

# UNIT III

## CRASH AND EMERGENCY PREPAREDNESS

A thorough knowledge of safety and crash procedures is a requirement of any professional driver. School bus drivers can face many different types of emergencies, most commonly a breakdown or a traffic crash. There are other types of emergencies that the driver must be prepared to handle as well, such as a student injury or illness. Any driver may face an emergency situation at any time. This unit has been developed to prepare drivers to address various emergency situations.

### 3.1 **EMERGENCY PLAN OF ACTION**

**Each district must develop and implement a written policy to include emergency procedures. (Minn. Stat. 123B.91)**

There are a few basic things that the driver should keep in mind with any type of emergency:

**SAFETY** – The driver is responsible for the safety of the passengers on board the bus.

**REMAIN CALM** – The driver must remain calm under the pressure of an emergency situation to avoid unnecessary panic and confusion.

**ASSESS THE SITUATION QUICKLY** – The driver must be able to evaluate the situation quickly, and determine what type of assistance is needed.

**REQUEST ASSISTANCE** – Via two-way radio or telephone.

The following are examples of emergencies that must be planned for in all pupil transportation programs. There must be a written plan that spells out precisely what steps are to be followed in any emergency situation.

***The driver must never leave the bus unattended. The first responsibility is to the students. (MN Rule 7470.1000 Subp. 4)***

**Emergency Action Plans include:**

- A. Crash Procedures: – see section 3.2
  - 1. Driver's immediate responsibilities.
  - 2. Reporting guidelines.
  - 3. A procedure for handling situations when the driver is injured and unable to supervise the students.
  - 4. Transferring students to a replacement bus.
  - 5. Use of warning devices.
  
- B. Vehicle Evacuation: – see section 3.3
  - 1. Reasons for evacuating the bus.
  - 2. Evacuation procedures.
  - 3. Enlisting the help of Student Safety Assistants.
  - 4. Evacuation drills.
  - 5. Evacuation drills for special education students.

- C. Emergency Equipment: (See section 3.4)
  - 1. Required equipment to be carried on board the bus.
  - 2. Proper use of all emergency equipment.
- D. Emergency Medical Care: (See section 3.5)
  - 1. Good Samaritan Law (MN Stat. 604A.01 and 604A.015)

### **3.2 POST-CRASH PROCEDURES**

This section will discuss procedures for dealing with crashes, vehicle breakdowns, fire and the possibility of a driver becoming incapacitated, ill, disabled or the possibility of injured students.

**All crashes, regardless of severity, must be reported immediately.**

- A. Primary responsibilities of the school bus driver:
  - 1. Safety and care of students.
  - 2. Get assistance.
  - 3. Secure crash scene.
  - 4. Gather information.
- B. Quickly assess your situation before calling your dispatch office:
  - 1. Check for injuries.
  - 2. Determine if evacuation is necessary.
  - 3. Students remain on the bus unless the bus is in a dangerous location, a fire exists, or the bus is too heavily damaged.
  - 4. Evacuate if (see section 3.3 Evacuation Procedures) fuel spilled, bus is overturned, fire danger exists, potential for further hazards exists.
  - 5. If evacuated, consider traffic and hazards when evacuating, move students a minimum of 100 feet from site, keep students together and supervise them.
- C. Immediate first aid for severe or life threatening injuries: (see section 3.5 medical care)
  - 1. Do not move unless necessary for safety.
  - 2. Breathing problems treated first.
  - 3. Stop bleeding next.
  - 4. Treat for shock after that.
- D. Prevent further crash and/or injuries:
  - 1. Delegate an adult(s) or responsible student(s).
  - 2. Supervise until emergency teams arrive.
- E. Get help on the way immediately:
  - 1. Radio or call your dispatch office or;
  - 2. Send for help if no other options are available.
  - 3. Send any responsible adult who stops to assist.
- F. Quickly secure the vehicle in a safe area if possible.
  - 1. Do not move the vehicle after stopping unless:
    - a. Requested to do so by the police
    - b. Vehicle is in an unsafe place

