

**FIRST AID GUIDE  
FOR  
SCHOOL BUS DRIVERS  
AND  
BUS ASSISTANTS**



Colorado Department of Education  
Student Transportation Office

**ACKNOWLEDGEMENTS**

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**Notice to the Reader**

**DISCLAIMER**

The information and recommendations contained in this curriculum have been compiled from sources believed to be reliable; the Colorado Department of Education makes no guarantee as to, and assumes no responsibility for, the correctness, sufficiency, or completeness of such information or recommendations. Other or additional safety measures may be required under particular circumstances.

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## **FIRST AID and BODY FLUID KIT CONTENTS**

School buses are equipped with at least one First Aid kit and one Body Fluid Clean-up kit.

### **First Aid kit will contain:**

- Non-latex gloves
- Gauze pads.
- Roller bandages.
- Triangular bandages (slings).
- Space blankets.
- Blunt scissors.
- Tweezers.
- Adhesive tape.
- Adhesive bandages.

### **Body Fluid kit may contain:**

- Disposable gloves (add additional non-latex gloves).
- Red Z or other absorbent material.
- Antiseptic wipes.
- Disinfectant solution.
- Biohazard bag.
- Paper towels.
- Instructions.
- Small plastic shovel and scraper.

## **NOTICE TO READER**

The information contained in this booklet is offered as a guideline only and is not meant to take the place of seeking medical attention or emergency services. The procedures in this book are based on the most current recommendations for responsible emergency care. However, it is the responsibility of the reader to obtain first aid training and keep abreast of current and updated information. Once you have determined that you need help, immediately contact dispatch or dial 911 for assistance. Always follow the directions given by the emergency medical services.

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## **FIRST AID PROGRAM**

This program contains useful information in the event of a medical emergency. Remember these general guidelines:

**Be Prepared.** Keep first aid supplies in a readily available location and take them with you when traveling and for other activities where injuries are likely.

**Be Calm.** Children will react to your anxiety, which can make the situation worse. Reassure your victim that you can help.

**Be Smart.** Remember that first aid is not a substitute for medical care. Call Emergency Medical Services (EMS) or dial 911 immediately for any serious injury.

## **VOMITING**

Children will vomit for a variety of reasons: intestinal virus, running or spinning too fast, excitement, or motion sickness.

**Note:** Vomiting would be considered more serious should the following occur:

- Following a head injury.
- Vomit that is green or yellow-green fluid.
- Severe stomach pain.
- Vomit resembles coffee grounds.
- Vomiting blood.

### **Care for motion sickness:**

- Sit facing forward; do not ride facing backward.
- Look outside the window at scenery in the distance.
- Sit in the middle of the bus where there is the least amount of movement.
- Get off the bus during stops to walk around and get fresh air.
- Provide the child with a plastic bag and instruct them how to use it should they need to vomit.
- After the episode the child will require little care except for cleaning hands and face and rinsing their mouth. Clean soiled clothing if necessary.

### **How to Clean Up:**

- Use Body Fluid Clean-up kits along with plastic bags, disposable gloves, and paper towels.
- With gloves on, cover the vomit with paper towels or absorbent material, remove and place waste in a plastic bag. A weak solution of bleach and water can be used to disinfect the area.

### **Soft Splints:**

- Soft materials such as a folded blanket, towels, pillows, or a folded triangular bandage can be splint materials.
- A sling is a specific kind of soft splint that uses a triangular bandage tied to support an injured arm, wrist or hand.

### **Rigid Splints:**

- Boards, folded magazines or newspapers, or metal strips that do not have any sharp edges can serve as splints.

### **The Ground:**

- An injured leg stretched out on the ground is splinted by the ground.

## **STROKE**

### **Signals of a stroke include:**

- Weakness or numbness of the face, arm or leg.
- Occurs usually on one side of the body.
- Blurred vision.
- Difficulty talking or being understood.
- Sudden or severe headache.

### **If you suspect a Stroke, think FAST.**

**F=FACE** Ask the person to smile.  
Check to see if one side of the face droops.

**A=ARMS** Ask the person to raise both arms.  
Check to see if one arm drifts downward.

**S=SPEECH** Ask the person to repeat a simple phrase.  
Check to see if their speech sounds slurred or strange.

**T=TIME** If any of the above signs is observed, call 911.  
Inform dispatcher of when the symptoms started. The faster help arrives, the more likely the person is to recover from the stroke without lingering effects.

## **GOOD SAMARITAN LAW**

The State of Colorado has a "Good Samaritan Law." This law, CRS 13-21-108, was enacted to protect any person "who in good faith renders emergency care or emergency assistance." To be protected under this law, a person must not be, or expect to be, compensated for services rendered or go beyond the scope of the training received. Reasonable and prudent care:

- Move a victim only if the victim's life is endangered.
- Ask a conscious victim for permission before giving care.
- Check the victim for life-threatening conditions before providing further care.
- Summon emergency medical personnel to the scene by calling 911 or the local emergency number.
- Provide care until more highly trained personnel arrive.
- Use common sense and a reasonable level of skill, not to exceed the scope of the individual's training in emergency situations.
- Do one's best to save a life or to prevent further injury.
- Good Samaritan Law immunity will not apply when a lay responder's response was deliberately negligent or reckless or when the responder abandons the victim after initiating care.

