# Chapter 9: Safety and First Aid

Personal Safety

## 9.1 Personal Safety

Every one has the right to be protected. Violent crime has become a major health problem. Among these crimes are homicide and robbery. Homicide is the killing of a human being by another. It is important to avoid persons who are argumentative and under the influence of drugs. Robberies can be prevented. Always follow certain precautions to protect yourself from crime.

Accident Prevention

## 9.2 Accident Prevention

Almost all accidents can be prevented. The best way to prevent accidents is to be aware of their causes so that you can follow preventive behaviors.

Causes of Accidents

### 9.2.1 Causes of Accidents

1- **Stress** is a major cause of all kinds of accidents. Stress can create problems other than losing the ability to concentrate. Stress can produce fatigue. When you are fatigued, you are less alert. You do not react or respond as quickly as usual. A delay in reaction time may create a dangerous situation.
2- **A person's age** plays an important role in accidents. Young people and elderly are more exposed.
3- **Drugs especially alcohol** play a significant role in motor vehicle accidents as well as other kinds of accidents.
4- **Illness** cause changes in the body those results in an in ability to perform tasks optimally.
5- **Accidents** occur more frequently at certain time of the day and during certain days of the week.
6- **Attitude** than others some people are more susceptible to accidents.

Preventing Vehicle Accidents

### 9.2.2 Preventing Vehicle Accidents

Efforts are being made towards preventing motor vehicle accidents and reducing the risks of injury and death to people involved in the accident. These efforts focus on factors involving vehicles, high ways, drivers and laws.

- **Vehicle factors** relate to the design and maintenance of the automobile. Design to absorb the impact from a crash. Heavy padding of passenger compartment is important for safety. Airbags are an option on some vehicles. Safety belts must be hooked up by the drivers.
- **High way factors** play a role in automobile safety. Studies show that certain road features promote automobile accidents. Among these are sharp curves, steep grades, potholes, and a lack of a physical medium that separate opposing traffic.
- **On city streets shielded signs**, missing signs and poor lighting increase accidents rates.
- **The driver** is the most important factor in motor vehicle accident. Alcohol and the use of drugs are responsible for half of all automobile related accidents.
- **Laws mandating** the use of seat belts are practiced. Wearing a helmet is essential for motor cycle drivers. In States, there are laws mandating the use of child restraint system for children under a certain weight.

Preventing Home Accidents

## 9.2.3 Preventing Home Accidents:

- **Falls, fires, burns and poisoning** are major causes of accidental deaths in the home.
- **The greatest number of injuries in the home is caused by falls**. Be sure you and others in your home are protected from falls. Be sure walking surfaces are clear and well lighted. Furniture and other objects should be placed so that they are not where people least expect them. if you must climb to reach an object, use a secure ladder than a chair that may be less secure ladder than a chair that may be less secure have tendency to tip over.
- **More than half of all fires in a home are caused by improper use and disposal of cigarettes**. Other causes are improper storage of gasoline and cleaners; over heated cooking oils, and children playing with matches. Overloaded electrical wiring can also result in fire.
- **Most cases of poisoning in a home occur to children**. Substances most commonly associated with poisoning are medicines and pesticides.

Preventing Accidents in Work Place

## 9.2.4 Preventing Accidents in Work Place

- **OSHA (Occupational Safety and Health Act)** is a series of safety and health standards that employers must meet.
- **New employers should be trained** and made aware of hazards. They must also receive periodic review of safety regulations.
- **Supervisors must be alert** to factors that can cause accidents and inform you of any new safety rules.

Preventing Accidents during Dangerous Conditions

### 9.2.5 Preventing Accidents during Dangerous Conditions

**In earthquake**

- Stay calm – do not panic.
- Stay clear of any objects that can fall on you, whether **indoors or out door**
- Move to an open space.
- In a building, get under a desk or table.
- In out doors, avoid broken power lines.
- In an automobile, stop as soon as possible, and get out. If on a bridge get off as soon as possible.

Emergency Care

## 9.3 Emergency Care

**Objectives:** you will be able to describe the importance of first aid. Identify the priorities of giving first aid.

### 9.3.1 Importance of First Aid

Importance of First Aid

First aid is the immediate and temporary care given to a person who had been injured or suddenly become ill. It also includes self help and home care when medical assistance is delayed or is not available. Having knowledge of proper first aid procedures may help you to some yourself or others.

### 9.3.2 Priorities of the First Aid

Priorities of the First Aid

1- **Have a plan of action to follow** before giving first aid. This depends on the circumstances surrounding the accident or illness. Sometimes, prompt action is needed to save life. In other situations, reassurance and prevention of further injury may be more of a priority.

2- **Know how to call for help in a first aid situation**. Once an emergency telephone connection is made. give the following information:

- **Identify exact location**, full address.
- If possible **leave telephone number at which you or rescuer** can be reached.
- **Give the name of rescuer**.
- **Provide as much specific information about illness or injury** as possible so that appropriate emergency equipment's can be sent.
- If you, rescuer, **cannot make the call, ask someone** else to call for help. After has been called, further evaluate the situation. (Check A, B, C). A for airway. B for breathing and, C for circulation.