2. Secure vehicle:
  - a. Set emergency brake
  - b. Shut off ignition
  - c. Remove the keys
3. Operation of triangle reflectors – driver must know how to use them.
4. Placement of triangles: (two-way roadway)
  - a. First -10 feet behind rear of bus, facing traffic
  - b. Second - 50 steps behind bus (100 feet)
  - c. Third - 50 steps in front of bus (100 feet)
5. Placement of triangles: (one way roadway)
  - a. First -10 feet behind rear of bus, facing traffic
  - b. Second - 50 steps behind bus (100 feet)
  - c. Third - 100 steps behind bus (200 feet)
6. Placement of triangles: (curve or hill)
  - a. First -10 feet behind rear of bus, facing traffic
  - b. Second -100 feet to 500 feet behind bus
  - c. Third - 50 steps in front of bus (100 feet)
7. Lights:
  - a. Emergency flashers on day or night
  - b. Running and interior lights after dark

G. Secondary care of passengers and /or injured victims:

Possible Student Injuries: **Check your specific school district or company policy.**

Report all crashes immediately to a school official. A school official may be able to squelch some of the rumors that would otherwise go home to parents about even a minor crash. If there is any indication whatsoever that some students, although not outwardly showing it, could be shaken up or injured internally or externally all students should be brought into the school nurse upon arrival at school.

1. Treat students and other victims for injuries as necessary:
  - a. Do not move unless necessary for safety
  - b. Stop bleeding
  - c. Treat for shock
2. Maintain order:
  - a. Students remain seated
  - b. Students hold noise down
  - c. Inform students of situation
  - d. Reassure students that situation is in control
3. If injured are sent to the hospital:
  - a. Record names of students
  - b. Record time
  - c. Record destination hospital
4. Transfer of students:
  - a. If another bus is necessary to transport students, do not release students until all student names, addresses and phone numbers are recorded and the replacement bus has arrived.
  - b. Students must be released by emergency personnel before they can leave the bus.

- c. Safe conditions must exist including the avoidance of crossing of any streets and walking through hazards. Students must walk in a single-file, orderly line to the replacement bus.
  - d. Any transfer of students requires the supervision of an adult.
  - e. Double check to make sure all students have been transferred.
- H. Exchange of information: (have someone supervise students)
- 1. Fill out crash information card.
  - 2. Give name, address and license number to police and other driver.
  - 3. Get other driver/vehicle(s) information: (name, address, phone number and DL number).
  - 4. License plate number(s) of vehicle(s) involved.
  - 5. Insurance information.
  - 6. Name, phone number and address of witnesses.
- I. Other required procedures:
- 1. Discuss crash only with the police, transportation department, school official, company officials.
  - 2. Do not discuss or let passengers discuss crash with unauthorized people such as the media or a passerby.
  - 3. Do not leave crash site until authorized to do so.
  - 4. Do not let anyone on your bus other than emergency personnel, school or company staff.
- J. Crash reporting (MN. Statute 169.09 and MN. Rule 7470.1000 Subp. 4):
- 1. It is recommended that each bus be equipped with a card that lists the following information: type of bus, year, make, color, license number, company name, address, phone number, insurance company name and policy number, space for the driver's name, phone number, driver license number, company or district contact person.
  - 2. A driver must report the crash to law enforcement in the event of a personal injury or death.
  - 3. Drivers of vehicles involved in a crash resulting in bodily injury, death or property damage of \$1,000 dollars or more (total of all vehicles or property involved) must file an accident report to the commissioner of public safety within 10 days.
  - 4. Additional information and filing of a report electronically can be found online at: <http://www.mndriveinfo.org>
- K. Requirements for a post-crash re-inspection of a school bus. MN Statute 169.4511  
A school bus must be re-inspected by the state patrol if the crash resulted in:
- 1. a fatality;
  - 2. bodily injury to a person who, as a result of the injury, immediately receives medical treatment away from the scene of the accident; or
  - 3. one or more motor vehicles incurring disabling damage as a result of the accident, requiring a motor vehicle to be transported away from the scene by tow truck or other motor vehicle.
- L. Vehicle Breakdown and Emergency Stops:
- 1. Examples – stalled engines, mechanical, flat tires.

