Standard First Aid & CPR Course


Course Presentation

Welcome

Canadian Group Emergency Training Inc

Copyright

Electronic Devices in class

Respect for your fellow colleagues, your instructor, and the educational process, all technology devices (cell / smart phones, laptops, tablets) must be powered down or at least on mute mode unless you are using the devices to download class notes or the First Aid APP.

If you feel you have an emergency situation that requires your phone please use your device outside the classroom.

Notice on Care Procedures

- Any procedures described in this slide presentation should be applied by persons who have received formal training.

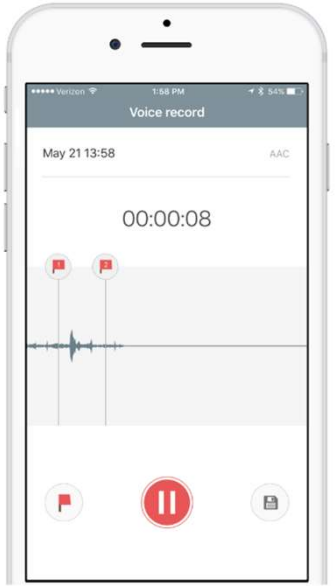
- *Any discrepancy* or variance of this presentation, please refer to ***"Basic Emergency Care Manual - 13th edition"*** published by the Canadian Group Emergency Training Inc.

- Every effort has been taken to ensure the accuracy of the information presented and also to describe generally accepted basic emergency care. However, the author of this presentation and external reviewers cannot be held responsible for any errors or omissions, or for any consequences that may arise from improper use of the information in this slide presentation.

- Finally, if you are participating in a CPR & AED course, you may be subjected to some physical activity. Therefore, it is important to understand that CPR is indeed hard work. If for any reason, your physician has recommended that you avoid strenuous activity or that your activity be limited in any way, please advise your instructor if you require any assistance or if there are any physical restrictions that may hinder your participation during the course.

Recording Policy

The course may be voice recorded for *audit, training and quality assurances (Q/A) purposes* as per our privacy practices to comply with applicable Canadian Federal, provincial and territorial laws, including the *Personal Information Protection and Electronic Documents Act* (PIPEDA).



Classroom Safety

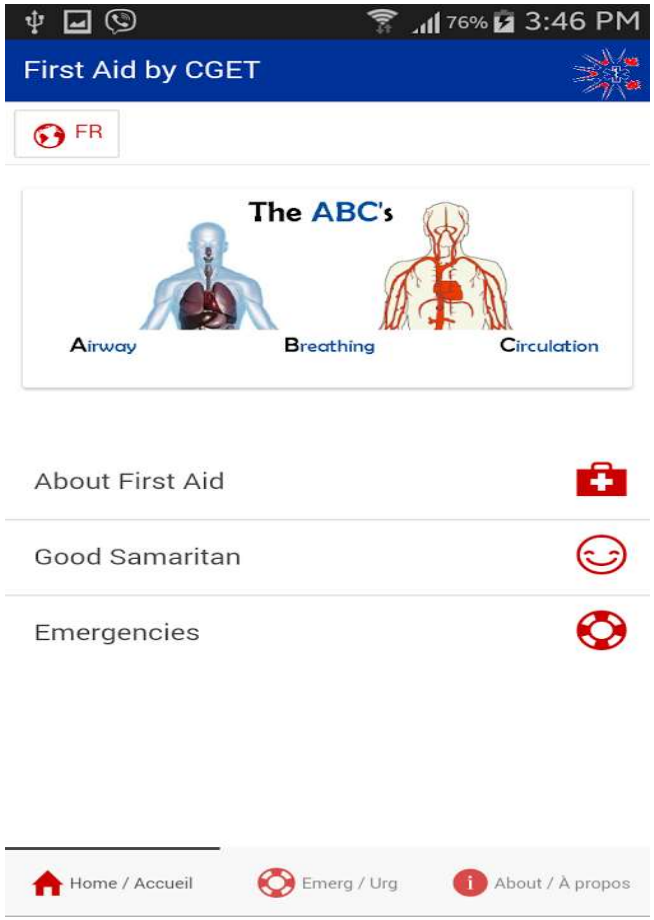
- **Washrooms**
- **Emergency Exits**
- **Safety Equipment**
  - First Aid Kit & AED
  - Fire extinguisher

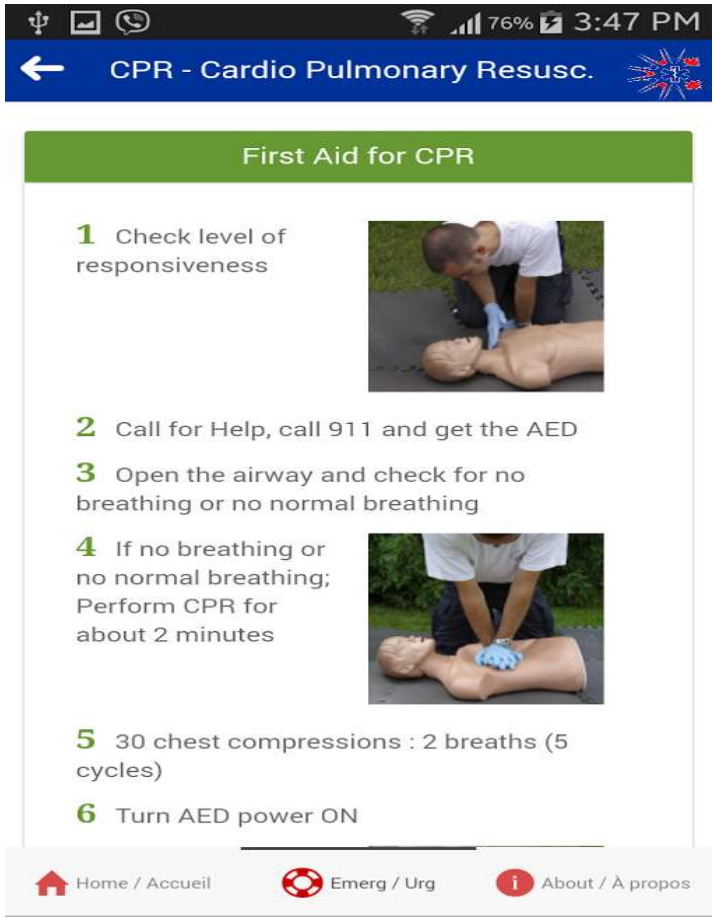
- **Emergency Procedures**

  Follow directions from your instructor.

Smart Phone & Tablet App

Name of the App: First Aid by CGET





Accreditation

Our programs meet standards and guidelines set by Provincial First Aid Regulations.

This course is recognized and approved by WSIB in accordance with the First Aid Regulations 1101.

Course Schedule

- Introduction, safety & schedule
- Definition of First Aid
- Principles of a Good Samaritan
- Communicable Diseases
- Emergency Scene Management
- Casualty Management & The ABC's
- Respiratory Distress
- Airway Obstruction
- Heart Attacks & Strokes
- Adult CPR
- Child/Infant CPR
- AED-Defibrillation
- Wounds & bleedings
- Burns
- Medical Conditions
- Eye Injuries
- Bones & Crush Injuries
- Head & Spinal Injuries
- Chest & Blast Injuries
- Heat & Cold Related Injuries
- Poisoning Emergencies
- Introduction to WHMIS
- Casualty Moving Techniques
- Orientation to First Aid Kits
- Elective First Aid skills
- Written Exam & Course Evaluation

- 1-day course for Recertification
- 2-day course for Certification

What is First Aid?

First aid is the emergency care that is provided to an ill or injured person until EMS arrives on scene.

The three objectives of first aid are to:

- **Preserve life**
- **Prevent further injury**
- **Promote recovery**

Definitions

What is First Aid ?

Emergency care and treatment to an injured or sick person before EMS is available.

What is a First Aider ?

This person is the one most likely to have first aid training and is the primary person in charge of treatment. This person will also be the one who decides whether an ambulance should be called, and the one who will direct resources for first aid.

What is Medical Help ? The First Aider is calling 911 or 0 to get Medical assistance. Medical help is the assessment and treatment by a licensed physician or under medical supervision such as: a Physician Assistant, a registered nurse, a paramedic or a emergency medical responder.

What is a Casualty ?

The casualty is an injured or ill person that needs immediate first aid & medical help.

What is the recommended Casualty age for resuscitation ?

Adult: 8 years of age + Child: 1 to 8 years of age Infant: newborn to 1 year old

Definitions

History

The history of the incident can guide the rescuer to the casualty's potential injury or illness. The person's past and present medical history is helpful when assessing and treating the injured or ill person.

First Aider and Bystander Safety

This person ensures crowd and bystander safety. The person can ensure that all access routes are set up and cleared in the event that they are needed. Also, they can carefully assess the scene for potential hazards.

Mechanism of injury (MOI)

MOI can confirm the type of trauma that the casualty may have received during the impact.

Signs & Symptoms

- A sign is a trauma, an injury or a medical condition that can be observed by the first aider on the casualty.
- A symptom is a condition that can be described only by the casualty and cannot be observed by the first aider.

First Aid & the Law

Identify yourself, ask for permission, and offer to help.

Act in good faith. Use common sense.

- **Consent:** informed or implied (children over 14 yrs.)

- **Standard of Care:** means you are responsible to provide first aid within the scope of your training. You should act within the limits of your training, and to the best of your abilities

- **Right to refuse treatment:** means that an injured or ill person, who is of sound mind and judgement, clearly understands the consequences of not receiving treatment. Ensure refusal is informed.

- **Abandonment**:means to leave or to stop providing care before a person of equal or greater training assumes responsibility for that person.

First Aider and the Law

In any event, any first aider who initiates First Aid should continue until:

- The person's breathing and signs of circulation have been restored and;
- Care is transferred to another trained person who continues First Aid or;
- Care is transferred to EMS personnel or to a licensed physician or;
- The first aider is too exhausted to continue resuscitation or;
- The first aider life is in danger.

First Aider and the Law

Bill 20 2001 - An Act to protect persons from liability in respect of voluntary emergency medical or first aid services.

Protection from liability

"Despite the rules of common law, a person described in subsection (2) who voluntarily and without reasonable expectation of compensation or reward provides the services described in that subsection is not liable for damages that result from the person's negligence in acting or failing to act while providing the services, unless it is established that the damages were caused by the gross negligence of the person." (1)

Employers must ensure staff who are designated first aid providers in the workplace are accredited by a first aid training agency recognized by the Workplace Safety and Insurance Board (WSIB).

(1) reference: www.e-law-gov.on.ca

First Aider and the Law

Federal Legislation

- *"18.3.1 First-aid attendants voluntarily provide first-aid services in conjunction with their regular duties.*
- *18.3.2 An adequate number of qualified first-aid attendants shall be available to render first aid to employees during working hours as follows:*
- *(a) if there are 2 or more employees, at least 1 attendant per 50 employees shall be available at all times during each shift or working period at a given location;*
- *18.3.3 Employers shall ensure that first-aid attendants' certification are current. A list shall be maintained of the names, certification levels and statuses, and the locations of first-aid attendants."(1).*

(1)Source: **NJC Occupational Health and Safety Directive Part XVIII - First Aid**

The text does not replace a complete Act, Legislation or Regulations.

First Aider and the Law

Policy on Legal Assistance and Indemnification

5.1 Objective

- *"The objectives of this policy are to: protect Crown servants from personal financial losses or expenses incurred while they were acting within the scope of their duties or in the course of their employment, and were not acting against the interests of the Crown; protect the Crown's interest and its potential or actual liability arising from the acts or omissions of its Crown servants; and ensure continued and effective public service to Canadians" (1).*

***6.1.5 "Three basic eligibility criteria**: In considering Crown servants for legal assistance or indemnification, determining whether the Crown servant:*

- *acted in good faith;*
- *did not act against the interests of the Crown; and*
- *acted within the scope of their duties or course of employment with respect to the acts or omissions giving rise to the request."(1)*

(1)Source: treasury Board of Canada
http://www.tbs-sct.gc.ca/pol/doc-eng.

Communicable Diseases

HIV, AIDS, Hepatitis A, B, C, Tuberculosis, Meningitis and etc..

Diseases enter four ways:

- Direct contact
- Indirect contact
- Airborne
- Vector-borne

Safety - Personal Protective Equipment (PPE)

- Medical gloves
- Barrier device (pocket mask, one-way valve)
- Proper disposal of gloves/barrier device
- Washing hands
- Immunization

Anti-Contamination Procedures

CPR Mask use

- Using a one way valve barrier device or CPR mask and wearing medical gloves is recommended when performing rescue breathing.

After CPR Mask use:

- Dispose of face shield after use, CPR mask should be decontaminated.
- It is not recommended to use a CPR pocket mask or face shield on multiple casualties unless decontamination procedures are performed. This is to avoid cross-contamination.

Gloves

When you remove your medical gloves after treating an injured person; You should do the following:

- ❑ Pinch the medical glove at the wrist area (outside surface).
- ❑ Pull the medical glove downward motion and remove it.
- ❑ Form the medical glove in a ball and hold it in the other hand.
- ❑ Then, insert your thumb under the inside rim of the other glove.
- ❑ Push the glove inside out and down.
- ❑ Throw out gloves after use in garbage.
- ❑ Always wash your hands after removing gloves.

Safety First !

Check for hazards such as:

- Fire
- Electrical wire
- Broken glass
- Chemical spills
- Traffic
- Violence

Why is Safety important for the First Aider ?

- ✓ Is it safe to approach the injured person ?
- ✓ Are there any hazards ?
- ✓ Does the first aider need any help ?
- ✓ History of the incident ?
- ✓ Signs and symptoms of the casualty?
- ✓ Number of casualties ?
- ✓ Treatment priorities ?
- ✓ Bystanders ?
- ✓ Mechanism of injury ?