## **STEPS FOR SURVIVAL**

1. Response.
2. Calling the Emergency Number (911).
3. First Responder Care.
4. Medical Care.
5. Rehabilitation.

## **RECOGNIZING AN EMERGENCY**

The most noticeable indicators of an emergency are abnormal sights, odors, noises, and personal appearances or behaviors. An emergency or serious illness may be difficult to recognize. Indicators are not always easy to identify, and they may not be obvious. Injured or ill people will often deny that anything may be wrong. If you suspect that something may be wrong, check the injured or ill person.

**Your Senses:** Emergencies are often signaled by something unusual that catches your attention.

### **1. Unusual Noises**

Screams, yells, moans or calls for help.  
Breaking glass, crashing metal, or screeching tires.  
Changes in machinery or equipment noises.  
Sudden, loud voices.  
Explosions.  
Quiet – no noise.

### **2. Unusual Sights**

A stalled vehicle.  
An overturned planter.  
A spilled medicine container.  
Broken glass.  
Downed electrical wires.  
Smoke or fire.

### **3. Unusual Odors**

Odors stronger than usual.  
Unrecognizable odors.  
Smell of something burning.

### **4. Unusual Appearances or Behaviors**

Trouble breathing.  
Clutching the chest or throat.  
Slurred, confused or hesitant speech.  
Unexplainable confusion or drowsiness.  
Sweating for no apparent reason.  
Unusual skin color.

- I: ICE** applied to the injured area will help to reduce swelling.
- Swelling causes more pain and slows healing.
  - If available, apply ice.
  - Place something between the ice pack and the skin.
  - Cover the ice pack with a wet cloth.
  - Apply ice for 20 minutes on and 20 minutes off.

**C: COMPRESSION** or using a pressure bandage also helps to prevent or reduce swelling.

- Use an elastic bandage.
- Wrap the injured area with the bandage, but not so tight that blood is cut off; it should not be painful.
- Fingers or toes beyond the bandage should remain pink and not become “tingly.”
- Splint the injured part only if the person must be moved and it does not cause significant pain.

**E: ELEVATION** means raising the injured area above the level of the heart.

- Elevate legs and arms.
- Have child lie down to get the leg above heart level.
- Elevation may also reduce throbbing pain.

## **IMMOBILIZING**

Splinting is a method of immobilizing an injured extremity and should be used **ONLY** if you have to move or transport a person to seek medical attention and if splinting does not cause more pain.

**If you need to splint:**

- Splint the injury in the position in which you find it.
- Splint the injured area and the joints or bones above and below the injury site.
- Check for circulation (feeling, warmth, and color) before and after splinting.

**Anatomic splints:**

- The person’s body is the splint. For example, splint an arm to the chest or an injured leg to the uninjured leg.

- Following a seizure, give reassurance.
- The person may be tired, sleepy and disoriented.
- Allow the child to rest while waiting for EMS.
- Watch their airway and breathing.
- Start CPR if the child stops breathing.
- Turn to recovery position after seizure is over.

## **SHOCK**

Shock occurs when cells, tissue, and organs do not receive enough oxygenated blood. Shock can result from a severe injury, an illness or infection. Symptoms are the result of the body trying to save oxygen for the most vital body parts, including the heart and brain.

### **Symptoms:**

- Disorientation.
- Confusion.
- Loss of consciousness.
- Clammy, pale skin.

### **Care:**

- Call 911.
- Have the child lie down with their legs elevated 10 to 12 inches.
- If child has no back or neck injuries and is unconscious, roll them like a log onto their side.
- Do not give the child fluids.
- Keep them comfortable.

## **SPRAINS, FRACTURES AND DISLOCATIONS**

A child with an injury to muscles, bones, or joints may have a sprain, strain, or fracture. The care given for these injuries is the same. Always assume there is a bone fracture.

Remember **RICE**

**R:** **REST** the injured area.

- If moving the injured area causes pain, your body is telling you to stop.

## **Recognizing Emergencies While Driving the Bus:**

- Students may have unusual facial expressions.
- Crying.
- Students slide out of sight and can hide behind seats.
- Students alerting the driver of a situation.
- Trips and falls.
- Fights.
- Weapons.
- Students congregating.

## **VICTIM ASSESSMENT**

### **Check-Call-Care / Assess the Area and the Injured**

- **Determine if the area is safe.** Do not place yourself in harm's way.
- Determine the extent of the illness or injury and how it happened.
- Look for witnesses who may be able to assist with care.
- Ask bystanders to help you find out what happened.
- Examine the injured for a MEDIC ALERT necklace, bracelet, or identification card (check neck, wrist and ankle).
- Look beyond the first casualty; you may find others.
- Look for consciousness and any life-threatening emergencies.
- Contact your Transportation Dispatch and follow proper procedures.

### **Life-threatening conditions. These would include:**

- Unconsciousness.
- No response to rescue breaths.
- Persistent chest pain or discomfort.
- No pulse or signs of life.
- Breathing difficulties or lack of normal breathing.
- Severe bleeding.
- Seizures that last more than 5 minutes, recur, or result in injury.
- Burns that cover more than one part of the body.
- Burns to the head, neck, feet, hands, and genital area, or burns resulting from explosives, chemicals or electricity.

## **OBTAINING CONSENT**

Consent must be obtained before caring for a conscious victim. Consent for a child or infant is implied if no adult is present.

