

## EMERGENCY SITUATIONS



Your priority is the treatment of injured persons. The types of injuries that could be incurred are numerous, however, three types require prompt attention:

- **Blocked Airway or Stoppage of Breathing** – Most people can be saved if they start breathing on their own or artificially within two minutes. If breathing has been stopped for five minutes, there is only a 25% chance of saving the victim. (A basic CPR course is recommended for all school bus drivers).
- **Severe Bleeding** – Sanitary napkins are very effective. If a person is bleeding profusely, shock or death may result quickly.
- **Shock** – In shock, the vital body functions are depressed. Death may result if not treated promptly, even though the injury which caused the shock is not severe enough to cause death. Shock may result from injuries not readily apparent, or even without physical injury.

### Priority of Treatment

A school bus crash may involve injury to a number of people. If several people are injured, and the scene permits you to begin treatment promptly, treat breathing first, then move quickly to those who are bleeding but still have a chance for survival. Then move to less urgent injuries. Except in situations of continuing danger or physical impracticality, treat a person where he is found and utilize those on the scene, including the victims, to assist in the treatment where feasible. In this way you can handle a number of injuries at once.

It goes without saying that a collision scene is a very confusing place. Most people tend to run around trying to be helpful, but do not really know what to do. Therefore, it is essential that you be prepared to take control and establish priorities for action on the basis of three evaluations you make. **Note:** You, as a school bus driver, will be functional in a collision only if you remain conscious and alert.

**NEVER begin first aid treatment until the further safety of everyone is assured.**

### **General First Aid Principles**

There are a number of basic first aid principles that are applicable in every case, regardless of the nature of the injury. In carrying these out, you will do much to preserve the lives of the injured until the casualty or casualties are transported to medical attentions. The principles are:

#### Arrange for Medical Attention

- The best procedure to follow is to take the casualty or have him taken (if necessary, by ambulance) to the emergency room of the nearest hospital.
- Speed is important because a major factor in saving lives and limbs of those who are seriously injured is early medical assessment.

### Keep the Casualty Quietly at Rest

- Particularly if badly injured or if the nature of the injuries is unknown.

### Organize Bystanders to Give Assistance

- Some bystanders may have knowledge of first aid: others should be sent to obtain assistance or blankets, direct traffic, etc.

### Provide Warmth

- It is important to keep the casualties warm by placing blankets, coats, etc. over and under them.

### Give Plenty of Reassurance

- Fear and anxiety are frequently the most distressing aspects of traffic collision. Words of comfort help slightly, but an attitude of efficiency and calmness will do much more to give the casualty confidence and relieve high anxiety.
- Determine the number of casualties and the severity of the injured (quick look at the group)
- Send for the medical aid
- Where there are multiple casualties, check each in turn for life threatening injuries, only treating those injuries as soon as found.

### **A – Airway**

### **B – Not Breathing**

### **C – Circulation – severe bleeding and shock**

When all life threatening injuries are dealt with, you can then check for other injuries.

- Be alert for changes
- Hand over to medical help

When you check each person, you can ask “Where does it hurt?”. If you get a response you will be able to tell if there is a good airway and if the breathing is effective.

Control any obvious bleeding and do a rapid body survey (wet check) for hidden severe external and internal bleeding.

Have them take a deep breath and cough. If they are able to, it is unlikely that they have serious chest injury. Have them pull in their stomach and blow out again. If there is no distress they are probably free from internal injury. **Warm, rest, reassure and into the recovery position for shock.** If breathing is ineffective, assess the rate and depth of breathing and assist if needed (see artificial respiration).

### **If there is no response**

- Remember that unconsciousness is a breathing emergency. Open the airway using a head tilt chin lift if there is no suspected spinal injury, otherwise do a jaw thrust with NO head tilt.
- Maintain the airway and check for breathing by looking at the chest, listening and feeling for breathing.
- If effective, check for severe bleeding.
- If ineffective, assist as needed.

- If NOT breathing, give **two slow breaths**, then check for pulse. If present, continue with artificial respiration. **If absent start CPR** or move on if there are multiple casualties.
- Do a quick check and control severe bleeding
- If you find any deformities, have the injured part steadied and supported until medical help takes over.

## Artificial Respiration

- Open the airway and check for breathing by looking at the chest, listening at the nose and mouth and feeling with cheek and with hand on chest. If there is no breathing then pinch the nose and mouth-to-mouth seal.
- Give two slow breaths.
- Check the carotid pulse – 5 to 10 seconds.
- Continue breaths – adults, one breath every 5 seconds – children, one breath every 3 seconds.
- Check pulse after one minute and every few minutes thereafter.
- Continue artificial respiration until casualty is breathing unassisted or medical aid takes over, treat for severe bleeding and shock and check for other injuries.
- Watch for changes in condition until handed over to medical aid.



## Severe Bleeding

If you suspect internal bleeding – send for medical help immediately.