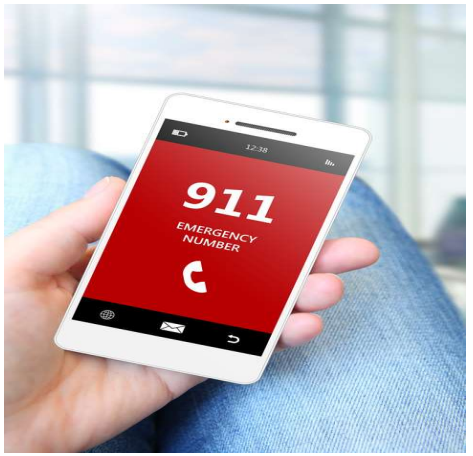
Emergency Scene Assessment

Source of assistance in an emergency situation are:

- ✓ Bystanders
- ✓ Emergency Medical Services (EMS)
- ✓ EMS Dispatch-assisted CPR
- ✓ Police and Fire Service
- ✓ Medical Help (physician, nurse and etc..)

Source of technology in an emergency situation are:

- ✓ Phone App for AED locations
- ✓ Phone App for First Aid & CPR skills



What should the First Aider do ?

How do you call for help ?

Emergency Scene Management (ESM)

What is Emergency Scene Management ?

Emergency scene management provides the first aider a logical order to assess and treat an injured or ill person. ESM follows steps for any emergency situation.

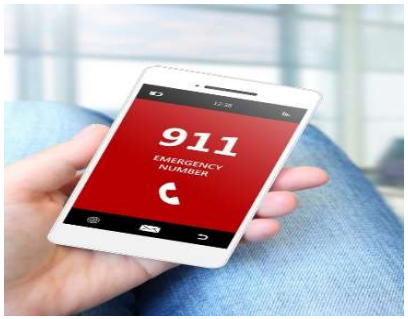
There is 4 ESM steps:

1. Scene Survey
2. Primary Survey
3. Secondary Survey
4. Ongoing Casualty Care

Emergency Scene Management

Scene Survey

- ❑ Take charge of the situation
- ❑ Call out for help
- ❑ Assess for hazards
- ❑ Safety first (First aider and others)
- ❑ History of the incident/accident (What happened?).
- ❑ Number of casualties & mechanism of injury.
- ❑ Identify yourself and ask permission
- ❑ Assess level of responsiveness
- ❑ Call 911



Primary Survey

- ❑ Assess the ABC's
- ❑ Rapid body check, look for medical alert info and stop major bleeding
- ❑ Treat for shock

Secondary Survey

- ❑ Head-to-toe assessment
- ❑ Check for the 3 ‘’B’’s : Bleeding , Burns & Bones
- ❑ Prioritize treatment & triage

Ongoing Casualty Care

- ❑ Continue treatment
- ❑ Treat for shock & Monitor vital signs
- ❑ Ongoing casualty care until hand over to EMS

Casualty Management - Medical bracelet

Why check for a medical info bracelet or necklace ?

- In a first aid or emergency situation, the First Aiders should look for the MEDICAL bracelet, necklace, key chain or a tattoo on the forearm of the casualty and read the engraved information.

- Such information can include:

  medical conditions, allergies to medication, etc…

- First Aiders should call 911 and the medical bracelet

provider who operates a 24hrs/7days a week emergency response centre who provides additional critical medical information.

Casualty Management - Shock

Shock is a condition that occurs as a result of inadequate circulation of oxygen throughout the body.

Types of shock

- Hypovolemic shock
- Respiratory shock
- Septic shock
- Cardiogenic shock
- Psychogenic shock
- Anaphylaxis shock
- Neurogenic shock

Major Causes of Shock

- Loss of blood
- Respiratory distress
- Trauma
- Medical illness

Casualty Management - Shock

Signs & Symptoms

- Pale, cool and clammy skin that changes to a bluish-grey color
- S w e a t i n g
- Bluish lips and finger nails
- Shallow and rapid breathing(may gasp for air as shock progresses)
- Very rapid and weak pulse
- Restlessness
- Confusion and disorientation
- Anxiousness and fear
- Dizziness
- Dry mouth and thirst
- Fatigue
- Nausea

Casualty Management - Fainting

This happens when the brain is deprived from oxygen over a short period of time. This should be treated in the same manner as shock.

Causes of fainting

- ✓ Fatigue with low blood sugar
- ✓ Low blood pressure
- ✓ Bleeding
- ✓ Medical conditions: diabetes, epilepsy, etc..
- ✓ Emotional shock
- ✓ Respiratory distress
- ✓ Standing or sitting for a long time

Casualty Management - Feels Faint

Signs and symptoms of an impending faint

- Very sweaty skin
- Nausea (feeling very sick)
- Fast, deep breathing
- Confusion
- Feeling lightheaded
- Blurred vision or seeing spots in front of the eyes
- Ringing in the ears

First Aid for person who feels faint (call for help & call 911 (if required))

1. Immediately sit the casualty in a position which is the most comfortable for them or place the casualty in the recovery position.
2. Assess level of responsiveness.

- ❑ What is your name?
- ❑ Where are we?
- ❑ What happened?
- ❑ What where you doing before you felt faint?
- ❑ How do you feel?

First Aid for Shock & Fainting

- ❑ Check for hazards and responsiveness
- ❑ Call 911.
- ❑ Check the ABC's
- ❑ Rapid body check and stop major bleeding
- ❑ Treat for the shock.
- ❑ Rest and reassure the injured person.
- ❑ Cover the person and keep them warm.
- ❑ If the person is unresponsive, place them in the recovery position.

Casualty Management: Level of Unresponsiveness

Unresponsiveness is defined as a state of unawareness or an inability to respond as a result of reduced brain stem activity.

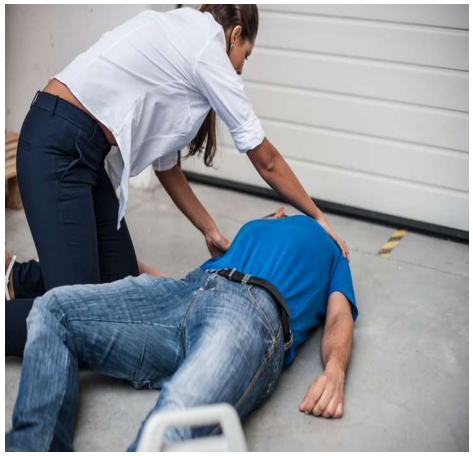
Signs & Symptoms

- Pale, cool and clammy skin that changes to a bluish-grey color
- Sweating
- Bluish lips and finger nails
- Shallow and rapid breathing (may gasp for air as shock progresses)
- Inability to respond
- Unconscious
- No or limited pain stimuli response

Casualty Management - First Aid for Unresponsive

- ❑ Check for hazards and responsiveness.
- ❑ Call 911.
- ❑ Check the ABC's.
- ❑ Rapid body check and stop major bleeding.
- ❑ Place casualty in the recovery position.
- ❑ Rest and reassure the injured person.
- ❑ Cover the person and keep them warm.
- ❑ Continue monitoring vital signs.

* Look for medical bracelet/necklace information.



Casualty Management - Casualty positioning

1. Recovery position
2. Semi-sitting position
3. Prone position
4. Position found

If casualty if unconscious and not breathing or respiratory distress, position casualty face up by minimizing neck movement. Open the airway and check breathing, follow the ABC's procedures.

***The recovery position can be use for both conscious and unconscious persons.**

Casualty Management- Recovery Positions

Place in recovery position if...

- Unconscious casualty is breathing and injuries are not suspected.
- Breathing is noisy (gurgling sounds).
- Casualty starts to vomit.
- Casualty is bleeding from the mouth.
- You must leave the casualty to call 911 or get help.

Casualty Management - How to turn a casualty face up ?

1. Straighten his legs. Take the arm nearest to you, and move it so that it is straight and above his head. Repeat for the other arm.

2. Kneel beside the casualty with your knees near his shoulders. Leave room to roll his body. Place one hand behind his head and neck for support. With your other hand, grasp him under his far arm.

3. Roll him towards you with a steady, even pull. Keep his head and neck in line with his back.

4. Return his arms to his side. Straighten his legs, and reposition yourself so that you are kneeling at the level of his shoulders.

Respiratory System

The respiratory system consist of many components, including the upper airway and the lower airway.

Upper airway consists of :

nose, the mouth, the larynx, and the trachea.

Lower airway consists of :

bronchi, the bronchioles , the lungs and the alveoli (microscopic air sacs which transfer oxygen & carbon dioxide).

Did you know ?

- The air we breathe contains about 21% oxygen.
- The air we exhale contains unused oxygen 16%.

Causes of choking

Foreign objects

- Infants & Children: food, toys, buttons, coins, etc.
- Adults: food, liquids, etc.

Unconscious Casualty

- Tongue falls to the back of the throat.
- Saliva, blood, or vomit pools in the throat.

Injury or illness

- Injury to the throat area causes swelling of the airway.
- Illness causes swelling (allergic reaction & severe asthma attack)

Choking

Good Air Exchange

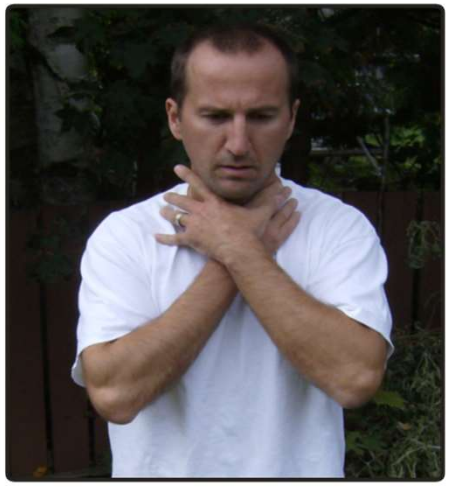
- Mild obstruction

The person will be able to **speak, breathe and cough.**

Poor Air Exchange

- Severe obstruction

The person will have **extreme difficulty speaking, breathing and coughing.**



No Air Exchange

- Completely blocked

The person is **not able to speak, or breath.**

Choking Rescue Techniques

1. **Ask "Are you choking?"**
   Call for help!
   Get someone to call 911 !

2. **Clear the obstruction**
   Give five back blows &
   five abdominal thrusts

Signs & Symptoms of choking

- Visibly distressed
- Suddenly unable to speak
- Unable to cough
- Unable to breathe
- Wheezing or gasping
- Casualty may grasp their throat which is the universal sign for choking

Choking Rescue Techniques

Give 5 Back Blows then 5 Chest Thrusts for pregnant or corpulent casualty

Give Seated Chest Thrusts

Self-Administer Thrusts

Always have the door open for EMS and call 911.

Airway Obstructions

If a choking casualty becomes unresponsive

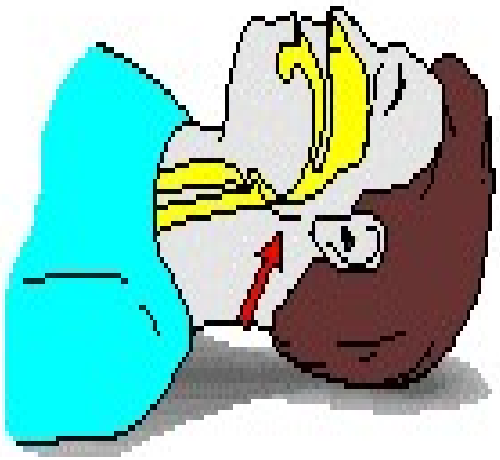
- ❑ Call for help, have someone call 911.

For an adult casualty, if no one is available, call 911.

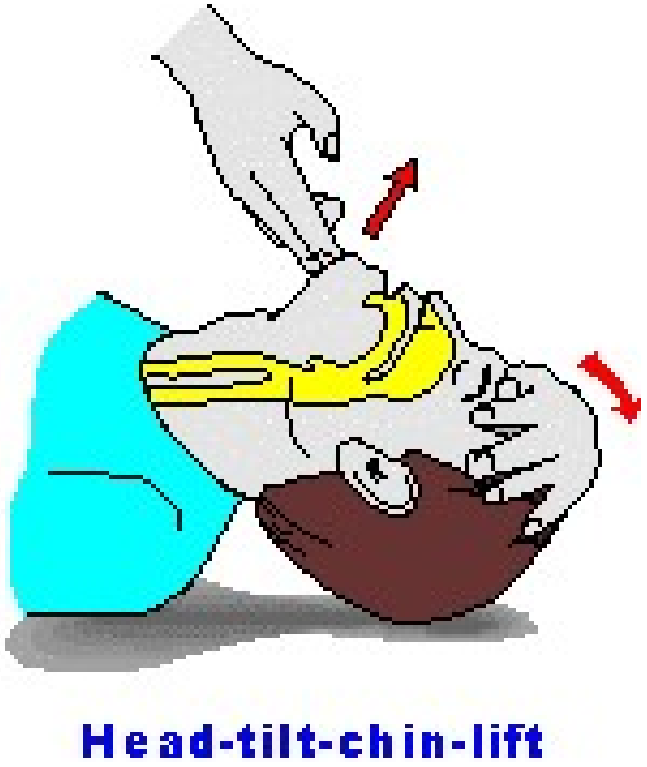
- ❑ Start the steps of CPR
- ❑ Give chest compressions
- ❑ Open the airway
- ❑ Look in the mouth (sweep only If you see an object in the mouth)
- ❑ Give 2 breaths and continue CPR
- ❑ If the first breath does not go in, re-tilt the head and attempt second breath.
- ❑ Continue the steps of CPR until someone brings and AED or EMS arrives on site

*Place a wedge under the pregnant casualty's right hip.