### **To obtain consent:**

- Identify yourself.
- Inform the victim that you have been trained in first aid.
- Ask the injured person if you may help.
- Explain what you plan to do and how you can help.
- If the victim does not consent to care, do not give care. Remember, "NO" means "NO."
- A person who is unconscious, confused, or seriously ill may not be able to give consent. In these cases, consent is considered to be implied, which means that an injured person would agree to any care you would provide if they could.

## **STANDARD (UNIVERSAL) PRECAUTIONS**

Many people afraid to act in an emergency are concerned they may contract a disease from the injured party. Take steps to minimize the risk of disease transmission. The risk of contracting a disease by administering first aid is very low.

### **Following basic guidelines can help reduce disease transmission when providing first aid:**

- Be prepared by having a first aid kit handy and stocked with protective equipment and supplies.
- Before providing care, use protective barriers, such as eye protection, non-latex disposable gloves, or a clean dry cloth between the victim's body fluids and yourself.
- Avoid contact with body fluids when possible.
- Use disposable (non-latex) gloves when possible.
- Cover any cuts, sores, scrapes, and skin conditions you may have.
- Do not eat, drink, or touch your mouth, nose or eyes when giving first aid.
- Do not touch objects that may be soiled with blood.
- Wash your hands with soap and water as soon as possible after providing care to a victim.
- Work up a soapy lather for at least 15 seconds and rinse hands well.

## **NOSE INJURY**

Administer basic first aid, be aware of danger points, and take into consideration the "do not" list.

### **DO's**

- Sit victim upright and slightly forward to avoid swallowing blood.
- Hold firm pressure below the bony part of the nose for 10 minutes.
- If bleeding has not slowed after 10-15 minutes, seek medical care.

### **DON'T**

- Do not lean the child back.
- Blood can clot – child can choke or aspirate fluid.
- Do not use ice packs on the nose or head.
- Do not press between nose and eyes.
- Do not allow child to pick or blow nose.

## **SEIZURES**

### **Symptoms:**

- Confusion, dizziness, or disorientation.
- Loss of consciousness may occur.
- Difficulty breathing – turning blue.
- Entire body stiffening.
- Convulsions (uncontrollable jerks & twitches).
- Eyes roll upward.
- Vomiting.
- Soiling may occur.
- Staring.

### **Care:**

- Stay calm.
- Protect child from harmful surroundings.
- Protect their head.
- Do not restrain convulsive movements.
- DO NOT put anything in student's mouth.
- Turn child's face to side to prevent choking.
- Time the duration of the seizure.
- Call dispatch, 911, or local emergency services.
- Ensure parents are notified.
- Provide information to Emergency Responders.



**Three acceptable techniques for moving an injured person are:**

- Clothes drag or blanket drag for those suspected of having a head, neck, or spinal injury.
- Pull the child out of harm's way, holding onto the clothing, keeping the body in a straight line.
- Support the head with the clothing and your hands, without allowing the head to move as you drag.

**Log-Roll Technique:**

- This move can be done with 3 people evenly spaced along the child's body.
- Hold hip, thigh, and calf to support and steady the leg.
- Support the child's head and neck continuously while gently straightening the legs and arms.
- While supporting the spine, direct rescuers to roll the victim, keeping head, neck, trunk, and toes in a straight line at all times.

**Assisting a walking person: Child can walk but needs assistance to get out of danger:**

- Put the injured person's arm over your shoulder and hold it with one hand while you put your other arm around their waist.
- While supporting the child, walk them away from the danger.
- With two rescuers, the child can put one arm over the shoulder of each person while receiving support on either side.

**NECK AND SPINAL CORD INJURIES**

**Always suspect a neck or spinal injury if the victim:**

- Has fallen more than 10 feet or 3 times their height.
- Has a bad head injury.
- Does not get up and come to you for comfort after a fall.
- Tells you their neck or back hurts.

**Care:**

- Do not move the child unless there is immediate danger.
- Call 911.
- If the child vomits, roll them like a log onto their side, keeping the neck and back straight.

- Use waterless hand sanitizers if soap and water are not readily available.
- Alcohol based sanitizers may be used if you do not have immediate access to hand washing facilities.

**Glove Removal:**

- Pinch the bottom of one glove at the wrist area.
- Pull the glove toward the fingertips without removing it, leaving it partially inside out.
- Remove the second glove by pinching the wrist area and pulling the glove inside out, removing it completely.
- Touching only the inside of the first glove with the ungloved hand, pull it off completely.
- Be sure to discard the gloves in an appropriate container.
- Wash your hands thoroughly with regular soap and water.

**CARDIOPULMONARY RESUSCITATION (CPR)**

CPR for all ages is a cycle of 30 compressions and 2 breaths. Compressions must be given at a rate of 100 per minute. The only differences will be the depth of the compression and the amount of air. Start with compressions.

**Procedure:**

- Carefully place victim on their back on a firm, flat surface.
- Kneel at the victim's side.
- Place the heel of one hand in the center of the victim's chest between the nipples.
- Place the heel of the other hand on top of the first hand, interlacing the fingers.
- Push straight down.
- Adults – 2 inches.
- Children (one—eight years old) – 2 inches.
- Infants (Use only first 2 fingers of one hand) - 1 ½ inches.
- After each compression, release pressure on the chest allowing it to return to its normal position. (For effective compressions, chest must return to normal position.)
- Give 30 compressions followed by two breaths that make the chest rise.
- Do not interrupt the cycle of compressions and breaths.
- Repeat the sequence until victim responds, help arrives, or you are too tired to continue.