### Signs

- Sharp blows
- Deep punctures
- Crush injuries
- Massive bruising
- Bleeding from mouth, ears and/or nose
- Coughed up frothy blood

### Symptoms

Ask the casualty to take a deep breath and cough, if no pain, unlikely to have internal bleeding, serious chest injury or broken ribs.

Ask the casualty to suck in and then blow out stomach; if no distress or hardness in the area, then internal bleeding or injury is unlikely.

## **Treatment of Severe External Bleeding**

- Expose wound
- Lie the casualty down or at rest
- Elevate wound
- Direct pressure applied to the wound

### **To bring bleeding under control, follow these steps:**

- Apply direct, even pressure over wound with dressing if possible, use bare hand if necessary.
- If blood soaks through dressing, do not remove but apply more dressing.
- When bleeding has stopped, apply bandage.
- Check skin temperature of limbs and nail beds for circulation.
- Elevate limb above heart level, except where there is a possible fracture.
- Treat for shock, monitor for circulation. If transporting, apply sling.

### **Dressings:**

Control bleeding and prevent further infection. Must be sterile, absorbent, lint free, non-sticky and large enough to cover wound.

### **Bandages:**

Hold dressings in place, maintain pressure over wound, support limb or joint, immobilize with a tie, belt, adhesive tape, scarf, pillowcase, tea towel, etc.

## **Shock**

Shock is always present to some degree with any injury or illness (the casualty may not be aware that they are in shock). Shock is caused by loss of circulation. Even if the symptoms of shock are not evident, the casualty should be kept warm, quiet, at rest and re-assured.

### Signs:

- Shallow rapid breathing
- Weak and rapid pulse
- Restlessness and anxiety
- Gasping for air
- Vomiting
- Unconsciousness

### Symptoms:

- Feels faint
- Thirst
- Nausea
- Anxiety
- Dizzy



To treat for shock you must give timely efficient first aid. The casualty must be kept warm, calm and in the right recovery position for the type of injury. The recovery positions are as follows:

### Suspected Spinal

- Steady and support the head and neck, cover with blanket
- Keep warm
- Keep in position found

### Unconscious (no obvious injuries)

- Recovery position
- Wrapped or covered with blanket
- Keep warm

### Conscious (with breathing difficulties)

- Semi sitting, cover with blanket
- Keep warm

### Conscious

- Lying on back, elevate feet 15 to 30 cm
- Loosen tight clothing

With all these casualties, loosen tight clothing, handle gently, keep warm with blankets, give nothing by mouth but moisten lips if needed.

**At all times, reassure and be alert for changes in condition.**

## Choking

Ask if the casualty is choking; encourage them to keep coughing. If there is poor or no exchange of air (bluish skin, unable to speak or cough) do abdominal thrust:

- Landmark – make a fist and place midway between the navel and point where ribs meet in the chest and pull the fist into the casualty's abdominal area.
- Repeat the thrust until airway clears or casualty becomes unconscious.
- Send for medical help as soon as the casualty loses consciousness.

With casualty on their back, open the mouth with a tongue-jaw lift, then finger sweep (on larger children or adults only) to try to find and dislodge the obstruction, then try to blow air in. If none goes in:

- Landmark
- Do five abdominal thrust (astride legs)
- Repeat the sequence until successful
- Treat for shock

Always make sure that a medical doctor sees them if abdominal thrusts have been used.

## Fainting

If the bus is too hot, the students are overdressed or are reacting to the sight of blood, you will often have a person who feels faint or faints. If a casualty feels faint (due to reduced oxygen in the brain):

### Signs:

- Pale
- Sweating

### Symptoms:

- Nausea
- Dizziness

### Treatment:

- Shock position
- Fresh air
- Loosen tight clothing at neck, chest and waist
- Remove glasses
- Make sure they are breathing

If casualty has fainted:

- Check breathing
- Check for any injuries the casualty may have suffered from fainting
- Recovery position
- If not fully recovered within minutes, send for medical aid
- Keep lying down for 10 to 15 minutes
- Monitor breathing frequently

## Burns

There are many different types of burns and each must be handled a little differently. The causes and treatments are as follows:

### Causes:

- Electricity
- Chemicals
- Heat
- Sun

### Severity:

- How much of the body is burned
- Location and depth
- Casualty age and health

*Superficial:* reddened skin, swelling, blistering, severe pain

*Deep:* charred skin, little or no pain

### Treatment:

- Do not apply lotions
- Do not break blisters
- Do not touch, breath or cough on burn
- Do not remove any clothing stuck on burn
- Do not cover with cotton wool



## Heat Burns

- Remove jewellery
- Immerse burn in cool water until cool
- Cover with sterile dressing
- Secure the dressing
- Send for medical aid
- Treat for shock

## Chemical Burns

- Brush off powdered chemicals before flushing
- Remove affected clothing and flush with cool running water 10 to 15 minutes
- Cover with moist sterile dressing
- Send for medical aid
- Treat for shock

## Electrical Burns

- Turn off electricity before touching or approaching casualty
- Call for an ambulance
- There is often cardiac arrest, stopped breathing, fractures, dislocations and severe internal burns
- Treat life threatening injuries

Cover burns with clean dry dressings at point of entry and exit to prevent further infection. Continue to monitor casualty for changes while waiting for the ambulance.