2. Primary responsibilities – student safety, vehicle and getting assistance.
3. Student care:
  - a. Remain on the bus unless bus is in a dangerous location or fire danger exists
  - b. Maintain order – remain seated and hold noise down
  - c. Inform passengers of situation
  - d. Reassure passengers that situation is in control
4. Safety and care of vehicle:
  - a. Pull off road as far as possible/consider conditions of shoulder
  - b. Secure vehicle – set emergency brake, shut off engine and remove keys
  - c. Set out emergency equipment
  - d. Operation of emergency triangles
5. Placement of triangles: (two-way roadway)
  - a. First -10 feet behind rear of bus, facing traffic
  - b. Second - 50 steps behind bus (100 feet)
  - c. Third - 50 steps in front of bus (100 feet)
6. Placement of triangles: (one way roadway)
  - a. First -10 feet behind rear of bus, facing traffic
  - b. Second - 50 steps behind bus (100 feet)
  - c. Third - 100 steps behind bus (200 feet)
7. Placement of triangles: (curve or hill)
  - a. First -10 feet behind rear of bus, facing traffic
  - b. Second -100 feet to 500 feet behind bus
  - c. Third - 50 steps in front of bus (100 feet)
8. Lights – emergency flashers day or night, running and interior lights after dark.
9. Get assistance:
  - a. Do not leave bus if carrying students
  - b. Radio call to dispatch if equipped
  - c. Send for help if no other options are available (send an adult who stops to help)
- \* All buses manufactured after January 1, 1995, must have a two-way communication system. Prior to 1995, it is highly recommended that some type communication system be available.

M. Fire. Causes of fires – electrical malfunction, crash, fuel ignition.

1. Primary responsibilities – safety of students, park vehicle properly (follow emergency stop or crash procedures), attempt to extinguish fire and assess fire danger, get assistance.
2. Secure vehicle –
  - a. Stop if moving
  - b. Evacuate students:
    1. Use emergency doors as necessary
    2. Consider traffic
    3. Consider location of fire
    4. Keep students away from fire and smoke
    5. Keep students together a minimum of 100 feet from bus
    6. Supervise after evacuation

3. Use fire extinguisher if possible:
  - a. Do not endanger yourself or others in an attempt to fight fire
  - b. Dry chemical extinguisher only approved - Useful for liquid, electrical and dry combustibles
  - c. Check for operable condition daily
  - d. Use safely – avoid breathing chemical, do not aim at a person
  - e. Proper use – pull pin, hold upright, squeeze handles together to discharge, use back and forth sweeping motion at base of fire
  - f. Get assistance – radio to dispatch to call 911 or call 911 yourself.

### **3.3 BUS DRIVER WHO BECOMES ILL, DISABLED OR INCAPACITATED:**

If the bus driver begins to feel ill or is disabled, the driver should stop the vehicle immediately in a safe location, set the brakes and remove the key from the ignition, and ask students for help, call dispatch office for assistance. Bus assistants should be trained to use the radio, to send for help and to keep order until help arrives.

#### Student Bus Assistants or Bus Patrols:

Injured driver plan – During the year it is important to instruct reliable students how to use the two way radio if the bus is so equipped, how to set the parking brake and to turn off ignition of bus. If the driver is injured or becomes ill, it is very important that the students have had instruction on how to react and how to keep calm in emergencies. Take time to instruct students during school bus evacuation drills. Students are to stay with the bus until help arrives.

#### Replacement Bus Drivers:

Replacement bus drivers should make sure that everything is secure and students walk safely to the replacement bus. Remember that you must park the replacement bus in a safe location so students do not have to cross the street and do not have to walk through or past any hazards to get onto the replacement bus.

### **3.4 VEHICLE EVACUATION**

Generally speaking, your students are safer on the school bus than off, given traffic conditions, weather and the difficult task of controlling a large group not confined in a small area. However, there are circumstances when you must evacuate the bus.

#### **A. Reasons for Evacuation:**

1. Fire or Danger of Fire – A bus should be stopped and evacuated immediately if the engine or any portion of the bus is on fire. Being near an existing fire and unable to move the bus away or the presence of any combustible material should be considered a fire danger and students should be evacuated. Also, the bus location near a fire spill, or the bus involved in a crash in which a fuel tank has been punctured either on the bus or the vehicle involved in the crash would necessitate evacuation.