The ABC's

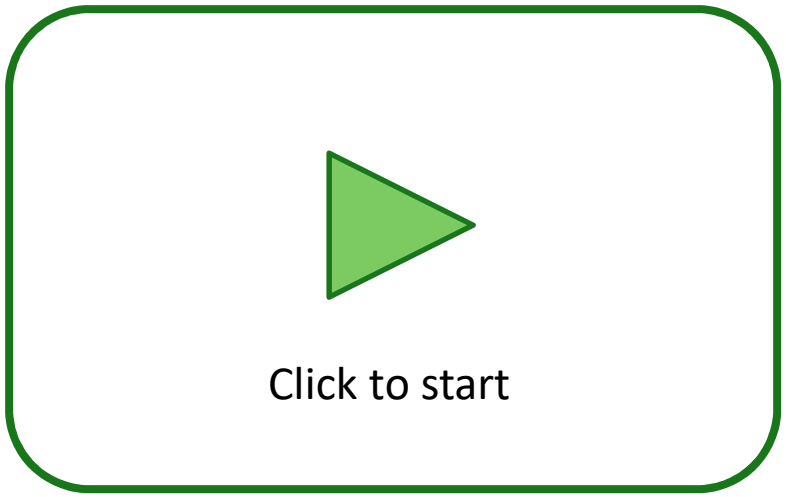


closed airway



open airway

Adult Choking Rescue Video



Infant/Child Airway Obstruction

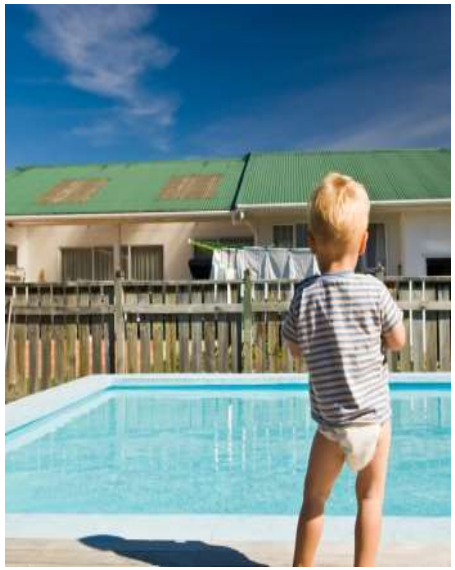
Common causes of breathing emergencies in infant & children

- Croup (Children age 4 and younger are most at risk)
- Asthma
- Whooping cough (infectious disease causes bouts of coughing followed by a deep inhalation with a high-pitched whooping sound)
- Choking
- Allergic reaction
- Smoke inhalation
- Strangulation
- Near drowning

Infant/Child Airway Obstruction

Safety measures to prevent breathing emergencies in infant and children

- ✓ Avoid blind cords
- ✓ Remove small objects away from the reach of an infant or a child
- ✓ Do not leave an infant or a child unattended near a pool or a bathtub
- ✓ Do not leave an infant or a child unattended at or near a playground



Infant/Child Airway Obstruction

Child with an Airway Blockage

Signs and Symptoms

- Respiratory distress
- Weak cough
- Weak cry
- Panic
- Respiratory distress
- Bluish lips & bluish skin
- High-pitched noisy breathing
- May demonstrate the choking sign

Infant/Child Airway Obstruction

Call for help and get someone to call 911 !

Give 5 back blows

Give 5 chest thrusts

Repeat the 5 back blows and 5 chest thrusts
until the obstruction is cleared or infant goes unconscious.

Always have the door open and accessible for EMS.

Infant Airway Obstruction

If a choking infant becomes unresponsive

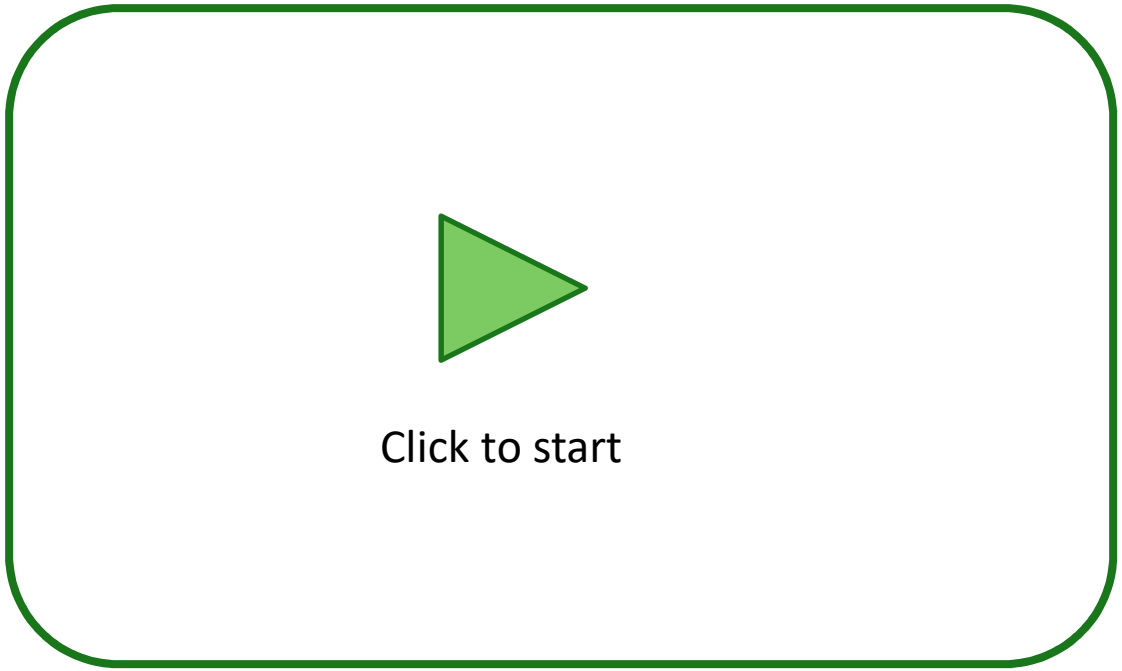
- ❑ Call for help and get someone to call 911
- ❑ If no one is available to call, start the steps of CPR for 2 minutes then call 911.
- ❑ 30 compressions
- ❑ Open the airway
- ❑ Look for obstruction
- ❑ Give to 2 breaths
- ❑ If the first breath does not go in, re-tilt the head and attempt second breath.
- ❑ Continue CPR until EMS is on scene.

Child Airway Obstruction

If a choking child becomes unresponsive

- ❑ Call for help and get someone to call 911
- ❑ If no one is available to call, start the steps of CPR for 2 minutes then call 911.
- ❑ 30 compressions
- ❑ Open the airway
- ❑ Look for obstruction
- ❑ Give to 2 breaths
- ❑ If the first breath does not go in, re-tilt the head and attempt second breath.
- ❑ Continue CPR until EMS is on scene.

Infant/Child Choking Rescue Video

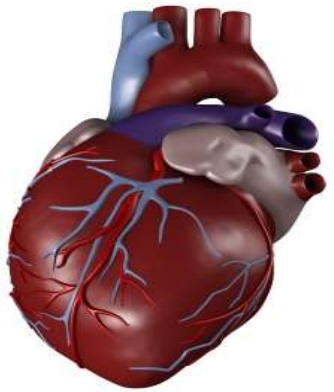


Cardiovascular System

This complex system consists of :

the heart, the blood vessels and the blood.

Circulation is the process of distributing blood to all cells and tissues of the body. The heart is a hollow, muscular organ with four chambers. It is located in the centre of the chest, between the lungs and sits on top of the diaphragm.



Did you know ?

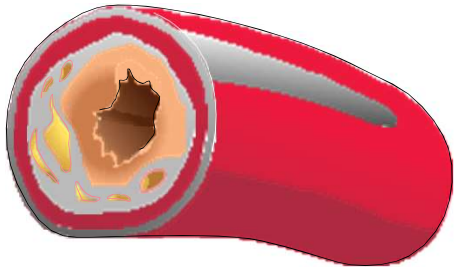
The heart weighs about 250 to 300 grams.

The human body contains about 5 litres of blood.

Cardiovascular Diseases

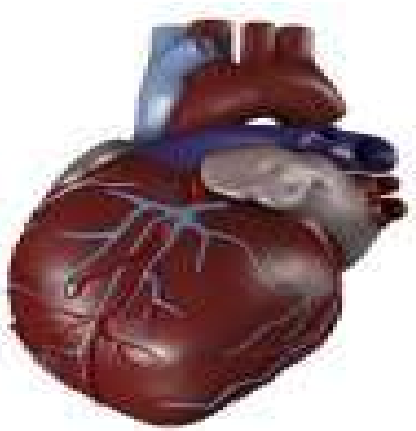
Progressive narrowing of blood vessels because of deposits.

- ❑ **Hypertension**
- ❑ **Cholesterol**
- ❑ **Stress**
- ❑ **Sugar**



What are the Main Causes of Cardiac Arrhy

- Heart attacks (Myocardial Infarctions)
- Strokes
- A generalized lack of oxygen
- Heart failure from water retention
- Pneumonia
- Pulmonary Embolism
- Chronic heart failure, etc…



Angina & Heart Attack

Angina Attack (angina pectoris)

Angina is a progressive narrowing of the heart's arteries (blood flow is reduced).

Heart Attack (Myocardial Infarction - MI)

When the delivery of oxygen to the heart muscle is decreased over a long period of time, the damage to the heart muscle often becomes irreversible. The affected heart muscle cells eventually dies.

Angina & Heart Attack

General Signs & Symptoms

- **Tightness or squeezing sensation in the chest behind the breastbone:**
- **Crushing, vice-like pressure in the chest**
- **Sore, aching jaw or arm**
- Nausea, heartburn and indigestion
- Denial
- Fear and anxiety
- Pale, cool and sweaty skin
- General feeling of fatigue and weakness
- Shortness of breath
- Fainting

Signs & Symptoms can be different for women

- **Swelling of the feet, ankles, and lower legs**
- **Pain in the lower jaw**
- **Pain or discomfort in the back, usually along the bra line**
- Clammy skin
- Sudden weakness, fatigue, or dizziness
- Very fast pulse
- Anxiety
- Stomach or abdominal pain
- Nausea and vomiting

43% of female patient may not have chest pain.

First Aid for Angina & Heart Attack

- ❑ Assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC's
- ❑ Ask the person to sit in a comfortable position
- ❑ Assist the person in taking his or her medication such as two chewable 81mg ASA (aspirin)and nitroglycerin medication (1)
- ❑ Treat for shock & ongoing care until EMS arrives on scene

Six Rights to assist with medications:
Right patient, Right drug, Right dose, Right time, Right route, Right documentation.

Ask the following questions?
Where is the pain located ? Severity of the pain (1 to 10) ?
Last meal (indigestion) ? Past medical history ?

(1) **Warning**

1. Do not give ASA (acetylsalicylic acid), to a person with the following conditions: allergy to aspirin, asthma, ulcers, bleeding disorder, head injury and CVA. May chew 1 adult (325mg) or 2 low-dose aspirin while waiting for EMS assistance to arrive.
2. Do not give nitroglycerin to a person who has taken erectile dysfunction medication within the last 48hrs.

Follow medical directions from a Health Care Professional on the use of ASA & Nitroglycerin.

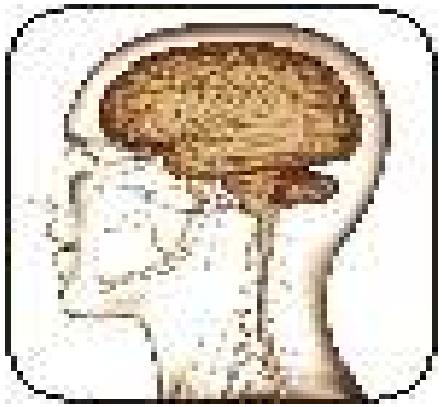
Stroke / TIA

Stroke
Part of the brain is not getting enough blood & oxygen to function properly.

TIA (transient ischemic attack)
Part of the brain is not getting enough blood & oxygen temporarily to function properly.

Signs & Symptoms

- Paralysis of facial muscles on one side
- Facial drooping & drooling
- Slurred speech, difficulty swallowing
- Numbness, weakness and tingling sensation in the arms or hands (mostly on one side)
- Nausea & indigestion
- Dizziness & lack of coordination
- Fear and anxiety
- Pale, cool and sweaty skin
- Decreasing level of consciousness
- Massive headache
- Blurred vision & unequal pupil size



Stroke

FAST check

- **F**acial droop – one side of face
- **A**rm drift – movement different in one arm
- **S**peech – impairment
- **T**ime – get help immediately

First Aid for Stroke

- ❑ Assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC‘s
- ❑ Ask the person to lay or sit in a comfortable position.
- ❑ Ask the person to smile and to squeeze both your hands.
- ❑ Also ask them to touch their nose with one finger of each hand, one at a time to assess for lack of coordination.
- ❑ Treat for shock & ongoing care until EMS arrives on scene.