**Concentrate on providing proper compressions at the correct rate.**

## **RESCUE BREATHING**

Rescue breathing should be done when there are no signs of breathing. This is determined by feeling for breath and watching for the chest to rise and fall. This is done during CPR or when there are signs of circulation. It is recommended to use some form of barrier when providing rescue breaths.

### **Procedure:**

- Pinch the nose closed with the first 2 fingers of your hand.
- Place heel of the same hand on the forehead and push back.
- With the other hand, lift the chin at the bony part.
- Take a normal breath, and covering the victim's mouth with yours, blow into the person's mouth for about 1 second.
- Watch for the chest to rise.
- If chest does not rise with each breath, reposition head and try again.
- Give 2 breaths and check for normal breathing and signs of circulation.

## **ACCIDENTS**

### **Accidents Involving a School Transportation Vehicle:**

- Secure the vehicle.
- Check yourself for injuries.
- Check your students for injuries.
- Determine if students would be safer inside or outside of the vehicle and whether the vehicle needs to be moved.
- Maintain control of your students and the situation - the driver's responsibility is to the students on the bus.
- Create a seating chart for law enforcement and district records.
- Follow your district's accident procedures.
- Be aware of places and times.
  - Loading / Unloading.
  - Location.
  - List of students' names on the bus.
  - Witnesses?
  - Students eating?
  - Weather.
  - Safety of students.
  - Information of involved parties.

## **HEART ATTACK**

A heart attack can happen to anyone, anytime. Usually a major blood vessel within the heart becomes blocked from the blood clot that has moved from another part of the body. Children who engage in strenuous sports activity may have a spasm in a valve or vessel that can cause sudden collapse.

### **Symptoms:**

- Pain or squeezing sensation in the chest.
- Pain that radiates to the jaw or down one or both arms.
- Breathlessness.
- Nausea & vomiting.
- Profuse sweating & anxiety.
- Collapse.
- Irregular heart beat.

### **Care:**

- Call dispatch, 911, or local emergency services.
- Check the CAB's (circulation, airway, breathing). Give CPR if breathing and circulation have ceased.
- If CAB's are okay, make the child comfortable.
- Do not leave alone.
- Offer reassurance.
- Continue to monitor until help arrives.

### **PROVIDE PROPER COMPRESSIONS AT THE CORRECT RATE.**

## **INJURED PERSONS CARE**

**DO NOT MOVE** an injured person unless it is absolutely necessary to do so. Moving a person who is not in imminent danger could result in more damage. Therefore only under these special circumstances should a victim be moved.

- There is a threat of immediate danger to you or the victim.
- In order to reach or have access to another injured person.
- It is necessary to move the child to give the necessary care.

### **Eye Puncture:**

- Secure item to face with a clean cloth.
- Instruct child to close both eyes.
- Call emergency/911 immediately.
- Younger children – bandage both eyes.

### **Chemical Burns or Foreign Object:**

- Rinse eye with clean water.
- Position affected eye lower than the unaffected eye.
- Keep eyes closed if irritation does not subside.
- Contact dispatch or call 911.

### **Direct Trauma (a hit or a punch):**

- Apply a cool, clean towel.
- Apply slight pressure.
- Seek medical attention for bruising and possible eyeball laceration.

## **HEAD INJURIES**

### **Signs:**

- Fainting.
- Dizziness.
- Lightheadedness.
- Extreme weakness.
- Sleepiness.
- Fatigue.
- Paleness.
- Sweaty skin.
- Nausea.
- Change in mental status.
- Change in consciousness.
- Confusion.

### **Care:**

- Remain with victim at all times.
- Have victim lie down to prevent injury.
- If the child fell, are there head or back injuries?
- If no injury, elevate feet, loosen clothing.
- If symptoms persist or worsen, contact dispatch, 911, or local emergency services.
- Always make sure a parent is notified of any kind of head injury.

### **Triage when there are injuries:**

When identifying the conditions of the students, try to separate the students into three categories. Group these students by color as much as possible in your safe location. Place a piece of yarn or ribbon matching the category around the students wrist.

- Minor (Green) - This category is often called the walking wounded.
- Immediate (Red) - Look for any one of these three signs.
  - **R**espiration - Over 30.
  - **P**ulse - No signs of circulation. (Capillary Refill over 2 seconds when fingernail is pinched and released)
  - **M**ental Status - Unable to follow simple commands; such as, "Hold up two fingers."
- Delayed (yellow) - Do not see any symptoms or injuries at the current time.

By following these steps while waiting for help to arrive, you can significantly help the first responders when they arrive. If you are unsure, place the student in red. These will be the first individuals the first responders look at.

### **Accidents Not Involving a School Transportation Vehicle:**

- Recognize that an emergency exists.
- Decide to act.
- Follow your district's procedures to contact 911.
- Provide care until help arrives.
- The worst thing you can do is nothing at all.

## **INJURIES**

### **Leading causes of unintentional deaths.**

- Motor Vehicle Accidents.
- Falls.
- Poisoning.
- Drowning.
- Choking.
- Fire.

## **ENVIRONMENTAL/HEAT/COLD EMERGENCIES**

Heat related emergencies can range from mild to life-threatening. You must recognize and give first aid. A child with mild signs can get worse quickly and develop potentially life-threatening problems, such as heatstroke. Children are especially sensitive to extreme temperatures.