2. Unsafe Position – If the bus is stopped in any position that constitutes a hazard, the bus should be evacuated:
  - a. on or very near railroad tracks, whether or not a train is in the immediate area;
  - b. in an intersection;
  - c. where the position of the bus may change, increasing the danger (edge of steep bank, near top of steep grade, etc.);
  - d. where the position of the bus is such that there is danger of a collision (where visibility is not at least 300 feet; such as below crest of hill, near a sharp curve, in dip of roadway, etc.);
  - e. in or near water; threat of drowning; or
  - f. in or near the path of a tornado (you should refer to your local school district policy regarding weather situations).
3. When not to evacuate. Under some circumstances it is not desirable to evacuate the bus:
  - a. the emergency is not of danger to the occupants in the vehicle (overheating the engine, flat tire, etc.); or
  - b. conditions outside present greater hazard than remaining in vehicle (extreme cold, deep snow, lightning, etc.).

B. Evacuation Procedures:

There are three basic types of evacuation:

1. Everyone exits through the front entrance door.
2. Everyone exits through the rear emergency door.
3. Front half exits through front door and rear half exits through the rear door.
4. Newer buses have roof exit hatches or side window exits. Be familiar with this equipment.
5. Under certain circumstances, one or both doors may be blocked and unusable. Emergency planning should take this into consideration. Drivers and students must know the location and function of emergency exits.

C. Recommended Procedures:

1. Stop and secure the vehicle well away from traffic and apparent hazards.
2. Notify emergency agencies: (police, fire, ambulance, etc.)
3. Gather emergency equipment (ie: first aid kit, fire extinguisher, hang microphone out driver's window).
4. Driver should stay on bus and supervise evacuation.
5. Designate an assembly area for students at least 100 feet from the bus.
6. Use both exits, if necessary, to reduce evacuation time.
7. Direct and supervise student safety assistant in assisting pupil evacuation.
8. Set out reflectors and remove the first aid kit and fire extinguisher from the bus.
9. Notify immediate supervisor as soon as possible. Supervisor will notify school personnel.
10. Strongly recommend teachers participate and supervise all evacuation drills.

Cautions:

1. The welfare of the students is the driver's primary concern.
2. There is a possible danger when a child jumps from the rear emergency door exit. Through proper instruction and practice this danger can be minimized.
3. In an emergency, it is possible for students to "jam" the exits by all trying to get out at the same time. The driver should remain calm and make every effort to instill confidence in their students.

D. Student Safety Assistant.

1. A well-organized school bus safety assistant can be a big help in emergency situations.

Role: The purpose of the school bus safety assistant is to assist the driver in ensuring the safety of students. If the driver is not able to perform the required duties, the assistant should be able to take over and protect the students.

Qualifications:

- Maturity
- Good citizenship
- Live near the end of the route, if possible
- Written consent of parents and/or authorized by school

Specific Responsibilities:

Assist the driver in an emergency by:

1. Keeping other students calm in case of emergency
2. Aid in keeping students together in the evacuation process
3. If driver is incapacitated, know how to turn off bus, set the brake and call for help
4. Follow the recommended bus evacuation procedures

E. Evacuation Drills:

State statute requires students be trained annually (K through 10<sup>th</sup>) in school bus evacuations and other emergency procedures. (See MN. Statute 123B.90 for requirements)

These drills need to be carefully planned and supervised to provide meaningful experiences for emergency situations.

Some points for consideration are:

1. Emergency drills for school buses should be organized in a manner similar to fire drills held regularly in schools.
2. Drills should be held on school property or other safe location.
3. All drills should be under the direction or supervision of the administrative office, and help must be solicited from building staff.
4. All students must be given an opportunity to participate, including those children who only ride a bus on a special trip.
5. Each student must be instructed in the proper safety precautions while riding the bus and during drills. (All students must be trained regardless if they ever ride a bus or not).
6. Drivers must supervise the drill. Drivers must be sure that the brake is set, ignition is off and transmission is in neutral or park.
7. The major objective of a school bus evacuation drill is to get the children off safely in the shortest possible time and in an orderly fashion. Students should not be permitted to take lunch boxes, books, etc. with them as they evacuate the bus. Instruct them to leave those items on the bus and return through service door to retrieve them after the drill.
8. The students should move a distance of at least 100 feet from the bus and assemble there in a group. Instruct students on how and where to get help. Instructions and telephone numbers should be posted or otherwise carried in the school bus.