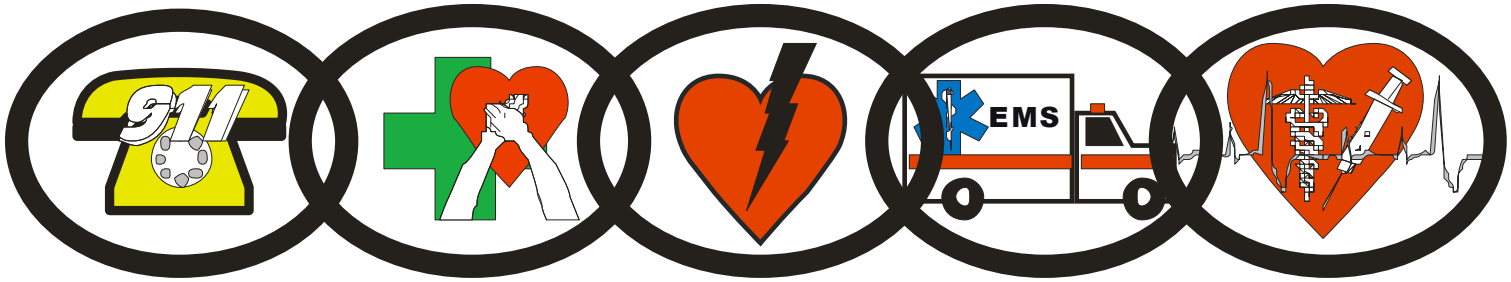
Six Rights to assist with medications:

Right patient, Right drug, Right dose, Right time, Right route, Right documentation.

Warning

Do not give ASA (aspirin) since this may increase the chance of bleeding & follow directions of the medical doctor.

Chain of Survival®



The links in the “chain” establish critical steps that can give a person the greatest chance of survival from the time of the injury or event to the treatment received on the way to the hospital.

- **Activation of EMS**
- **Early CPR**
- **Rapid defibrillation**
- **Effective Advanced Life Support**
- **Hospital (Integrated Post Cardiac Arrest Care)**

CPR – Cardio Pulmonary Resuscitation

Signs of Cardiac Arrest

- Unconscious (unresponsive)
- Pupils are fixed & dilated
- No breathing or agonal breathing(1)
- No pulse(2)
- No signs of circulation

(1) Abnormal breathing. (2) Pulse check performed by HCP or EMS only.

Potential Brain & Vital Organs Damage

(if CPR is not performed within 4 minutes of cardiac arrest)

- 4 minutes: potential brain & organ damage
- 6 to 10 minutes: brain & organ damage likely
- 10 minutes+ : permanent brain and organ damage

CPR – Cardio Pulmonary Resuscitation

Why Push Hard & Push Fast ?

- ✓ Deeper compressions increase blood flow to the brain and vital organs such as the heart, lungs, kidneys and liver.
- ✓ Decreases the risk of blood coagulation (clotting).
- ✓ Extend heart fibrillation.

Interruptions in chest compressions should be minimized.

Notice on Care Procedures - CPR

Student Safety !

You may be subjected to some physical activity.

Therefore, it is important to understand that CPR is indeed hard work.

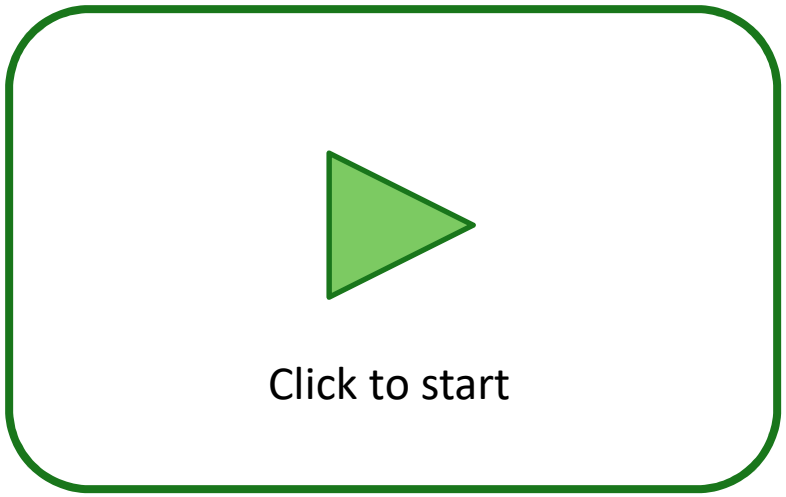
If for any reason, your physician has recommended that you avoid strenuous activity or that your activity be limited in any way, please advise your instructor if you require any assistance or if there are any physical restrictions that may hinder your participation during the course.

Adult CPR

- ❑ Survey the area & safety check
- ❑ Determine unresponsiveness
- ❑ Call for help and call 911
- ❑ Open the airway & check for breathing.
- ❑ Visual landmark for chest compressions
- ❑ Begin 30 compressions
- ❑ Open the Airway and give 2 breaths
- ❑ 30 :2 x 5 cycles
- ❑ Assess breathing
- ❑ Continue until EMS arrives on scene

If not breathing: repeat CPR until a rescuer brings an AED or EMS arrives.
If breathing: place the casualty in the recovery position and monitor vital signs until EMS arrives.

Adult CPR Video



CPR/AED

What is defibrillation ?

Defibrillation is the process by which a controlled electrical current is delivered by means of conductive pads which are applied to the exterior of the casualty's chest.

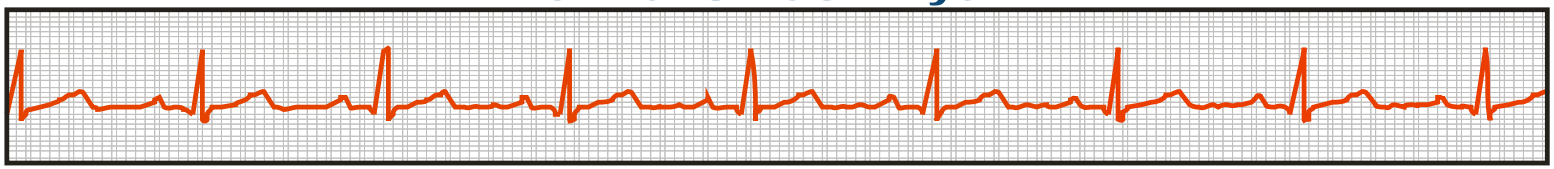
This brief but powerful electrical current passes through the heart muscle and interrupts the arrhythmia, with an objective of reversing the state of fibrillation.

This restores the heart's normal synchronized electrical activity and a proper heart beat, blood flow and blood pressure.

CPR/AED

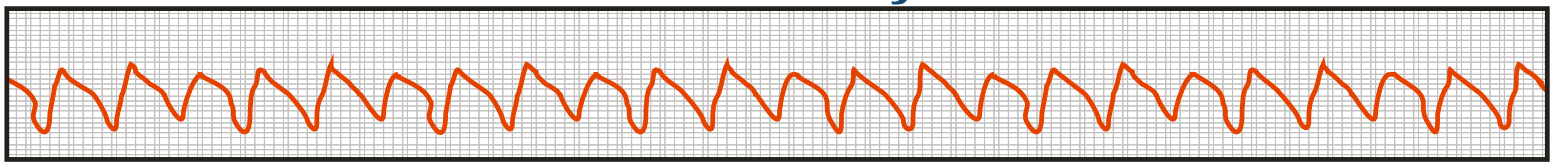
- ✓ **Normal Sinus Rhythm (NSR)** : Normal heart beat conduction
- ✓ **Ventricular Fibrillation (VF**) : Heart quivers, not able to pump blood and no pulse
- ✓ **Ventricular Tachycardia (VT)** : Very fast heart rate (190/min +)
- ✓ **Asystole -Ventricular Standstill** : No electrical activity and "Flat line" on an ECG

Normal Sinus Rhythm



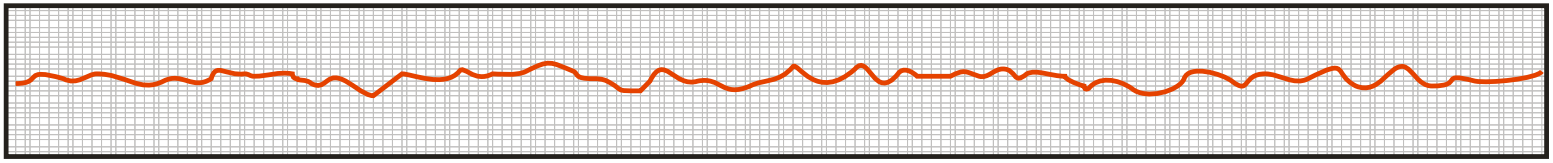
Electrocardiogram : Normal Heart Beat Conduction

Ventricular Tachycardia



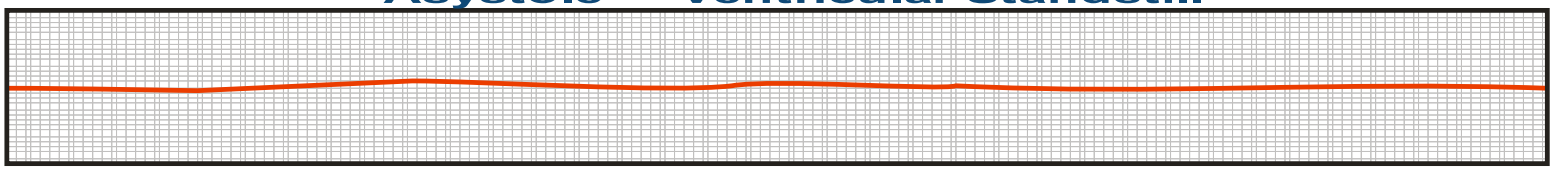
Electrocardiogram : Abnormal Heart Beat Conduction

Ventricular Fibrillation



Electrocardiogram : Abnormal Heart Beat Conduction

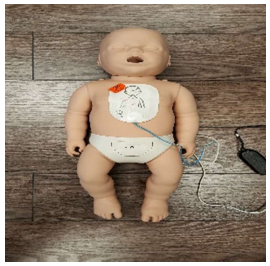
Asystole - Ventricular Standstill

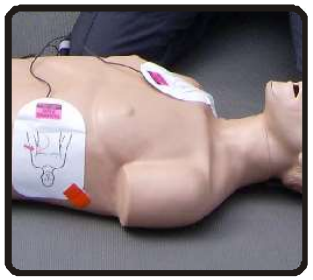


Electrocardiogram : No Heart Beat Conduction

CPR/AED: If the AED indicates that shock is advised

- ❑ Make sure the scene is safe
- ❑ Check for level of responsiveness
- ❑ Call for help and activate 911, get an AED
- ❑ Check for breathing or agonal breathing
- ❑ Perform CPR = 30 compressions x 2 breaths: 5 cycles
- ❑ Turn on AED unit
- ❑ Follow verbal instructions
- ❑ Place the pads on the casualty bare chest
  (if needed, shave and dry off the chest area)
- ❑ Analyze mode (do not touch the casualty)
- ❑ Shock mode (do not touch the casualty)
- ❑ Make sure everyone including the rescuer is clear from
  the casualty before giving a shock
- ❑ Press the flashing shock button
- ❑ Follow AED verbal instructions to continue CPR
- ❑ Analyze again, shock advised
- ❑ Follow AED verbal instructions



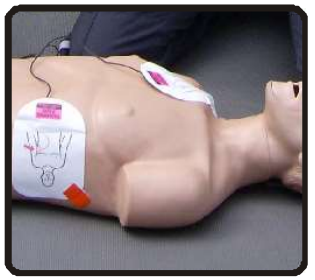


CPR/AED – no shock is advised

- ❑ Make sure the scene is safe
- ❑ Check for level of responsiveness
- ❑ Call for help and activate 911, get an AED
- ❑ Check for breathing or agonal breathing
- ❑ Perform CPR = 30 compressions x 2 breaths: 5 cycles
- ❑ Turn on AED unit
- ❑ Follow verbal instructions
- ❑ Place the pads on the casualty bare chest
  (if needed, shave and dry off the chest area)
- ❑ Analyze mode (do not touch the casualty)
- ❑ No Shock mode*

***If the AED indicates that no shock is advised**:

- ❑ Continue CPR at 30:2 for five cycles and then reassess breathing & signs of circulation
- ❑ Continue CPR until EMS arrives.



CPR/AED

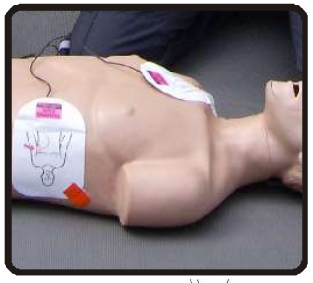
If AED indicated to assess the ABC's after the shock:

Then rescuer should check breathing.

Breathing : Yes, go to caring for a casualty.
Breathing : No, start rescue breathing.

Caring for a casualty who has regained breathing/circulation after a shock has been delivered:

- ❑ Proper airway management
- ❑ Supplemental oxygen (if available and trained)
- ❑ Appropriate airway clearance if vomit occurs
- ❑ Continued monitoring of vital signs
- ❑ Do not turn off the AED unit (Patient may re-arrest & EMS will turn off unit)
- ❑ Continue monitoring the vital signs until EMS arrives.



CPR/AED

BASIC SAFETY PROCEDURES

- Do not place the casualty on a conductive surface such as metal plates or water.
- Before shocking, the rescuer must ensure that no part of his body or of other rescuers and bystanders is touching the casualty.
- If the defibrillator malfunctions, continue CPR Protocols.
- If the electrode malfunctions, replace the pads immediately.

For more information, please refer to the Basic Cardiac Resuscitation manual.