**Heat related emergencies include:**

- Muscle cramps.
- Sweating.
- Headache.
- Nausea.
- Weakness.
- Dizziness.

**HEAT CRAMPS**

Heat cramps are painful, involuntary muscle spasms that usually occur during heavy exercise in a hot environment. The body loses salts and fluids when sweating. Drinking large amounts of water dilutes the salts, causing cramps. Inadequate fluid intake often contributes to heat cramps. Muscles affected include: calves, arms, abdominal wall, and back, although heat cramps usually concern muscle groups involved in exercise. Heat cramps are the mildest of the heat emergencies.

**Symptoms:**

- Painful spasms in the muscle.
- Excessive sweating.

**Care:**

- Stretch the cramping muscle.
- Cool the child with cool, wet towels, water sprays, and fanning.
- Provide sports drinks to replace fluid and electrolytes, usually 4-6 ounces every 15 minutes.

**HEAT EXHAUSTION**

Heat exhaustion is a condition whose symptoms may include heavy sweating and a rapid pulse, a result of your body overheating. Body temperature will remain near normal. Heat exhaustion is more severe than heat cramps.

**Symptoms:**

- Cool, moist, pale skin.
- Irritability.
- Headaches.
- Dilated pupils (wide).
- Dizziness.
- Nausea/Vomiting.

**EYE INJURIES****Seek emergency medical care for:**

- Puncture to the eye.
- Unequal pupils.
- Visual disturbances.
- Constant pain, tearing, or blinking (more than 30 minutes).
- Inability to move the eyes; foreign bodies in the eye.
- Light sensitivity.

Avoid excessive movements of the injured eye. Prevent eye movement by gently covering both eyes with gauze or paper cups.

Do not remove any object that has punctured the eye – call 911.

**The following conditions should be reported to school personnel:**

- All black eyes.
- Bleeding in the white part of the eye.
- Lacerations near the eye.
- Child complains of eye pain

**If poison splashes in the victim's eye:**

- Gently flush the eye with water for 15 minutes.
- Call Poison Control Center for further advice.

**Local Poison Control Center phone number: \_\_\_\_\_****Eye Flush:**

- Pour water over the bridge of the nose.
- Be sure the affected eye is lower than the other eye when rinsing to avoid contaminating the unaffected eye.
- Use a plastic bag with a small hole in it.
- An eye-wash bottle, gently running hose, or shower can also be used.

**Eye Injury Signs:**

- Pain.
- Swelling / redness.
- Trouble seeing.
- Bruising.
- Bleeding.

## **DIABETES**

Diabetic emergencies are generally caused by too little sugar in the child's blood. Diabetics usually carry some form of sugar or glucose tablets to take in the event of a diabetic emergency or low blood sugar.

### **Signs of low blood sugar include:**

**Mild:** Hunger, shaking, sweating, paleness, spaciness, or irritability.

**Moderate:** Confusion, slurred speech, poor coordination, behavior changes.

**Severe:** Loss of consciousness, seizures.

### **Conscious Care:**

- If child is alert, escort into school/home.
- Give them some type of fast-acting sugar, preferably in liquid form.
- Fruit juices or non-diet sodas can be used as well as sugar dissolved in water.
- Honey sticks or small tubes of cake gel work well and are easy to transport.
- Place honey or cake gel between the cheek and the gums and rub in.
- Call dispatch, 911, or local emergency services if necessary.

### **Unconscious Care:**

- Call 911 or radio your dispatcher if the person is unconscious or semi-conscious.
- Verify airway is clear.
- Check breathing.
- Monitor signs of life until help arrives.

## **EAR / FOREIGN BODY**

**Do not attempt to remove objects from the ear.** Call dispatch, 911, or local emergency services.

- Diarrhea.
- Fever.
- Thirst.
- Fatigue.
- Cramps in the arms, legs, or abdominal wall.

### **Care:**

- Give cool liquids immediately and at 15-minute intervals.
- Move the child to a cool or shady area.
- Lay the child on back with feet elevated.
- Remove or loosen clothing.
- Cool the child with cool, wet towels, water sprays, and fanning.
- Seek medical attention if the victim is vomiting or is unable to take fluids.

## **HEAT STROKE**

Heat stroke is a life-threatening condition that occurs when your body temperature reaches 104° F (40 C) or higher, often resulting from exercise or heavy work in a hot environment. It is the least common but the most severe of all heat emergencies.

### **Symptoms:**

- Occurs when people ignore symptoms for heat exhaustion.
- Vomiting.
- High fever (over 104° F).
- Hot, red, or dry skin (may stop sweating).
- Confusion or strange behavior.
- Disorientation.
- Seizures.
- Loss of consciousness.
- Rapid or weak pulse.
- Rapid or shallow breathing.
- Not able to drink.

### **Care:**

- **Cool the child as quickly as possible!**
- Call 911.
- Move to a cool or shady area.
- Loosen or remove clothing.
- Fan the victim.
- Cool the child with cool, wet towels or water sprays.
- If conscious – give small amounts of cool water.
- Do not offer fluids to drink if the child is disoriented or unconscious.

**Do Not:**

- Do not wait to begin cooling the victim until trained help arrives and takes over. **Every minute counts!**
- Do not continue cooling the victim once the victim's behavior is normal again. Unnecessary cooling could lead to low body temperature (hypothermia).
- Do not put rubbing alcohol or anything other than water onto the victim's skin.
- Do not give the child anything to drink or eat if the victim cannot swallow or is vomiting, confused, has had a seizure, or is not responding.