9. Document the day of drill and have bus contractor or school administrator sign statement that the drill took place.
10. Special education students, including students in wheelchairs, and preschool students, must be included in evacuation drills (see unit 6 for more information).

F. Tornadoes:

1. Encounter Procedures – Bus Drivers:

- a. Upon first sighting a tornado funnel, determine which direction it is traveling, and whether it will hit you. If time allows, notify dispatch of location and situation.
- b. If there is likelihood that the tornado will come near your vehicle, travel at right angles away from the tornado.
- c. If there is likelihood that the tornado will hit your vehicle, and there is no escape route available, follow the procedures below:

**EVACUATE THE BUS, TAKE THE STUDENTS TO THE NEAREST DEPRESSION OR DITCH UPWIND OF THE BUS FAR AWAY FROM THE BUS SO THAT THE BUS WILL NOT ROLL OVER ON THEM AND INSTRUCT THEM TO COVER THEIR HEADS WITH THEIR ARMS.**

**DO NOT ALLOW STUDENTS TO TAKE PERSONAL POSSESSIONS. IF THE STUDENTS ARE WEARING COATS OR JACKETS, THESE CAN BE USED TO PROVIDE ADDITIONAL PROTECTION FOR THEIR HEADS AND BODIES. TAKE ONLY THE FIRST AID KIT FROM THE BUS.**

- d. If you are driving when you hear a tornado warning or spot a funnel, and there is no time to move the children when you stop the bus, have the children assume the protective position, remaining in their seats, with their heads below window level. Shut off vehicle, except for lights, and get under the dash away from the door.
- e. If there is a house or building nearby which offers shelter, and there is time enough to reach it, move to the basement of the building, and crouch against the wall nearest the approaching storm. If there is not a basement in the building, crouch against a central wall not exposed to windows facing the approaching storm.
- f. Do not:
  1. Attempt to escape a tornado by outrunning it when in a residential area
  2. Drive at unsafe speeds to escape a tornado
  3. Take on students if a tornado is nearby, or likely.
- g. What To Do After The Tornado Has Struck:
  1. Remain calm and try to keep the children calm.
  2. Apply first aid as necessary.
  3. Call for help if needed.
  4. Transport children to school or to alternate locations if appropriate.
  5. Continue to listen to your radio for weather bulletins and other emergency information.

### 3.5 **EMERGENCY EQUIPMENT** - MN. Statute 169.4501

A. Certain items of emergency equipment are required by Minnesota Statute. They are:

1. Fire extinguisher – at least 2 ½ pound capacity (or equivalent) and with UL rating of at least 10 BC.

Location – The fire extinguisher must be mounted in manufacturer's bracket and located in driver's compartment in full view of or marked and readily accessible to the driver and students.

2. First aid kit – a removable, moisture proof and dust-proof container. Kits must be mounted in full view and marked to indicate their location and identity in the driver's compartment.
3. Body fluid cleanup kit - a removable, moisture and dust-proof container. Kits must be mounted in full view and marked to indicate their location and identity in the driver's compartment.
4. Emergency reflectors – each school bus must carry at least three reflectorized triangle road- warning devices, each of which must be capable of being seen and distinguished at a distance of 500 feet under normal atmospheric conditions. (MS 169.454)

B. Use of Emergency Equipment:

1. Fire extinguishers – how to use:

Remove extinguisher from mounting bracket. Hold in vertical position. Release safety device. Squeeze the handle to discharge. Direct the discharge hose at the base of the fire in a sweeping motion, keeping in mind the direction of the wind.

A fire extinguisher has approximately 10 – 12 seconds of continuous discharge. Once used, it may be ineffective to use again. Report any usage of extinguisher to immediate supervisor for replacement.

2. Placement of warning devices:

- a. Two-way traffic – one device is placed at the traffic side of the bus and 10 feet from the bus in the direction of greatest hazard. Second device is placed approximately 100 feet from the bus and in the center of the lane occupied by the bus. Third device is placed approximately 100 feet in front of the bus and in center of lane occupied by bus.
- b. One-way traffic – one device is placed on traffic side of vehicle and 10 feet from vehicle in direction of greatest hazard. Second device is placed 100 feet from vehicle, in center of lane occupied by vehicle. Third device is placed in center of lane occupied by vehicle and 200 feet from vehicle in direction of greatest hazard.
- c. If the bus is on hill or curve, placement distance can be greater but should not exceed 500 feet.