Child CPR

- ❑ Survey the area & safety check
- ❑ Determine unresponsiveness
- ❑ Call for help
- ❑ If you are all alone, start CPR
- ❑ Open the airway & check for breathing.
- ❑ Visual landmark for chest compressions
- ❑ Begin 30 compressions
- ❑ Open the Airway and give 2 breaths
- ❑ 30 :2 x 5 cycles
- ❑ Call 911 after 5 cycles of CPR
- ❑ Continue until EMS arrives on scene

Infant CPR

- ❑ Survey the area & safety check
- ❑ Determine unresponsiveness
- ❑ Call for help
- ❑ If you are all alone, start CPR
- ❑ Open the airway & check for breathing.
- ❑ Visual landmark for chest compressions
- ❑ Begin 30 compressions
- ❑ Open the Airway and give 2 breaths
- ❑ 30 :2 x 5 cycles
- ❑ Call 911 after 5 cycles of CPR
- ❑ Continue until EMS arrives on scene

Emergency Scene Management (ESM)

Scene Survey

- ❑ Take charge of the situation
- ❑ Call out for help
- ❑ Assess for hazards
- ❑ Safety first (First aider and others)
- ❑ History of the incident/accident (What happened?)
- ❑ Number of casualties
- ❑ Identify yourself and ask permission
- ❑ Assess level of responsiveness
- ❑ Call 911

Primary Survey

- ❑ Assess the ABC's
- ❑ Rapid body check, look for medical alert info and stop major bleeding
- ❑ Treat for shock

Secondary Survey

- ❑ Head-to-toe assessment
- ❑ Check for the 3 ‘’B’’s : Bleeding - Burns - Bones
- ❑ Prioritize treatment & triage

Ongoing Casualty Care

- ❑ Continue treatment
- ❑ Treat for shock & Monitor vital signs
- ❑ Ongoing casualty care until hand over to EMS

Wounds and Bleeding

WOUNDS are classified as:

- Contusions
- Punctures
- Incisions
- Lacerations
- Abrasions
- Avulsions

BLEEDING is classified as:

- External or Internal
- Minor or Severe
- Venous or Arterial

Signs & Symptoms

- Bleeding may be visible
- Pain, swelling and discoloration at the site
- Pale, cool and clammy skin
- Shallow and rapid breathing
- Rapid and weak pulse
- Restlessness
- Confusion and disorientation
- Anxiousness and fear
- Dizziness
- Dry mouth and thirst
- Fatigue & nausea

Impaired Circulation

The four common causes of impaired circulation are:

1. Compartment syndrome
2. Crushing injury
3. Prolonged immobilisation
4. Deep vein thrombosis

Signs & Symptoms

- Bruising
- Poor circulation
- Discoloration
- Numbness
- Weakness of the extremities
- Weak pulse
- Poor capillary refill

First Aid for Impaired Circulation

- ❑ Reduce swelling (by applying an ice pack)
- ❑ Treat for shock
- ❑ Keep the person warm
- ❑ Have them rest in a comfortable position
- ❑ Seek medical attention

First Aid for Internal Bleeding

<u>Ongoing Care</u>

- ❑ Treat for shock
- ❑ Keep the person warm
- ❑ Have them rest in a comfortable position
- ❑ Seek medical attention

If the internal bleeding is a minor bruise, put an ice pack with a cloth directly on the skin to reduce the swelling.

Internal Bleeding

Signs & Symptoms

- Bruising
- Swelling
- Shock
- Boarding (bleeding into the stomach area; the quantity of blood combined with the tissues swelling result in a rigidity of the tissues.
- Pulsating masses (an area of the body that can be seen throbbing due to arterial blood pressure beneath the skin)

Examples of internal bleeding ?

Wounds & Bleeding

Cleaning a superficial wound procedure

- ❑ Rescuer must wear medical gloves
- ❑ Clean the wound with antiseptic swabs, other approved first aid cleaning agents or soap and water.
- ❑ When cleaning the wound wipe from the centre of the wound and outwards
- ❑ Apply antibiotic ointment(1)
- ❑ Use sterile bandages
- ❑ Treat for shock (if needed)
- ❑ Antibiotic prophylaxis to casualty deep wounds may be required (provided by a physician only)

(1) *Apply if there no allergies, skin sensitivities and after checking the 6 Rights to medication.*

First Aid for Wounds and Bleeding

- **Direct Pressure:** Apply direct pressure to stop the bleeding.
- **Rest:** Keep the injured person at rest to reduce the amount of circulating blood at the site.
- **Reassure:** Reassure the injured person and treat for shock.

Bandaging with sterile gauze



Bleeding – use of slings

Slings: A triangular bandage or commercial product looped and tied around the neck to support an injured arm, shoulder hand or wrist)

- Arm sling
- Tubular sling
- Wrist sling

You can also use a belt, tie, scarf, etc….

Practice session required !

First Aid for Imbedded Objects

- **Call 911**
- Expose the area to properly visualize the site.
- Gently place clean dressings around the object.
- Wrap gauze roll dressings around the object.
- Secure the dressings with tape or another conforming bandage.
- Stabilize the object
- Seek medical attention.

First Aid for Amputations

- ❑ **Call 911**
- ❑ Apply direct pressure to stop the bleeding.
- ❑ Applying dressings and pressure bandage to the wound.
- ❑ Keep the injured person at rest to reduce the amount of circulating blood at the site.
- ❑ Reassure the injured person.

Care for the amputated part

- ❑ Wrap the amputated part in a clean, moist dressing.
- ❑ Place the amputated part in a clean plastic bag & seal it.
- ❑ Place the plastic bag in a cool container.
- ❑ Indicate the body part on the bag.
- ❑ Indicate casualty's name, time and date on the bag.
- ❑ Provide the packed amputated part to EMS.

Tourniquets

Use only in a delayed care situation to control extreme hemorrhage if direct pressure is not successful or possible.

First Aid for Nose Bleed & Knocked-Out Teeth

Nose Bleed

- ❑ Have the person sit with the head slightly forward.
- ❑ Pinch the nose to control and stop the bleeding and place an icepack on the nose.
- ❑ Place a small gauze or pad under the nostrils to absorb any dripping blood.

Knocked-Out or Broken Teeth

- ❑ Stop the bleeding
- ❑ Pick up the tooth and rinse off with water
- ❑ Put the tooth in a sealed plastic bag or container filled with milk, water or saline solution
- ❑ If milk, water or saline solution is not available, the tooth can be stored in a bag with the person's saliva (not in the mouth)
- ❑ Label the bag or container with the injured person's name, date and time.
- ❑ Seek medical attention (dentist or Emergency Room)

First Aid for Mouth & Facial Injuries

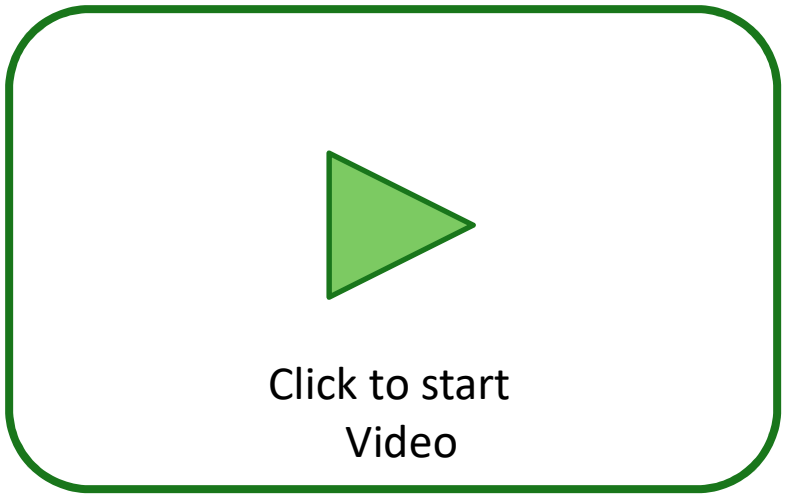
- ❑ Check for hazards & safety
- ❑ Check level of responsiveness
- ❑ Call 911 & call for help
- ❑ Assess the ABC's
- ❑ Control any visible bleeding
- ❑ Treat for shock

Specific Treatment

Mouth, face, ear and scalp

The rescuer must take great care to protect the airway and stop bleeding.

Bleeding Treatment Video



Abdominal Injuries

Abdominal pain from illness or injury is one of the most common complaints made by casualties, but it remains one of the most difficult types of pain to assess.

2 potential complications:

1. Infection
2. Internal bleeding

Open abdominal wound: A wound that exposes or penetrates the abdominal wall.
Closed abdominal wound: A wound that has not been penetrated from the exterior but has a risk of internal injuries.

First Aid for Abdominal Injuries

- ❑ Check for hazards.
- ❑ Assess level of responsiveness.
- ❑ Call 911.
- ❑ Assess the ABC's.
- ❑ Place the person in a comfortable position with the knees raised if it reduces the pain.
- ❑ Be prepared to treat for shock from internal bleeding.
- ❑ Elevate the lower extremities slightly and keep the person warm.

First Aid for Abdominal Wounds

IF THE PERSON HAS AN OPEN WOUND

- ❑ Check for hazards & assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC's
- ❑ Dress the wound with clean dry absorbent dressings
- ❑ Place the person in a comfortable position with the knees raised if it reduces the pain
- ❑ Be prepared to treat for shock from internal bleeding

IF THE PERSON HAS AN OPEN WOUND WITH PROTRUDING ORGANS

- ❑ Check for hazard & assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC's
- ❑ Dress the wound with clean moist dressings on the organs
- ❑ Place the person in a comfortable position with the knees raised if it reduces the pain
- ❑ Be prepared to treat for shock from internal bleeding

First Aid for Bites & Stings

- ❑ Check for hazards and safety
- ❑ Assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC's
- ❑ Apply an antiseptic lotion
- ❑ Dry the wound and cover it with a sterile dressing
- ❑ Direct pressure on the wound (if bleeding)
- ❑ Treat for shock

First Aid for Bites & Stings

Scene Survey, Primary Survey, Call 911

Insect Bites

- Give the person's antihistamine (if available)*
- Use ice to stop swelling

Animal Bites

- Wash site with antiseptic soap

Leeches & Ticks

- Use tweezers to withdraw tick
- Use salt to remove most leaches

Snake Bites

Use anti-venom kits (if available)

Jellyfish Stings

- To prevent further nematocyst discharge and pain relief, the rescuer should use vinegar to neutralize the nematocyst and immerse in hot water for 20 minutes. Seek medical attention.

* follow protocol for allergies.

Burns Safety

Safety Measure to prevent burns

- Make sure to turn off cooking appliances.
- Take precaution when handling hot liquid.
- Avoid intense radiation heat sources (radiator).
- Avoid prolonged exposure to the sun.
- Do no put water on a grease fire.
- Keep matches away from children.
- Wash your hands after handling a chemical.
- Keep electrical appliances away from water.

Burns Injuries

Common causes of burns

1. Sun exposure
2. Fire
3. Hot liquid
4. Chemical
5. Lightning strike
6. Cooking on the stove

Factor affecting burn severity

1. Depth of burn
2. Percentage of body burned
3. Type of burn
4. Location of the burn

Burns Injuries

Complications from a burn

1. Epidermis & dermis damage
2. Infection
3. Nerve damage
4. Soft tissue and muscle damage
5. Scars

Seek medical attention

1. Surface of the burn
2. Degree of burn
3. Percentage
4. Age of injured person
5. Level of awareness of the injured person

Types of Burns

First degree (Superficial) involves the epidermis or top layer

Signs & Symptoms: pink and red, painful & slightly swollen.

Second degree (Partial Thickness) involves dermis or middle layer

Signs & Symptoms: mottled pink to red color. It presents with blistering and swelling and it is usually very sensitive.

Third degree (Full Thickness) involves the subcutaneous layer or bottom layer

Signs & Symptoms: brown or deep cherry-red areas that are dry And leathery in appearance.

Classification of burns

- Thermal burns
- Radiation burns
- Chemical burns
- Electrical burns

First Aid for Thermal & Radiation Burns

- **Call 911**
- To stop burning: remove any clothing or jewelry from the burn site if possible
- If clothing is stuck to the skin; don't tear it off, cut around it.
- Sterile dressings and flushing the wound with water
  (for 1st and 2nd degree burns only.)
- Use water based gel for burns (if available)
- Cover the 3rd degree burns with a dry dressing.
- Keep the person warm & treat for shock

First Aid for Thermal & Radiation Burns

Prevention of Sunburns

1. Shade
2. Fluids
3. Remove excessive clothing
4. Water based gel with aloe Vera
5. Rest
6. Look for heat exhaustion / stroke

First Aid for Sunburns

- Wear protective clothing
- Use a sunscreen with a sun
- protection factor of SPF 30 or higher
- Drink plenty of water

First aid for Chemical Burns

- **Call 911**
- Remove the casualty from the chemical spill area
- Brush off the powder chemical
- Rinse off the liquid chemical
- Treat for shock

Workplace / Laboratories

- Hydrofluoric acid (HF) burns to the body first-aid treatment - use 2.5% calcium gluconate gel on the skin.
- Workplace Emergency Shower Stations are mandatory for laboratories.
- Follow WHMIS and first aid labels on chemical products

First aid for Electrical Burns

- **Call 911**
- Cut the electrical current (safety first !)
- Treat the injury (look for entry and exit wounds)
- Treat for shock

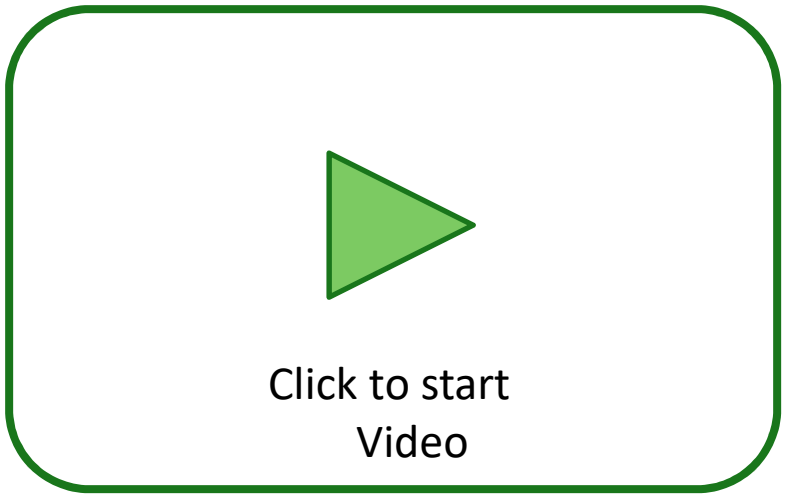
Rescuer Safety

Reduce the risk of electrocution by eliminating any potential conductor for the electrical current. If it is not safe for you to proceed, wait until a qualified person has shut off the power source.