- **Prompt rescue**, if necessary.
- **Checking for open airway**.
- **Controlling severe bleeding.**
- **Checking for signs of poison**.

It is important to give an ill or injured person psychological first aid. This helps victims adjust mentally to a life – threatening situation.

Respiratory Emergency (Asphyxiation)

## 9.3.3 Respiratory Emergencies (Asphyxiation)

It is that condition where normal breathing stops or oxygen intake markedly falls that it becomes insufficient to support life. There are many causes for respiratory emergencies such as drowning, heart failure, electric shock, drug overdose, and carbon monoxide poisoning. Foreign body airway obstruction usually occurs during eating (choking).

- **Artificial respiration** is a term that includes many techniques that are used by one person to another to restore breathing. In mouth-to-mouth breathing or mouth-to-nose respiration, the rescuer inflates the victim's lungs by forcing air into them.
- **Immediate action** must be taken if some one is choking. If the victim can cough, speak, or breathe, do not do anything. He may free the blockage. If the victim cannot cough, speak or breathe, begin performing the abdominal thrust.
    - **Stand behind** the victim.
    - **Wrap your arms** around victim's waist.
    - **Make a fist with one** hand and place the thumb side just above victim's navel and below the top of the sternum.
    - **Grasp fist** with your other hand.
    - **Press fist** into victim's abdomen with quick upward thrust.
    - **Do 4-5 times**. Check the victim's mouth; hopefully the lodged matter will be forced out.
- If the above steps are **not successful**, **repeat them**.
- If you experience choking yourself and no one is around, **you can perform this technique on yourself**. Or lean forward over a chair and press your abdomen quickly on the edge of the chair.

Cardiopulmo-nary Resuscitation (CPR)

## 9.3.4 Cardiopulmonary Resuscitation (CPR):

It is an emergency procedure that is used with mouth-to-mouth resuscitation when the heart has stopped beating. CPR should never be done on a conscious person or on someone who has a heart beat. Only persons trained in CPR should administer these techniques.

**The ABCs of CPR** are general procedures you should know.

A- **Airway** – always be sure the victim's airway is open. The tongue is the most common cause of airway obstruction in an unconscious victim.

B- **Breathing** – after making sure the airway is open, check to see if the person is breathing. CPR should not be performed if the person is breathing.
C- **Circulation** – always check the victim's pulse to determine if chest compression will be necessary.

Procedures

**Procedures:**

1) **Check r**esponsiveness.
2) **Activate** emergency system; call for help, local emergency telephone number.
3) **Roll person** onto back.
4) **Open** airway.
5) **Check for breathing** – give 2 full breaths.
6) **Check for pulse** – do 15 chest compressions.

This cycle is to be repeated until respiration and circulation are restored or until medical help arrives. If you suspect a neck injury be careful in opening airway and use jaw thrust method instead of (head tilt/chin lift method). Become trained in CPR, contact the Egyptian Red Crescent society or the medical education and Development Center in the Faculty of Medicine – Cairo University.

Controlling Bleeding

## 9.3.5 Controlling Bleeding

Any break in the skin is called a wound. Stopping bleeding through a wound is a priority. Direct pressure and elevation can stop bleeding. A second method of stopping bleeding is the use of pressure on a supplying artery. The two pressure points are under the arm (the brachial artery) and inside the grain area (the femoral artery).

## 9.3.6 Poisoning

Poisoning

A **poison is any substance that can cause illness or death** when introduced into the body. Poisons can enter the body through ingestion (swallowing), inhalation, injection, or absorption through skin or mucous membrane.

- **Determine immediately the poison ingested**. If a container is nearby, follow the first aid directions on label. Get additional clues by asking others what they think occurred.
- Call the local poison center or physician for further information. Seek medical help for the victim.
- If there is no instructions on the container or there is no container**. Dilute the ingested poison by having the victim drink milk on water.**

- **Never force unconscious victim to vomit**. Also, never force a victim to vomit who has swallowed a corrosive substance such as gasoline, kerosene or lye. Vomiting these products can cause further damage to the digestive tract. Rather, have the victim swallow milk or eat raw egg or mashed potatoes so that the stomach can be coated and the poison neutralized.

Sudden Illness or Injury

## 9.3.7 Sudden Illness or Injury

Any serious injury or illness can result in shock. Shock is a condition in which the rate of the functions of the vital organs of the body slows.

When a person becomes suddenly injured or ill, the function and possibly the structure of the body changes. The objective of first aid is to prevent these changes from causing further harm to the body. All victims should be treated for treated for shock and should receive medical attention. It is important to maintain body temperature and blood circulation in a shock victim.

**Some situations** will be mentioned in the lectures e.g.:

- **Heart attack and stroke**
- **Fractures, dislocations, sprains and strains**
- **Burns**
- **Some environmental hazards**.