3. It is recommended on Special Education and Wheelchair buses to have blankets, to be used to cover students and an approved cutting device (REQUIRED) for cutting seatbelts, tie downs, etc. in emergencies.

### 3.6 **EMERGENCY MEDICAL CARE**

The first objective of emergency medical care is to save a life. Many persons are hesitant or reluctant to provide emergency medical care because they are afraid they may be held liable for their actions. The laws of Minnesota protect people who render emergency care.

#### A. GOOD SAMARITAN LAW: (MN. Stat. 604A.01 and 604A.015)

“No person who in good faith and in the exercise of reasonable care renders emergency care at the scene of an emergency is liable for any civil damages as a result of acts or omissions by such person in rendering the emergency care. For the purposes of this section, the scene of an emergency shall be those areas not within the confines of a hospital or other institution which has hospital facilities, or an office of a person licensed to practice one of more of the healing arts. . .”

#### B. FIRST AID:

First aid is the immediate and temporary care given to the victim of a crash or sudden illnesses until the services of a professional can be obtained. A person who is familiar with first aid procedures will be more likely to respond to emergencies in a confident and competent manner. A victim recognizes that a competent person is administering the treatment. Common sense and a few simple rules are the keys to effective first aid.

THE MOST SERIOUS EMERGENCIES ARE CONDITIONS THAT AFFECT A PERSONS AIRWAY: BREATHING AND CIRCULATION (ABC's). EXAMPLES:

AIRWAY –Choking, allergic reactions that cause swelling which constricts the airway, asthma, trauma.

BREATHING – Conditions that affect breathing or lead to respiratory arrest: cardiac arrest, head trauma, drowning, drug overdose, SIDS.

CIRCULATION - Cardiac arrest, uncontrolled profuse bleeding, shock.

ANY CONDITION THAT AFFECTS THE A,B,C's IS CONSIDERED A SERIOUS EMERGENCY

#### **CALL 911**

Bus drivers should immediately call 911 whenever they feel a student is experiencing a medical emergency, whether or not the student admits to his or her condition. The students may not recognize the seriousness of their condition.

The bus driver must determine the safety of the scene in which the emergency is taking place before providing first aid. Determine if there are any hazards on the scene that may cause injury/illness. If the scene is unsafe, the driver should not enter to provide first aid.

**THE ABOVE PRECAUTIONS MUST BE TAKEN BEFORE PROVIDING ANY EMERGENCY MEDICAL CARE.**

#### C. STOPPAGE OF BREATHING:

Review of the American Heart Association CPR guidelines.

#### D. BLEEDING:

1. Use appropriate Personal Protective Equipment such as gloves.
2. Bleeding or hemorrhage can be caused not only by severing a blood vessel, but also by a blood vessel that ruptures (aneurysm).

3. The time it takes a person to bleed out varies depending on the age, size and current health of the victim as well as the type of bleeding occurring: arterial bleed, venous or capillary bleed. Death from profuse, uncontrolled external or internal bleeding can occur rapidly.
4. The following methods only cover external, not internal, bleeding:
  - a. Direct Pressure – **Never use your bare hand. use a gloved hand.** Place a pad over the wound and press firmly with one or both hands. Direct pressure can be applied by your gloved hand, by a dressing and your hand, or by a pressure dressing.
  - b. If dressing becomes blood stained DO NOT remove, just add additional layers of dressing and continue to apply pressure until you stop the bleeding.
  - c. Elevation – elevation is used in conjunction with direct pressure, not after bleeding has stopped. A bleeding extremity should be elevated so that the wound is above the level of the heart. Gravity helps to reduce blood pressure, thus bleeding is slowed. However, this method should not be used if there are possible fractures or dislocations to the extremity, objects impaled in the extremity, or possible spinal injury.
  - d. Pressure Points - A pressure point is a place where a large blood vessel passes over an underlying bone. Severe bleeding may be controlled by using the fingers or heel of the hand to press the blood vessel against the underlying bone. There are eight commonly used pressure points. (Pulse sites are common pressure points.) Pressure applied at any of these points will slow bleeding beyond that point. Pressure should not be applied any longer than necessary to stop the bleeding. (Even though there are 8 commonly used pressure points used in pre-hospital care, there are actually more than 8).