First Aid for Airway Burns

- ❑ Scene Survey
- ❑ Call 911
- ❑ Primary Survey
- ❑ Ongoing Casualty Care
- ❑ Remove casualty from hazards
- ❑ Bring casualty outside for fresh air
- ❑ Treat for facial burns
- ❑ Treat for shock

Burns Treatment Video



Asthma

What is asthma ?

- Airway reaction causing narrowing, inflammation and production of mucus in the airway.

Common causes of an asthma attack

- Physical activity induced
- Emotional and physical stress
- Allergens
- Environment (air quality, temperature, humidity)
- Chemical odour

Asthma

Signs & Symptoms

- Progressive shortness of breath
- Shallow, irregular and rapid breathing
- Laboured and difficult breathing
- Gasping for air
- Noisy, wheezy breathing
- Pale, sweaty skin from working hard to breath
- Leaning forward with shoulders pulled up
- Using neck muscles to move chest up to breath
- Bluish tinge to lips from lack of oxygen
- Anxious and fearful
- Unable to finish a complete sentence without gasping for air
- Weak and exhausted

First aid for Asthma Attack

Without an inhaler

- ❑ Call 911
- ❑ Assess breathing
- ❑ Ask the person to sit in a position that is the most comfortable for them (tripod position).
- ❑ Ask the person to inhale by the nose, and exhale by the mouth (Pursed lip breathing)
- ❑ Treat for shock

First Aid for Asthma Attack

With the Inhaler/spacer

- ❑ Shake the inhaler and test to make sure any dust particles are expelled.
- ❑ Ask the person to quietly breathe out completely.
- ❑ Ask the person to breathe in as they press the inhaler to release the medication.
- ❑ Ask the person to hold their breath for about 5 seconds so the drug can spread into the lungs. Person may use a spacer.
- ❑ If the asthma attack persists, call 911.

Six Rights to assist with medications:
Right patient, Right drug, Right dose, Right time, Right route, Right documentation.

Severe Allergic Reactions - Anaphylaxis

An extreme allergic reaction targeting the lungs & airways.
Severe cases can progress in seconds and be fatal in minutes

4 Routes of Entry for the Allergens

- Ingestion
- Injection
- Inhalation
- Absorption

Common Anaphylaxis-Causing Agents

- Food Products
- Other products
- Pharmaceutical Products
- Venom from Stinging Insects

Severe Allergic Reactions

Signs & Symptoms

Mild Signs & Symptoms

- Flushed, itchy skin, Skin rash (Hives)
- Runny nose
- Watery eyes
- Coarse voice

Severe Signs & Symptoms

- Swelling of face, lips, tongue, and skin around the eyes and neck
- Breathing difficulties
- Chest tightness & wheezing
- “Lump in the throat”
- Hoarseness and coughing
- Metallic taste or itching in the mouth
- Stridor (high-pitched squeak or wheeze)
- Rapid, bounding heartbeat
- Abdominal bloating, cramping, vomiting & diarrhea
- Massive headache & dizziness

First Aid for Severe Allergic Reactions

- ❑ **Call 911**
- ❑ Assess the person's level of responsiveness
- ❑ Have victim sit or lie down in a comfortable position
- ❑ Locate patient-prescribed auto-injector
- ❑ Administer epinephrine with auto-injector unit as per local protocols
- ❑ Monitor the ABC's

Dosage for adult: 0.3 mg of epinephrine
Dosage for child: 0.15 mg of epinephrine Jr.

Administer a second dose If the first dose is not effective after 5 minutes.

Six Rights to assist with medications:
Right patient, Right drug, Right dose, Right time, Right route, Right documentation.

Diabetes

Disease caused mainly by the pancreas inability to produce sufficient insulin. Insulin regulates the conversion of sugar to energy.

- Hypoglycemia (low blood sugar)
- Hyperglycemia (high blood sugar)

Did you Know?

About 11 million Canadians living with diabetes or prediabetes.

- 90% with Type 2 diabetes
- 5 to 10% with Type 1 diabetes

Diabetes

Hypoglycemia (Diabetic Shock)

Signs & Symptoms

- Develops very quickly
- Headache and confusion
- Weak, trembling and staggering
- Appears to be intoxicated
- Slurred speech
- Tired and sleepy
- May become belligerent and aggressive
- Pale, cool and clammy skin

Diabetes

Hyperglycemia (Diabetic Coma)

Signs & Symptoms

- Develops over several hours
- Thirsty
- Nausea and vomiting
- Frequent urination
- Warm, dry and flushed skin
- Fever and abdominal pain

- "Fruity" or nail-polish remover smell to the breath (late sign)
- Drowsy and comatose

First aid for Diabetic Emergencies

- **Call 911**
- **Conscious person**: give glucose tablets, glucose gel, sugar tablets or a sweetened drink with a bit of sugar added. *(in order of preference)*
- **Unresponsive person**: do not give anything by mouth, assess ABC's and place the person in recovery position.

Identify diabetic emergencies

- ✓ Responsive or unresponsive casualty?
- ✓ What provoked the diabetic emergency?
- ✓ What is the severity of the diabetic emergency?
- ✓ How long ago did the diabetic emergency start?
- ✓ What was the casualty's last meal / oral intake?
- ✓ Events leading prior to the incident?
- ✓ Do they take diabetic medication?

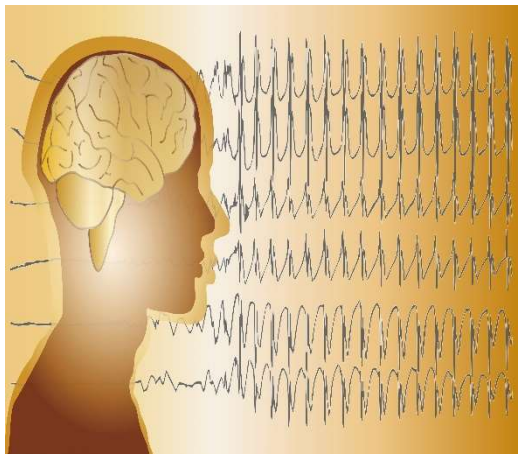
Administration of glucose may be repeated if symptoms persist after 10 minutes.

Six Rights to assist with medications:

Right patient, Right drug, Right dose, Right time, Right route, Right documentation.

Seizures

Seizures or convulsions occur when there are uncoordinated discharges of electrical activity in the brain.



Types of Seizures:

- Grand-Mal Seizure (tonic-clonic seizure)
- Petit-Mal Seizure (absence seizure)
- Simple Partial Seizure (focal motor seizure)
- Complex Partial Seizure (temporal lobe or psychomotor seizure)
- Febrile (infantile spasm)
- Atonic Seizure (drop attack)
- Myoclonic Seizure

Did you know ?

According to Epilepsy Canada, 300,000 Canadians are affected by epilepsy.

Seizures

Signs & Symptoms

They may mention that they don't feel well or that they have an odd taste or smell prior to the seizure episode.

- Blank stare
- General stiffening of the body
- Loss of consciousness
- Generalized jerking and uncoordinated body movements
- Grunting because of spastic diaphragm contractions
- Abnormal and irregular breathing and sometimes panting
- Frothing at the mouth (from productive salivary glands and panting)
- Loss of bladder and or bowel control

First Aid for Seizures

- **Call for help and get someone to call 911**
- If you have sufficient time before the seizure activity begins, have the person lie on the floor or on the ground
- Loosen any restrictive clothing
- Protect the person from injury by supporting the head
- Assess the airway and breathing (Never place anything in the person's mouth since this may break teeth, cause gagging, vomiting, and will likely compromise the airway.)
- After the convulsion has subsided, place the person in the recovery position and cover them with a blanket
- Provide reassurance and limit the exposure to loud or bright stimulus (this could precipitate another seizure)
- Do not give any liquids during or after the seizure
- Check for medical bracelet.(casualty medical history)
- If another seizure begins or if the first seizure lasts longer than 5 minutes, please advise EMS personnel.

Six Rights to assist with medications:

Right patient, Right drug, Right dose, Right time, Right route, Right documentation.

Febrile Seizures

Signs & Symptoms of Febrile Seizures

- Drowsiness
- Involuntary cry or moan
- Generalized jerking and uncoordinated body movements
- Irregular breathing
- May vomit
- Might bite the tongue
- Loss of bladder and or bowel control

First Aid for Febrile Seizures

- ❑ **Call for help and get someone to call 911**
- ❑ If you have sufficient time before the seizure activity begins, have the person lie on the floor or on the ground
- ❑ Loosen any restrictive clothing
- ❑ Protect the person from injury by supporting the head
- ❑ Assess the Airway and Breathing (Never place anything in the person's mouth since this may break teeth, cause gagging, vomiting, and will likely compromise the airway.)
- ❑ After the convulsion has subsided, place the young child in the recovery position
- ❑ Provide reassurance and limit the exposure to loud or bright stimulus(this could precipitate another seizure)
- ❑ Do not give any liquids during or after the seizure

Six Rights to assist with medications:

Right patient, Right drug, Right dose, Right time, Right route, Right documentation.

Fever

Signs and Symptoms of a fever

- Fever
- Sore throat
- Earache
- Cough & Vomiting
- Dehydrated
- Drowsiness & confusion

High fevers

- infant < 90 days old: 37.9 ºC (100 ºF)
- infant 3 – 6 months: 38.3 ºC (101 ºF)
- infant 6 – 12 months: 39.4 ºC (103 ºF)
- adult: 40.5ºC (105 ºF)

First Aid for fevers

- ❑ Call 911 (if high fever does not subside or the casualty has a seizure).
- ❑ Remove excess clothing or blankets.
- ❑ The environment should be comfortably cool.
- ❑ Place cool towels in the armpits, behind the neck, and in the groin or sponge bath may help cool someone with a fever.

Eye Injuries

When assessing the injured eye, take a close look at the other eye to compare and see if it was also affected.

Serious eye issues:

- Loss of vision
- Blank spots

Safety Practices for Eyes

- Wear safety glasses when working with tools or chemicals.
- Wear eye protection when playing sports such as squash or racquetball.
- Wear dark glasses with UV protections in sunlight.

First Aid for Minor Particles in Eye

- ❑ **Call 911** (if needed)
- ❑ Sit the injured person in a comfortable position
- ❑ Tell the person not to rub the eyes
- ❑ Examine the eyes with a good light
- ❑ Ask if the person has any visual disturbance with the affected eye
- ❑ Begin flushing the foreign object with the affected eye looking down
- ❑ Patch the eye (if necessary)
- ❑ Consider seeking medical attention

First Aid for Light or Laser Eye Injuries

- ❑ **Call 911** (if needed)
- ❑ Rest & reassure the casualty
- ❑ Examine the casualty eyes
- ❑ Patch both eyes with a moist & cool sterile bandage (if necessary)
- ❑ Treat for shock
- ❑ Seek medical attention

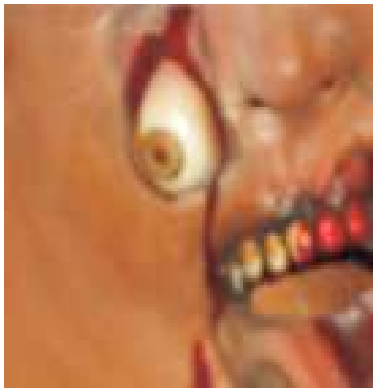
First Aid for Eye Injuries – Chemical Burns

- **Call 911**
- Rest & reassure the casualty
- Examine the casualty eyes
- Flush the eyes
- Treat for shock
- Seek medical attention

* Check the chemical product label and read the first aid direction if available.

First Aid for Imbedded object & extruded eye injuries

- ❑ **Call 911**
- ❑ Sit the injured person in a comfortable position
- ❑ Tell the person not to rub the eyes
- ❑ Examine the eyes with a penlight
- ❑ Immobilize the object with bandages
- ❑ Patch both eye (if necessary)



First Aid for Eyeball out-of-socket

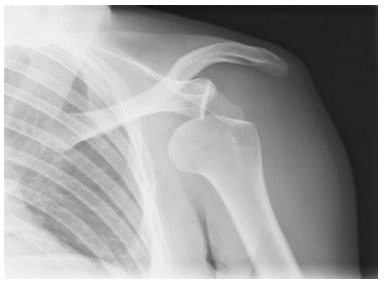
- ❑ **Call 911**
- ❑ Gently cover the extruded eye with loose moistened gauze in a cup.
- ❑ Immobilize / tape the cup around the eye (to the forehead and cheek)
- ❑ Do not exert pressure on the injured eye while applying a dressing

Bone & Joints Injuries

Injuries to muscles, joints and bones result from a variety of mechanisms and can very in severity. Examples ?