**HYPOTHERMIA**

A person with hypothermia usually is not aware of his or her condition because the symptoms often begin gradually and because the confused thinking associated with hypothermia prevents self-awareness.

**Symptoms:**

- Body temperature falls below 95° F (35 C).
- Shivering.
- Clumsiness or lack of coordination.
- Slurred speech or mumbling.
- Stumbling.
- Confusion or difficulty thinking.
- Poor decision making, such as trying to remove warm clothes.
- Drowsiness or very low energy.
- Weak pulse.
- Shallow breathing.
- Numbness.
- Glassy stare.
- Apathy.
- Loss of consciousness.

**Care:**

- Care for any life threatening conditions.
- Call 911.
- Remove any wet clothing, and dry the child.
- Move victim to a warm place.
- Make victim comfortable.
- Warm body gradually using blanket, dry clothing, or body heat.

**Make a fist with one hand.**

- Position it slightly above the person's navel.

**Grasp the fist with the other hand.**

- Press hard into the abdomen with a quick, upward thrust – as if trying to lift the person up.

**Perform abdominal thrusts.**

- Repeat until the blockage is dislodged.

**DENTAL INJURIES****Bleeding from inside the mouth:**

Bleeding from the lips, tongue or inside the mouth can be the result of injury from one's own tooth.

**Care:**

- To control the bleeding, fold a small gauze pad that is big enough to fit between the teeth and tell the child to bite down. This will apply pressure to the site of bleeding.
- Change the gauze if it becomes saturated with blood.
- Instruct the child not to swallow the blood.

**Tooth Knocked out:**

A knocked out tooth needs to be replaced as soon as possible. Replace within 30 minutes for the best chance of survival. A knocked out permanent tooth is considered a dental emergency. It is not necessary to replace a baby tooth. In order to tell the difference between the two, a baby tooth has a smooth edge. If you are still unsure, seek medical advice immediately for assistance.

**Care:**

- If a permanent tooth is knocked out or if the tooth has a large piece broken off, call or go to the dentist or an emergency center immediately.
- Put on disposable gloves.
- Place the tooth in milk (whole milk is best) or in the victim's saliva for transport in a paper cup or zip-lock bag.
- Never handle the tooth by the root.
- Apply firm pressure for approximately 10 minutes with gauze or a towel to control bleeding.
- Do not attempt to reinsert the tooth yourself.

## **CLOSED WOUNDS**

Closed wounds are also called bruises or contusions. This occurs when the damaged tissue is under the skin surface.

### **Care:**

- Apply direct pressure to the wound.
- Elevate the affected body part if it does not cause more pain.
- Apply an ice or cold pack.
- Be sure to place a cloth between the ice pack and the skin.
- Apply in 20-minute intervals. (Ice-20 minutes; No Ice-20 minutes)

## **CHOKING**

Choking occurs when a foreign object becomes lodged in the throat or windpipe, blocking the flow of air. Choking cuts off oxygen to the brain; administer first aid as soon as possible. If the child is coughing, encourage them to keep coughing. Stay with the victim and monitor their progress.

The universal sign for choking is hands clutched to the throat. If the person doesn't give the signal, look for these indications:

- Inability to talk.
- Difficulty breathing or noisy breathing.
- Inability to cough forcefully.
- Skin, lips, or nails turn a bluish color.
- Loss of consciousness.

### **Care:**

- Perform abdominal thrusts until the blockage is dislodged.
- If you are the only rescuer, perform abdominal thrusts before calling 911.

## **ABDOMINAL THRUSTS**

### **Stand behind the person.**

- Wrap your arms around the waist.
- Tip the person forward slightly.
- Put one foot between the person's feet and the other foot behind you to maintain balance.

- **APPLY HEAT SOURCE ONLY TO TORSO.**

- If available, apply heating pad or other heating sources.
- Do not apply heat directly to skin; keep a barrier such as a towel between the heat and skin.
- If alert, give sips of warm liquids slowly.

## **FROSTBITE**

When toes, fingers, or other body tissues are exposed to freezing or cold and windy conditions, blood vessels restrict and the tissues freeze.

### **Symptoms:**

- Tingling (pins & needles sensation).
- Cold & numb.
- White or waxy skin.
- Hard, painful skin.
- Skin does not move when you push on it.
- Blisters.

### **Care:**

- Call 911.
- Keep child warm.
- Carefully remove any constricting garments or jewelry.
- Remove any wet clothing.
- Warm the affected parts by putting between your hands. (do not rub as this may damage the tissue).
- Warm affected hands by placing them in the child's armpits.
- Warm affected body parts by placing them in warm water (NOT HOT) between 100 and 104° F.
- Dry carefully.
- Apply light dressing to keep fingers and toes separated.
- Give warm liquids.

## **BURNS**

The severity of a burn depends upon its size, depth, and location. Burns are most severe when located on the face, neck, hands, feet, and genitals. Burns are also severe when spread over large parts of the body, or when they are combined with other injuries. Burns result in pain, infection, and shock.

### **FIRST DEGREE:**

The least serious burns are those in which only the outer layer of skin is burned. The skin is usually red, with swelling and pain sometimes present. The outer layer of skin has not been burned through. Overexposure to the sun is a common cause of first degree burns.