#### E. SHOCK:

Shock, as classically defined, is a condition that occurs when tissue perfusion with oxygen becomes inadequate. The cells of the body are starving of oxygen. This condition, if it persists, will cause damage to organs and death.

There are many different types and causes of shock. Any condition that interferes with the body's ability to transport oxygen to the cells of the body produces the syndrome called SHOCK. Some conditions that cause SHOCK are severe bleeding, severe dehydration or loss of body fluid, heart attack, stroke, spinal or head injury, severe allergic reactions, sepsis (a toxic condition resulting from the spread of bacteria or their products from a focus of infection), salt balance and acid– base balance changes. Psychogenic (emotional) shock is a nervous system reaction brought about by fear or emotional upset. This type of shock is temporary and self-correcting (sometimes within minutes) and is not life threatening.

**A state of shock may be recognized by some of the following symptoms:**

1. Cold and sweaty skin
2. Pale face
3. Nausea or vomiting
4. Shallow breathing

5. Altered level of consciousness (confusion, restlessness, combativeness, unresponsiveness, faintness)
6. Rapid and shallow breathing
7. Rapid pulse
8. Victim will complain of feeling thirsty
9. Victim will complain of feeling weak and/or dizzy
10. Victim may complain of feeling cold
11. Victim may have a feeling of impending doom

**A life may be saved by prevention of shock:**

After correcting the cause of shock from bleeding, cardiac arrest, respiratory arrest, etc. the following procedures should be followed:

1. Monitor victim's airway and breathing. If the victim vomits, turn victim on their side and clear out airway of objects that are visible.
2. Place victim's body in a horizontal or slightly head-down position by elevating the legs slightly, about 12 inches. **DO NOT MOVE OR ELEVATE VICTIM'S LEGS IF YOU SUSPECT A SPINAL INJURY.**
3. **IF A SPINAL INJURY IS SUSPECTED LEAVE THE VICTIM IN THE POSITION YOU FOUND THEM IN FOUND. ONLY MOVE THE VICTIM TO MAINTAIN THEIR AIRWAY OR IF THEY ARE IN IMMINENT DANGER.**
4. Keep victim warm, but do not overheat.
5. Reassure the victim and keep them as calm and still as possible.
6. Do not give victim anything to eat or drink, even if they complain of thirst.
7. Continue to monitor the victim's airway and breathing.

**F. SEIZURES:**

1. 911 should always be called when a victim has a seizure or convulsions regardless of how long it lasts. When the electrical activity of the brain becomes irregular, seizures can occur. A seizure is not a disease in itself, but rather a sign of an underlying defect, injury, or disease.
2. Never restrain a victim having a seizure. **This action will make the victim's condition worse.**
3. Be prepared to begin rescue breathing. Victims having a seizure may stop breathing.
4. Medical personnel should evaluate victims of a seizure. Let dispatch know you have this situation so they can inform the school and/or parents.
5. Be sure to keep a victim of a seizure from hurting themselves on sharp objects or seats. If they vomit during or after the seizure roll them onto their side.
6. Never put your hands or fingers in or near the mouth of a person having a seizure.

#### G. CHOKING: (Heimlich maneuver)

For a victim who is conscious and choking follow these steps:

1. Determine if the person is choking – ASK them.
2. 911 should always be called.
3. When asking a person if they are choking, you should also ask if they can speak.  
If you just ask if they are choking, most people will just shake their head yes or no. You must ask if they can speak to see if they are truly choking. If they can speak (even barely), breath or cough forcefully, they are not completely obstructed.
4. Encourage them to cough. You will not need to perform the Heimlich Maneuver if the victim has only a partially blocked airway.
5. Never hit a choking person on their back in an attempt to pop out the object. This could cause the object to lodge deeper.
6. Position yourself behind the victim.
7. Place thumb side of fist against the middle of their abdomen, just above their navel.
8. Grasp your fist with your hand.
9. Give quick upward thrusts.
10. REPEAT until the object comes out or person becomes unconscious.