- Strains
- Sprains
- Dislocations/subluxations
- Fractures

  Open & Closed



Joint / Muscle Injuries

Signs & Symptoms of casualty

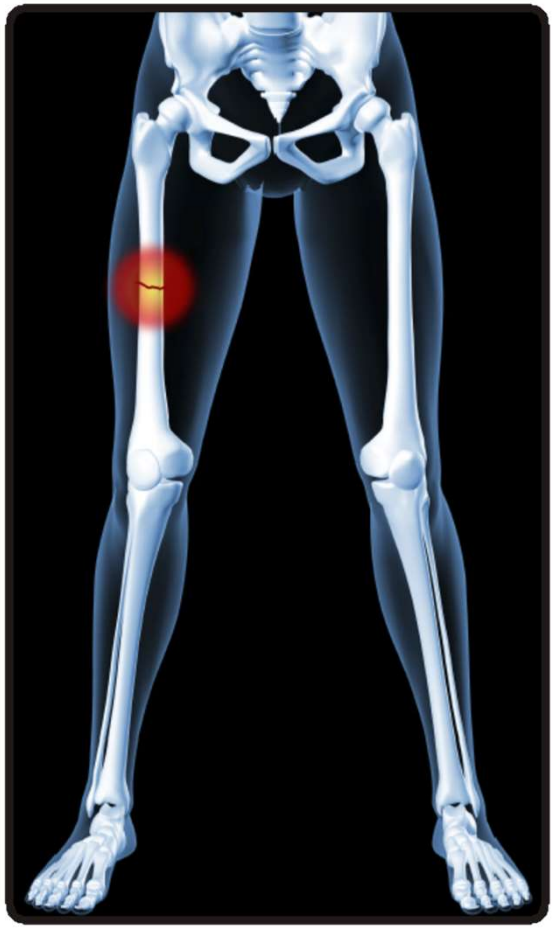
- Unnatural movement
- Deformity
- Odd shape
- Pain & tenderness
- Swelling
- Bleeding
- Shock

- Discoloration & bruising
- Numbness & tingling
- Cold affected area
- Muscle spasm & tightening
- Difficulty moving affected area
- Risk of fainting

Fracture

Signs & Symptoms

- Pain & tenderness
- Loss of function
- Deformity
- Unnatural movement
- Shock
- Grating sound
- Swelling & bruising



First Aid

For most injuries to bones, joints & muscles: use the PRICE method

- **P**rotect
- **R**est
- **I**mmobilize
- **C**old
- **E**levation

Before beginning treatment, try to obtain information about the event that will give clues on the severity of the injury.

Splint and Immobilize
Bone & Joint Injuries

1. Expose the affected area above and below the injury site and gently support the injured limb.
2. Use a padded board or a commercial splint that will function as a support for the limb.
3. Place the support around the affected limb and wrap the support with triangular bandages or gauze rolls to hold in place.
4. Check for good capillary color and a pulse at the extremity of the injured limb.

First Aid for Fractured Femur

Signs & Symptoms

- Severe pain
- Bleeding
- Odd shape & deformity of the leg
- Tissue swelling
- Muscle spasm & tightening
- Discoloration
- Unable to move the leg
- Bone fragments protruding from the skin
- Shock

First Aid for Fractured Femur

- ❑ Scene Survey
- ❑ Primary Survey
- ❑ Call 911
- ❑ Apply PRICE principle
- ❑ Use a padded splint or backboard to immobilize the hip and leg
- ❑ Treat for shock

*Be careful when immobilizing the fractured femur. Why ?

Repetitive Strain Injuries (RSI)

Tendonitis, Bursitis, Epicondylitis, and Carpal Tunnel Syndrome are repetitive strain injuries.

Signs and Symptoms of Repetitive Strain Injuries

- Muscle spasm & tightening
- Weak muscle
- Difficulty moving affected area
- Swelling
- Discoloration & bruising
- Stiffness

First Aid for Repetitive Strain Injuries

Follow ESM: Scene Survey, Primary Survey, Call 911

Ongoing Casualty Care : PRICE

Crush Injuries

Crush injuries occur when heavy forces are applied to the body.

Scene Survey

- ❑ Check for hazards & level of responsiveness before calling 911.

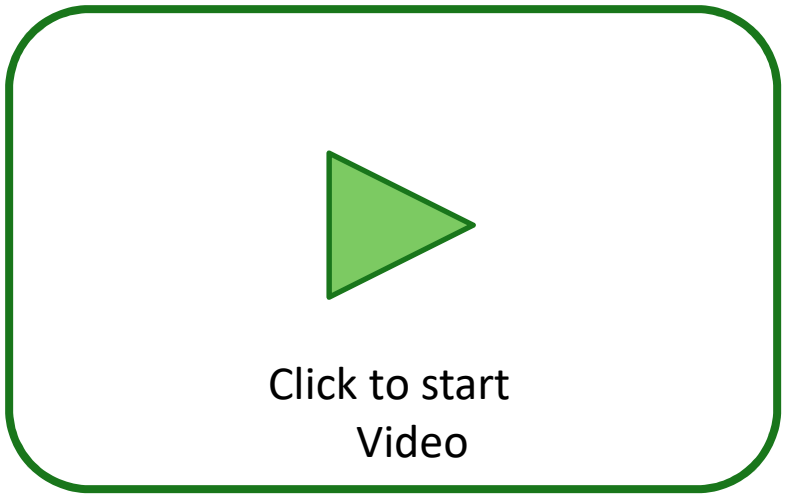
Primary Survey

- ❑ Assess the ABC's
- ❑ Rapid body check and stop major bleeding.

Ongoing Casualty Care

- ❑ Control and stop bleeding
- ❑ Splint the limb (if required)
- ❑ Immobilize the person (if required)
- ❑ Treat for shock

Bone & Joint Injuries Video



Casualty Management – Responsive casualty

Most common injuries associated with head & spinal injuries

With head & neck injuries:

- Scalp wound
- Skull fracture
- Pinched nerve & bulge disc and etc…
- Facial injuries (cuts, laceration, etc.)
- Eye injuries (black eye, etc.)
- Nose bleed & nose fracture
- Ear injuries (tear, etc.)
- Jaw fracture

Casualty Management – Responsive casualty

Most common injuries associated with head & spinal injuries

With spine & pelvic injuries:

- Muscle spasms
- Pinched nerve & bulge disc and etc.
- Fracture vertebrae
- Fracture pelvic

Organs that may be damaged by pelvic injuries are:

- Genital
- Kidneys
- Liver
- Pancreas, etc…

Casualty Management – Responsive casualty with suspected head & spinal injuries

Recognize head & spinal and pelvic injuries

Motor vehicle collisions (MVA) are a common source of head & spinal and pelvic injuries. Falls and sports are also frequent mechanisms of injuries.

Mechanism of injury

- ✓ Any motor vehicle collision (MVA)
- ✓ Any fall from a height
- ✓ A casualty found unconscious with unknown mechanism of injury
- ✓ Any injury from a serious impact from a sports such as hockey, football, skiing and etc..
- ✓ Any casualty thrown off a bicycle or motorcycle
- ✓ Any casualty which their helmet is crack from a fall

Head & Spinal Injuries

Causes

- **A head injury** refers to a trauma to the skull in which the bone may be fracture and the brain function may be altered or severely compromised.

- **A spinal injury** refers to a trauma to the spine in which the spinal cord may be compromised or severely damaged.

Casualty Management - Spinal Injuries

Signs & Symptoms

- Deformity at the injury
- Weakness or paralysis
- Bruising or swelling
- Numbness or tingling
- Shock
- Pain
- Shallow or rapid respiration
- Dizziness, nausea

Casualty Management - First aid for Spinal Injuries

- ❑ Check for hazards & safety
- ❑ Check level of responsiveness
- ❑ Call 911 & call for help
- ❑ Assess the ABC's and stabilize the head & neck
- ❑ Control any visible bleeding
- ❑ Treat for shock

The rescuer must take great care to avoid permanent disability and possible death by immobilizing the head, neck and back (spine).

Casualty Management - Types of Head Injuries

Skull Fractures

- It takes a tremendous amount of force to fracture a skull.
- Fractures can also occur in the nose, jaw or facial bones.
- Always consider the possibility of associated neck injuries.

Concussions

- Causes a temporary alteration in brain function.
- Damage to the brain tissue can result in serious, long-term damage.

Compressions

- Compression of the brain (cerebral compression) occurs when there is a build-up of pressure on the brain.

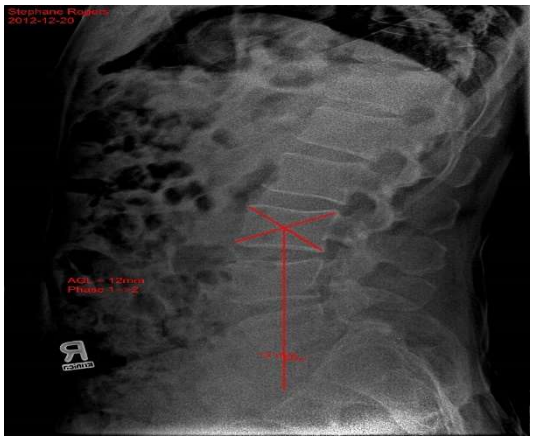
Head & Spinal Injuries

Signs & Symptoms

- Deformity of the skull
- Pain at the injury site
- Bruising or swelling around eyes
- Bruising behind the ears
- Dizziness & nausea
- Bleeding
- Significant headache
- Confused, disoriented
- Weakness or paralysis
- Respiratory distress
- Shock
- Straw colored fluid from nose or ears
- Can't remember the event

head

spinal



Casualty Management - First Aid for Head Injuries

- ❑ Check for hazards & assess level of responsiveness.
- ❑ Call 911 and call for help.
- ❑ Assess the ABC's, but stabilize the head and neck.
- ❑ Control any visible bleeding with thick compress bandages, but avoid excessive pressure on head lacerations.
- ❑ Treat for shock.

First Aid for a Bump on the Head

- ❑ Assess level of awareness.
- ❑ Control any visible bleeding with gauze pad.
- ❑ Ice pack directly on the bump.
- ❑ Seek medical attention if the person shows any signs of serious head injury, particularly if they are unusually drowsy or vomiting.

First Aid for Head & Spinal Injuries

- ❑ Check for hazards & safety
- ❑ Check level of responsiveness
- ❑ Call 911 & call for help
- ❑ Assess the ABC's and stabilize the head & neck
- ❑ Control any visible bleeding
- ❑ Treat for shock

The rescuer must take great care to avoid permanent disability and possible death by immobilizing the head, neck and back (spine).

Chest Injuries

Injuries to the chest can have serious consequences that can quickly become life threatening.

The two major concerns with chest trauma are:

1. Organ damage.
2. Internal bleeding.

Did you know that ?

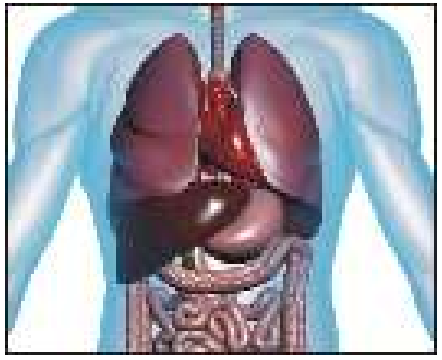
Whenever chest injuries are accompanied by shock and severe respiratory distress, the mortality rate can rise to as high as 73%.

Mechanism of injury: explosion, accident, fall, impaled object, etc..

Fractured Ribs & Flail Chest

Signs & Symptoms

- Shortness of breath
- Shallow, irregular and rapid breathing
- Labored and difficult breathing
- Gasping for air
- Noisy, wheezy breathing
- Pale, sweaty skin
- Weak and exhausted
- Leaning forward with shoulders pulled up
- Using neck muscles to move chest up to breathe
- Bluish tinge to lips from lack of oxygen



First Aid for Fractured Ribs & Flail Chest

- ❑ Check for hazards & assess level of responsiveness.
- ❑ Assess the ABC's.
- ❑ Call 911.
- ❑ Have the person sit in a position that is most comfortable for them.
- ❑ Splint the injured area by using bulky dressings or a pillow and gently put it against the fracture site.
- ❑ The splint can be secured by using widened swaths, but do not tighten the swaths so that breathing will be compromised.
- ❑ Try to coach the person to take slow deep breaths.

Pneumothorax/Hemothorax

Pneumothorax (Collapsed Lung)

Result of an injury where air gets into the chest cavity.

- Open pneumothorax
- Closed pneumothorax

Hemothorax (Blood in the Chest Cavity)

This injury produces an accumulation of blood in the chest cavity.

Open Pneumothorax

Open Pneumothorax

- ❑ **Call 911**
- ❑ Check for hazards
- ❑ Assess level of responsiveness
- ❑ Have the person sit in a comfortable position
- ❑ Assess and secure the ABC's
- ❑ Control bleeding immediately !

Blast Injuries

Blast injuries are inflicted on casualties subjected to the effects of the detonation of high-order explosives. They are often struck by material thrown by the blast.

- ✓ **Primary blast injury:** will affect air filled structures, such as the gastrointestinal tract, lungs, and ears.
- ✓ **Secondary blast injury:** caused by casualty being thrown by the blast and striking objects or the ground.
- ✓ **Tertiary blast injury:** caused by an object thrown by the blast that strikes the casualty and / or burns from the heat of the blast.

First Aid for Blast Injuries

Scene Survey

- ❑ Check for hazards & level of responsiveness before calling 911.

Primary Survey

- ❑ Assess the ABC's and stabilize the head & neck
- ❑ Rapid body check and treat major bleeding, burns and bones injuries.

Ongoing Casualty Care

- ❑ Cover the wound with sterile absorbent dressings
- ❑ Be prepared to treat for shock from internal bleeding
- ❑ Immobilize and stabilize injured person
- ❑ Treat for shock

First Aid for Pelvic Injuries

- ❑ Scene Survey,
- ❑ Primary Survey
- ❑ Call 911

Ongoing Casualty Care

- ❑ Unless it is necessary, do not move the casualty with a pelvic fracture.
- ❑ Immobilize the casualty in the position found.
- ❑ Splint the pelvis by placing bulky pillows or heavy padding on both sides of the pelvis and gently securing them in place with large swaths.
- ❑ Do not move or lift the legs.
- ❑ Check distal circulation and sensation in the legs.
- ❑ Treat for shock

Heat & Cold Related Injuries

Conditions that cause heat illness

- Dehydration
- Environmental conditions
- Strenuous activity
- Wearing excess clothing
- Drinking alcohol

(affects your ability to regulate body temp.)