#### **Care:**

- Treat a first-degree burn as a minor burn unless it involves substantial portions of the hands, feet, face, groin, or buttocks, or a major joint.
- Flush with cool (not cold) running water.

### **SECOND-DEGREE:**

These are deeper than first degree burns, and they look red or mottled and have blisters. They may also involve a loss of fluids through the damaged skin. Second degree burns are usually the most painful because nerve endings are usually intact, despite severe tissue damage.

#### **Care:**

- Flush with cool running water until the pain subsides.
- Loosely apply a nonstick, sterile, or clean gauze bandage.
- **Elevate the burned body part or parts.** Raise at or above heart level, when possible.

### **THIRD-DEGREE:**

Third-degree burns are the deepest, and they may look white or charred, extending through all skin layers. Victims of third-degree burns may have severe pain -- or no pain at all -- if the nerve endings are destroyed.

#### **Care:**

- Always seek medical attention.
- Remove burnt clothing unless it is stuck to the skin.
- May flush with cool water up to 10 minutes.
- Check for signs of circulation (breathing, coughing, or movement). If there is no breathing or other sign of circulation, begin cardiopulmonary resuscitation (CPR).
- Elevate the burned body part or parts. Raise above heart level, when possible.
- Cover the area of the burn. Use a cool, moist, sterile bandage; clean, moist cloth; or clean moist towels.

## **ANIMAL BITES**

- Animal bites are required to be reported to the County Health Department.
- Tetanus shots are recommended every 10 years. A booster shot may be necessary if the wound is deep or dirty and it has been more than five years since your last tetanus shot.
- **For minor wounds:** If the bite barely breaks the skin and there is no danger of rabies, treat it as a minor wound. Wash the wound thoroughly with soap and water. Apply an antibiotic cream to prevent infection and cover the bite with a clean bandage.
- **For deep wounds:** If the animal bite causes a deep puncture of the skin or the skin is badly torn and bleeding, apply pressure with a clean, dry cloth to stop the bleeding, and seek medical attention.
- **For infection:** If you notice signs of infection, such as swelling, redness, increased pain or oozing, consult a doctor immediately.
- **For suspected rabies:** If you suspect the bite was caused by an animal that might carry rabies – including any wild or domestic animal, seek medical attention.

**Snake bites:** Wrap the entire extremity from torso out with a bandage. Do not over stretch the bandage. You do not want to cut off circulation, only prevent swelling of the extremity.

## **INTERNAL BLEEDING**

### **Suspect bleeding inside the body if:**

- An injury from a car crash, a pedestrian injury, or a fall from a height.
- An injury to the abdomen or chest (including bruises such as seat belt marks).
- Sports injuries.
- Pain in the chest or abdomen after an injury.
- Shortness of breath after an injury.
- Coughed-up or vomited blood after an injury.
- Signs of shock without bleeding that you can see.

#### **Care:**

- Have the child keep still and lie down.
- Check for signs of shock.
- If the child stops responding, start CPR steps.



## **MAJOR WOUNDS**

Deeper cuts and lacerations that involve skin penetration, nerves or blood vessels. Blood can be spurting.

### **Care:**

- Use disposable non-latex gloves to provide a barrier between the wound and skin.
- Wash the wound thoroughly with regular soap and water.
- Irrigate the wound for five minutes with clean, running tap water.
- Place sterile dressing on the wound.
- Apply direct pressure to control bleeding.
- Cover the dressing with a roller bandage.
- **Do not remove the first dressing.**
- If bleeding persists, add more sterile dressing and cover with an additional roller bandage.
- Take steps to minimize shock.

## **PUNCTURE WOUND**

These are wounds that are caused by objects that penetrate the skin and underlying tissues, bones, muscles, and structures. They are caused by nails, wires, needles, knives, etc.

### **Care:**

- **Do not remove an object that is the source of the puncture.**
- **Prevent the object from moving by supporting the object and wrapping it with gauze to stabilize it.**
- If the cut is a puncture wound through a shoe (for example, the child has stepped on a nail), the child should be evaluated immediately by a doctor.
- All puncture wounds should be watched for signs of infection (pain, redness, or tenderness).
- Infections can occur weeks or even months after the puncture.
- Call dispatch, 911, or local emergency services.

### • **Do Not:**

- **Do not apply lotions, ointments, sprays, or home remedies.**
- **Do not immerse large severe burns in cold water.** Doing so could cause shock.
- **Do not use ice.** Putting ice directly on a burn can cause frostbite, further damaging the skin.
- **Do not apply butter or ointments to the burn.** This could prevent proper healing.
- **Do not scrub the burn.**
- **Do not break blisters.** Broken blisters are vulnerable to infection.
- **Do not remove burnt clothing if stuck to the skin.**
- Make sure the victim is no longer in contact with smoldering materials or exposed to smoke or heat.

## **MEDICAL EMERGENCIES**

### **ALLERGIC REACTIONS**

Allergic reactions can result from food, stings, latex, or medications. A severe allergic reaction (anaphylaxis) can produce shock and life-threatening respiratory distress and circulatory collapse. This condition can cause death quickly if not treated immediately. After inhaling, absorbing, or ingesting; allergic reactions may occur within seconds or up to several hours after exposure. There are a wide range of reactions from the harmless to the severe, and some may even be life-threatening.