If the victim becomes unconscious be prepared to do CPR if you are trained to do so. Even though CPR is not required by statute, it is important to know.

#### H. COMMON INJURIES OR ILLNESSES THE DRIVER MAY ENCOUNTER:

In case of involvement in a serious crash, the first concern of the person administering first aid is to save lives. After this phase is past, it then becomes necessary to attend to other injuries of persons involved. These injuries may be of a serious nature, but not likely to cause immediate death. It is therefore necessary to be able to recognize and administer first aid to the following:

1. Spinal injuries. In case of injury or suspected injury to the spine or neck:
  - a. 911 should always be called.
  - b. DO NOT move the victim unless victim is in imminent danger the victim should not be moved.
  - c. Keep the victim warm and quiet.
  - d. Watch breathing and be prepared to start rescue breathing. Do not move the head unless to open the airway while providing rescue breaths. Try to keep head movement to a minimum. Using the jaw thrust maneuver will open the airway and keep head movement to a minimum. You must open the airway if the victim is not breathing. Use current American Heart Association's guidelines for providing rescue breathing.
2. Fractures. First aid to broken bones should do no more than prevent further injury. There are two types of fractures:
  - a. Simple (or closed) – The bone is broken but the skin has not been punctured.
  - b. Compound (or open) – The skin is broken as well as the bone.

3. Do not move an injured person until the suspected fracture site has been splinted, unless the victim is in imminent danger. Place the limb in as natural a position as possible without causing discomfort to the victim.
4. Open wounds should be covered with sterile dressing, if possible, before apply a splint. Ideally, splints should be applied by medical personnel. A simple form of stabilization called manual stabilization can be used until professional help arrives. Manual stabilization is when you take your gloved hands and support the fracture site, preventing any movement and providing support to the injured limb. The goal is to prevent bone ends from moving and damaging surrounding tissue.
5. Broken bones in the hand or foot can be held steady with a pillow or blanket bound around it.
6. Head injuries. Consider anyone found unconscious to have a possible head injury, and take the following precautions:
  - a. Call for trained emergency medical personnel immediately. Keep the victim(s) lying down. Do not move unless absolutely necessary, unless victim is in imminent danger or movement is needed to provide rescue breathing or CPR.)
  - b. Keep victim warm, if weather is cold or damp.
  - c. Control bleeding from a head wound by applying a pressure dressing. Wound should be treated as described in previous bleeding section, as well as using the same precautionary measures. Caution should be used in regard to using pressure over a possible skull fracture.
  - d. Unconsciousness due to a head injury should be considered when the events leading to unconsciousness are not witnessed. Monitor the victim's airway. Rescue breathing may be necessary.

**REMINDER: Check around the victim's neck, wrist, wallet or purse for a medical alert identification tag or card that might help explain the victim's present condition.**

7. Common injuries or illnesses that the school bus driver might encounter:
  - a. Eye injuries – any eye injury is serious and the bus driver should never attempt to treat an injury of this nature. In case of eye injury, the eye should be covered with a sterile gauze pad and attended to by a doctor or nurse as quickly as possible. (If feasible, cover both eyes to prevent excessive eye movement).
  - b. Vomiting – vomiting is very seldom preventable, but some relief could be given both before and after vomiting by exposing the person to fresh air. Every bus is required to have a body fluid cleanup kit.
  - c. Nosebleed – Have the victim sit down and lean forward or lie down with their head and shoulders raised. Then pinch the soft part of the nose firmly for approximately 10 minutes. Do not have them put their head back.
  - d. Bee sting – bee stings can be serious if an adult or student is allergic to them. First aid for a bee sting can be as simple as an ice pack and as complicated as a 911 emergency call for an allergic reaction. Allergic reactions can be much the same as shock symptoms, and usually have some swelling and can result in trouble breathing.

**SUMMARY:**

The school bus driver must be ready to react in a confident, decisive manner if and when any emergency situation arises. Familiarity with correct crash reporting procedures, vehicle evacuation techniques, use of emergency equipment kept on board and basic emergency medical techniques are a must for all school bus drivers.