## Poisoning

There are many different types of poisons and many of the products we use daily can be poisonous in larger quantities.

Poison: any substance that can harm or kill you if taken into the body. It can be:

- Swallowed
- Inhaled
- Injected
- Absorbed through the skin

If you suspect poisoning **act immediately**. Quickly find out:

- What poison
- How much
- How it entered the body
- When it was taken

**Inform dispatch as quickly as possible.**

A very dangerous situation with a vehicle is the colorless, odorless gas known as **carbon monoxide**. If there is an undetected exhaust leak into the vehicle and there is not enough fresh air, the casualty will have some of the following symptoms:

Symptoms:

- Headache, irritability, fatigue
- Unconsciousness
- Reddish discoloration of the skin

Treatment:

- Remove the casualty from the poisoning source and to fresh air
- Give artificial respiration if breathing is weak
- Keep the casualty warm and away from draft
- Keep the casualty at rest, with the head slightly lower than the feet

**Cold Injuries Symptoms and Treatment of Cold Injuries**

**Hypothermia** is a term referring to the dangerous lowering of the body’s core temperature. Contrary to popular belief, it can occur at above freezing temperatures in a relatively short time depending on age, size, dress, etc. It is progressive as shown in this chart.

<b>Signs</b>	<b>Mild</b>	<b>Moderate</b>	<b>Severe</b>
<b>Pulse</b>	Normal	Slow and weak	Weak or absent
<b>Breathing</b>	Normal	Slow, shallow	Slow or absent
<b>Appearance</b>	Shivering Slurred speech Clumsy, stumbles	Shivering is violent or stopped	Shivering has stopped
<b>Mental State</b>	Conscious, withdrawn	Confused, sleepy, irrational	Unconscious

Treatment:

- Handle gently
- Remove from cold
- Remove wet clothing
- Gently warm (body heat and blankets)
- Give warm sweet drink if conscious (no coffee or alcohol)
- Do AR or CPR if needed
- Remember to warm the body core rather than the limbs

**Frostbite** is characterized by numbness of the affected area accompanied by a loss of coloration of the skin. While severe frostbite, involving damage to tissue, requires medical attention, it may be treated initially in the following manner:

- Get the person into shelter and warmth if not already there
- Remove anything constrictive from affected area (i.e. gloves, rings, boots)
- Gradually warm area with warm dry covering or with body heat, gentle steady pressure
- Do not warm if there is a danger of refreezing the area before receiving medical attention
- **Do not rub the affected area**
- **Do not apply direct heat in any form**
- **Remember that if the frostbite is severe, treat it gently and leave it frozen until medical help is obtained**



## **General First Aid**

### **Introduction**

In this module, we want to review some general first aid principles that are considered basic knowledge for the school bus operator, as well as deal with the treatment of specific injuries mentioned, namely:

- Blocked airway or stopped breathing
- Severe bleeding
- Shock

This segment is NOT a first aid course and operators are encouraged to complete proper first aid training. This segment has been kept basic and deals with only those subjects that are considered critical. A number of first aid courses are offered which cover many more topics than this. It is strongly recommended that anyone interested in developing their first aid skills, enroll in a course in their local area.

### **What is First Aid?**

First aid implies just what the name says. It embodies a number of principles that can be intelligently applied by the layman in almost any type of crash or emergency situation to care for the injured. Thus, it is a guide for practical action in emergency situations. It is by no means a substitute for medical assistance.

If, in respect of a person who is ill, injured or unconscious as the result of a crash or other emergency,

- A physician, professional medical assistant, or registered nurse voluntarily and without expectation of compensation or reward renders emergency medical services or first aid assistance and the services or assistance are not rendered at a hospital or other place having adequate medical facilities and equipment, or
- A person other than a person mentioned in the clause before, voluntarily renders emergency first aid assistance and that assistance is rendered at the immediate scene of the crash or emergency, the physician, professional medical assistant, registered nurse or other person is not liable for damages for injuries to or the death of that person alleged to have been caused by an act or omission on his part in rendering the medical services or first aid assistance, unless it is established that the injuries or death were caused by gross negligence on their part.

### **Diagnosing Injuries and Establishing Priorities for Treatment**

It may not be readily apparent after a collision from what a casualty is suffering. Offer to help but do not move the casualty if head/spinal injuries are suspected unless you have no choice (i.e. fire, dangerous or unsafe position).