### **Signals of an allergic reaction include:**

- Red, swollen skin.
- Hives, itching, or rash.
- Nausea, vomiting, weakness, or stomach cramps.
- Dizziness.
- Trouble breathing, including coughing and wheezing.
- Tingling sensation in the mouth or the throat.
- A feeling like the throat is closing off.
- Low blood pressure.
- Shock.
- Feeling of apprehension.
- Swollen tongue or face.

### Care:

- Ask student about allergies and if they have been exposed to allergen.
- Look for a medical ID bracelet.
- Check the person's airway, breathing and circulation.
- Call 911/radio Dispatch if they have trouble breathing or throat is closing.
- Assist into a position that is comfortable for breathing.
- Keep student calm.
- If student has an Epi-Pen – assist student with injection; through clothing into their outer thigh. (Epi-Pen is a pre-packaged, ready to inject dose of Epinephrine to counteract the effects of the allergic reaction).
  - Remove safety cap.
  - Hold pen in fist as shown above.
  - Press pen hard against thigh half-way between hip and knee.
  - Hold pen in place for several seconds.
  - Remove pen and rub injection site.
- Call emergency response when an Epi-Pen is administered.
- Note time injection was given. Effect can wear off in as little as 20 minutes.
- Place the used Epi-Pen in a plastic water bottle to prevent contact with the needle when it remains exposed.
- Give the used pen to emergency responders.
- Begin steps of CPR (see page 9) if the victim is not breathing and has no signs of circulation.
- **Do not administer a second dose.**



## ASTHMA / INHALERS

Asthma occurs when the airways in the lungs (bronchial tubes) become inflamed and constricted. The muscles of the bronchial walls tighten, and the airways produce extra mucus that blocks the airways. Asthma may require the use of a bronchodilator (inhaler). Colorado State Statute allows students to carry inhalers and Epi-Pens on the school bus with a doctor's consent.

### Signals of an asthma attack include:

**Mild:** Fatigue, cough, paleness, restlessness.

## EXTERNAL BLEEDING

### OPEN WOUNDS

An open wound is any injury that results in a break in one or more layers of skin. This can range from minor to major.

Five types of open wounds:

- Abrasions.
- Amputations.
- Avulsions.
- Lacerations.
- Punctures.

### MINOR WOUNDS

Consist of surface cuts, lacerations, or scrapes.

### Care:

- Clean with antiseptic or antibacterial soap and water.
- Rinse well.
- Apply pressure to the cut with clean gauze or a towel to control bleeding.
- Cover with an adhesive bandage if the cut is in an area that can become dirty easily.
- Keep small wounds exposed to air.
- If signs of infection develop, such as redness, oozing or swelling, seek medical attention.

## **STINGS**

A variety of insects can cause stings such as bees, wasps, and hornets. Stings to the mouth and throat can be potentially more dangerous since there can be local swelling inside, resulting in blockage of the airway.

### **Care:**

- Remove the stinger by scraping it off with a credit card or blunt edge of a nail file or finger nail.
- Do not squeeze or remove with tweezers as more venom could be injected.
- Clean the area with an antiseptic pad.
- Apply a cold pack to reduce swelling.
- Continue to monitor for severity of reaction.
- If condition worsens, call dispatch, 911, or local emergency services.

## **BLEEDING**

### **Care:**

- Always apply direct pressure to the cut to stop bleeding.
- Use a cloth, gauze, and towel or even a clean newspaper between the cut and your hands.
- Wear non-latex gloves if available.
- If bleeding is from an arm or leg, elevate the limb above the level of the heart.
- If bleeding is severe and not controlled by pressure, have the victim lie down with their feet elevated 10 to 12 inches.
- Call 911 immediately.
- Do not use tourniquets.
- If a knife, scissors, or any other object is in the wound, do not pull it out. It could make the bleeding worse.
- Wrap gauze or a supportive material around the object for support.

### **If Bleeding Does Not Stop:**

- Do not remove the dressing.
- Removing dressing will pull blood clots and cause the wound to bleed more.
- Add a second dressing and press harder.
- Watch for signs of shock.

**Moderate:** Cough, irritability, shortness of breath, increased respiratory rate, audible wheezing.

**Severe:** Nasal flaring, blue color around mouth and nail beds, extreme breathing difficulty.

### **Care:**

- Help the person sit up.
- If needed, assist child to use their "emergency" inhaler.
- Read and follow any instructions printed on the inhaler.
- Shake the inhaler.
- Remove the cover.
- Have the person place his/her lips tightly around the mouthpiece.
- As the person breathes in slowly, administer the medication by quickly pressing down on the inhaler canister.
- The child should continue to take a full, deep breath and hold it for 10 seconds.

If ordered, help administer second dose. Call 911 if condition does not improve or worsens.

## **BITES**

Both animal and human bites can be serious because sharp teeth can puncture the skin, which sends bacteria deep into the body.

### **Care:**

- Wash area with soap and water and apply pressure with sterile gauze or a clean cloth if the child is bleeding.
- Cover any broken skin with a bandage.
- Seek medical attention if:
  - The skin has been punctured or broken.
  - The bite was from a wild or stray animal, an animal that does not have up-to-date rabies shots, or any animal acting strangely.
  - The child was bitten on the face, neck, hand, or near a joint.
  - The bite or scratch is becoming red, hot, swollen, or increasingly painful.
  - The child is not up-to-date on their tetanus shot.