ice – 4
- _____ emergency care phone numbers
- _____ list of emergency phone numbers
- _____ scissors
- _____ safety pins
- _____ surgical gloves
- _____ player's Medical History Forms
- _____ chemical ice packs
- _____ list of first aid kit contents

A good rule of thumb for coaches is, "If you can't treat the problems by using the supplies in a well-stocked first aid kit, then it is a problem too big for you to handle." You should be able to handle bruises, small cuts, strains, and sprains. When fractures, dislocations, back, or neck injuries occur, call for professional medical assistance.

Ice

Having access to ice is easy in an ice rink. Ice is very important to proper immediate care of many minor injuries and should, therefore, be readily available.

Care of Minor Injuries

R.I.C.E.

Unless you are also a physician, you should not attempt to care for anything except minor injuries (e.g., bruises, bumps, sprains). Many minor injuries can be cared for by using the R.I.C.E. formula.

R.I.C.E. Formula

The R.I.C.E. formula for care of minor injuries involves the following steps:

- R = REST:** Put the injured area at rest.
- I = ICE:** Apply ice to the injured area.
- C = COMPRESSION:** Wrap an elastic bandage around the injured area and the ice bag to hold the bag in place. The bandage should not be so tight as to cut off blood flow to the injured area.
- E = ELEVATION:** Let gravity drain the excess fluid.

When following the R.I.C.E. formula, ice should be kept on the injured area for 15 minutes and taken off for 20 minutes. Repeat this procedure three to four times. Icing should continue three times per day for the first 72 hours following the injury. After three days, extended care is necessary if the injury has not healed. At this time, options for care include:

- stretching and strengthening exercises
- contrast treatments
- visiting a doctor for further diagnosis

Contrast Treatments

If the injured area is much less swollen after 72 hours, but the pain is subsiding, contrast treatments will help. Use the following procedure:

1. Place the injured area in an ice bath or cover with an ice bag for one minute.

2. After using the ice, place the injured area in warm water (100-110 degrees) for three minutes.
3. Continue this rotation for five to seven applications of ice and four to six applications of heat.
4. Always end with the ice treatment.

Contrast treatments should be followed for the next three to five days. If swelling or pain still persists after several days of contrast treatments, the player should be sent to a physician for further tests.

MAINTAINING APPROPRIATE RECORDS

The immediate care you provide to an injured player is important to limit the extent of the injury and to set the stage for appropriate rehabilitation. However, immediate care is not the end of prudent action when an injury occurs. One brief but valuable task should be completed. That is to complete a USA Hockey Injury Survey Form (located at the end of this chapter).

USA Hockey Injury Survey Form

It is important for you to maintain a record of the injuries that occur to your players. This information may be helpful to guide delayed care or medical treatment and may be very important if any legal

problems develop in connection with the injury. It includes a standard form that will help guide the recording of pertinent information relative to each injury. These records should be kept for several years following an injury. You should check on legal requirements in your state to determine how long these records should be kept.

SUMMARY

This chapter attempts to acquaint you with various injuries associated with hockey and how you should be prepared to deal with these injuries. If you have prepared your first aid kit, brought along the medical records, and familiarized yourself with the different types of injuries, you should be able to handle whatever situation arises. Follow the steps that are outlined for you, and remember—you are not a doctor. If you are in doubt about how to proceed call for professional medical help. Do not make decisions about treatments if you are not qualified to make them.

Remember, react quickly and with confidence. Most injuries will be minor and the injured players will need only a little reassurance before they can be moved to the bench area. Injuries will always occur in hockey. Therefore, you must prepare yourself to deal with whatever happens in a calm, responsible manner.