Safety measures to avoid heat illness

- Drink plenty of fluids
- Make sure you hare taking in more fluid than you are losing
- Drink appropriate sports drinks to help maintain electrolyte balance
- Schedule physical outdoor activities in the cooler parts of the day
- Wear light weight and loose-fitting breathable clothing

Heat Related Injuries

Heat Cramps

- Caused by salt depletion from profuse sweating
- Results in muscle cramps in lower extremities or abdomen

Heat Exhaustion

- Caused by a more severe loss of salt and water
- Results in drop in blood pressure

Heat Stroke

- Least common but potentially fatal
- Results from a dysfunction of body's heat regulating system
- Organ and brain damage can occur

Heat Cramps

Signs & Symptoms

- ➢ Mild sweating
- ➢ Cool (moist or dry) skin
- ➢ Normal body temperature
- ➢ Slightly tired and weak
- ➢ Abdominal cramps
- ➢ Cramps in lower extremities

First Aid

- ❑ Move casualty to a cool environment
- ❑ Give 1-2 glasses of a drink containing salt if casualty is alert
- ❑ Encourage person to limit exertion for at least 12 hours

Heat Exhaustion

Signs & Symptoms

- Profuse sweating
- Pale, cool skin
- Exhausted and dizzy &mildly confused
- Fast and shallow breathing
- Rapid or weak pulse

First Aid

- ❑ Assess the level of responsiveness
- ❑ Call 911 (if needed)
- ❑ Move the person to a cool environment
- ❑ Cool the person by sponging with cool water
- ❑ Place the person in the recovery position.
- ❑ Treat for shock
- ❑ Give one or two glasses of a solution containing salt (Sports drink or ½ teaspoon salt in lemonade)
- ❑ Only if the person is alert and not nauseated

Heat Stroke

Signs & Symptoms

- No sweating
- Flushed, hot, dry skin
- High temperature (>39°C)
- Confused, delirious, and comatose
- Rapid, deep respirations
- Rapid pulse – possible seizures

First Aid

- ❑ Assess Level of responsiveness
- ❑ Call 911 (if needed)
- ❑ Move casualty to a cool environment
- ❑ Cool the person as rapidly as possible by immediately immersing the entire body in cool water. Immerse the casualty gradually if they have a heart condition.
- ❑ Give 1-2 glasses of a drink containing salt if casualty is alert and not nauseated.

Hypothermia

Hypothermia - When core temperature is less than 35°C

Loss of body heat

- Convection
- Conduction
- Evaporation
- Radiation
- Respiration

Signs & Symptoms

Mild (37 °C to 35 °C)
- Conscious and shivering

Moderate (34 °C to 26.6 °C)
- Confused, shivering, cold bluish skin, slow pulse & respiration

Severe (<26.6 °C)
- No shivering ice cold and bluish skin, slow breathing & very weak pulse

Safety measures (avoid cold injuries)

- Wear layered clothing with insulation
- Drink plenty of fluids to avoid dehydration
- Eat high protein snacks
- Minimize periods of inactivity
- Avoid drinking alcohol

First Aid for Hypothermia

- ❑ Assess level of consciousness.
- ❑ Call 911 (if severe hypothermia).
- ❑ Move casualty to a warm sheltered location.
- ❑ Replace wet clothing if possible.
- ❑ Insulate casualty, especially the head.

- ❑ Assess the ABC's (check pulse for 45 seconds if hypothermia is severe).
- ❑ Provide heat to prevent any further drop in body temperature.
- ❑ Give warm fluids containing sugar if person is alert and not nauseated.

Frostbite

Injury can be superficial or deep. Severe frostbite shuts down circulation to affected area causing swelling, blisters and possible gangrene.

Signs & Symptoms

Superficial	Deep
• Stiff, white, waxy skin	Hard, cold, yellowish skin
• Numbness of affected area	No feeling in affected area
• Skin can become bluish, swollen	Skin can become grayish
• Blisters	Blisters

First Aid for Frostbite

Superficial Frostbite

- ❑ Move the person from the cold source
- ❑ If the person is outside, provide a shelter from the wind
- ❑ Dry the person
- ❑ Use luke warm water to warm up the extremities
- ❑ Do not massage the area
- ❑ Cover blisters with dry, sterile dressings

Deep Frostbite

- ❑ Call 911
- ❑ Assess level of responsiveness
- ❑ Dry the person
- ❑ Treat for shock
- ❑ Blanket on the casualty
- ❑ Keep the limb away from any direct heat source
- ❑ Pad the injured extremity to avoid any further injury
- ❑ Do not rub snow or ice onto a frostbite injury
- ❑ Do not massage the extremity
- ❑ Treat for shock

Poisons

Definition of Poison

A poison is a substance that can cause illness or death when it enters the body.

History of a poisoning emergencies

Exposure – Quantity - Time - Casualty State

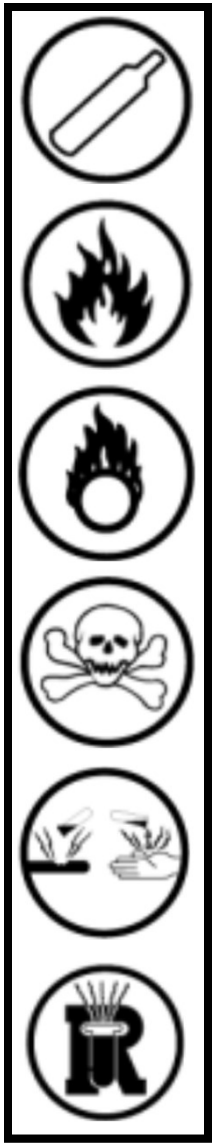
Poison comes in 4 forms: solids (such as pills or tablets), liquids (such as gasoline), sprays (such as household spray cleansers) and gases (such as carbon monoxide).

Some examples of common poisons are:

- Alcohol
- Prescription, over-the-counter and illegal drugs
- Food supplements, like vitamins, minerals and herbal products
- Nail polish and nail polish remover
- Mouthwash
- Drain and toilet bowl cleaners
- Bites and stings from insects , animals or marine life

Types of Poisons

Poisonous Substances Enter the Body:



Inhalation

- Carbon monoxide, smoke, etc.

Ingestion

- Food & drink, etc.

Absorption

- Through skin eyes or mucus membranes

Injection

- Drugs, puncture wounds, etc.

Poisons

Poison Prevention

- ✓ Store all household products in the cupboards above counters or in cabinets that can be locked with child-resistant safety latches, out of reach of small children;
- ✓ Keep all medications in cupboards out of reach of small children;
- ✓ Discard any outdated medication;
- ✓ Keep poisonous plants out of reach of small children;
- ✓ Discard foods that are outdated, that smell foul, or that you consider to be contaminated;
- ✓ Use products with containers that have child-resistant safety caps.

Poisons

General Signs & Symptoms

- Headache
- Dizziness
- Coughing
- Nausea & vomiting
- Rapid pulse

Severe Signs & symptoms

- Convulsion
- Dilated pupils
- Rapid breathing
- Unresponsive

First Aid for Poisons

Inhaled Poisons

- ❑ Check for hazards and safety
- ❑ Remove the person from the environment and into the fresh air
- ❑ Assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC's
- ❑ Treat for shock

Ingested (swallowed) Poisons

- ❑ Check for hazards
- ❑ Assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC's
- ❑ Do not give fluids unless told to do so by the Poison Information Centre. Wipe any substance from the person's face and rinse or wipe out the mouth.
- ❑ Treat for shock

First Aid for Poisons

Absorbed Poisons

- ❑ Check for hazard & safety
- ❑ Assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC's
- ❑ Wipe or flush any substance from the affected area with large amounts of water
- ❑ If the substance is a powder, immediately dust off the material then begin flushing
- ❑ Remove any contaminated clothing
- ❑ Do not touch the contaminated clothing
- ❑ Wash the site with mild soap and water
- ❑ Treat for shock
- ❑ Call the Poison Information Centre for medical direction

Injected Poisons

- ❑ Check for hazards and safety
- ❑ Remove the person from the environment
- ❑ Assess level of responsiveness
- ❑ Call 911
- ❑ Assess the ABC's
- ❑ Examine the wound to see if the skin was broken
- ❑ Wash the site with antiseptic soap
- ❑ Treat for shock
- ❑ Follow local medical protocols

Rescue carries

There may be circumstances when the first aider may not be in a position to provide first aid where the casualty is found.

The first aider may be required to move the conscious or unconscious casualty from one location to another.

Example: environment is unstable or unsafe for the rescuer or the casualty.

Rescuer safety while moving a casualty

To avoid back injuries, always lift with your legs not your back !

Casualty Rescue Carries

- Pick a back
- Cradle carry
- Human crutch
- Four-hand seat carry
- Blanket carry
- Drag carry
- Firefighter carry

Rescuer safety while moving a casualty

To avoid back injuries,

always lift with your legs not your back !

No lifting in class without direct assistance of the instructor.

First Aid Kits

Sample - Office First Aid Kit

- (a) a current edition of a standard First Aid Manual;
- (b) 24 safety pins;
- (c) 1 basin, preferably stainless steel; and
- (d) dressings consisting of,
- (i) 48 adhesive dressings, individually wrapped,
- (ii) 2 rolls of adhesive tape, 1 inch wide,
- (iii) 12 rolls of 1-inch gauze bandage,
- (iv) 48 sterile gauze pads, 3 inches square,
- (v) 8 rolls of 2-inch gauze bandage,
- (vi) 8 rolls of 4-inch gauze bandage
- vii) 6 sterile surgical pads suitable for pressure dressings, individually wrapped,
- (viii) 12 triangular bandages,
- (ix) splints of assorted sizes, and
- (x) 2 rolls of splint padding.

information: www.cget.ca

Elective Advance First Aid Skills

- Secondary Assessments
- Sample
- OPQRST
- Vital signs
- Triage
- Emergency childbirth

To be performed by trained first aiders only.

Secondary Survey

- ❑ Body check-assess for injuries
- ❑ Look for gross bleeding, wet check and medical bracelets.
- ❑ Check for the 3 ‘’B’’s: Bleeding - Burns – Bones
- ❑ Prioritize treatment
- ❑ Take the vital signs

<u>Ongoing care</u>

- ❑ Continue treatment
- ❑ Treat for shock & Monitor vital signs
- ❑ Ongoing casualty care until hand over to EMS*(1)
- ❑ Write a workplace incident report
- ❑ Follow up with employer (if required)

(1) Provide to the EMS information about the casualty injuries or illness and any finding during your evaluation and first aid treatment.

(2) To be performed by trained first aiders only.

Secondary Survey

Secondary survey is divided in five body sections:

1. Head &Neck assessment*
2. Back assessment
3. Chest assessment
4. Abdominal assessment
5. Extremities assessment (arms* & legs)

This "hands on" survey also utilizes a look, listen, feel an smell approach.

When exposing and examining a casualty, the typical findings
For medical and trauma casualties are:

- ✓ Bleeding, Burns, Fractures and etc..
- ✓ Bumps, Bruising, Deformities, Swelling and etc..

*Does the casualty have a medical information necklace or bracelet?

To be performed by trained first aiders only.

Secondary Survey

Questions to ask the casualty

S.A.M.P.L.E.

- **S** Sign & Symptoms

  (Signs are what we see while symptoms are what the casualty feels) How do you feel ?
- **A** Allergies (Do you have allergies to drugs and food products)
- **M** Medications (For any medical problems)

- **P** Past medical history

  (Cardiac, Pulmonary, Neurological, Digestive, or Metabolic)
- **L** Last meal (What was the time of the last meal?)

- **E** Events preceding the injury/illness

  (What was the casualty doing before the episode?)

To be performed by trained first aiders only.

Secondary Survey

Questions to ask the casualty

O.P.Q.R.S.T.

- **0.** **Onset**
- **P** What **Provoked** the illness
  (what was the casualty doing before the event occurred?)

- **Q** Describe the Quality of the pain
  (Dull sharp, stabbing, aching)
- **R** The **Region or Radiation** that is affected by the pain.
  (Does the pain stay in the chest or does it move to the jaw or arms?)

- **S** Describe the **Severity** of the pain
  (on a scale of 1-10, with 10 being the most severe)

- **T** What **Time** did the episode of pain occur?

To be performed by trained first aiders only.

Vital Signs

Determining baseline vital signs is an integral part of the secondary survey and is generally the first step in this assessment phase.

Pulse – Respirations – Skin – Pupils - Blood Pressure

Age	Pulse
Newborn	120 – 160 BPM
1 year	80 – 140
3 years	80 - 120
5-10 years	70 - 115
15 years	70 - 90
Adult	60 – 80

Feel the pulse on the carotid or radial: time 15 seconds x 4 = number BPM.
(BPM- beats per minute)

Adult breath per minute: 12 to 16 breaths per minute
Child breath per minute: 18 to 20 breaths per minute
Infant breath per minute: 20 to 30 breaths per minute

Look at the chest and stomach should rise and fall: time 15 seconds x 4 = number of breaths per minute.
Rate and depth of respiration should be consistent.

To be performed by trained first aiders only.

Vital Signs

Skin

Look for Colour

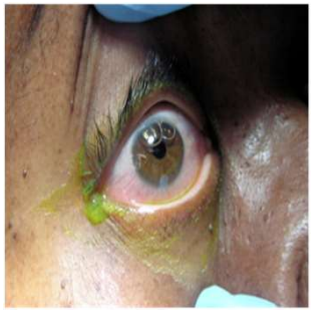
- ✓ Cyanotic (blueish-grey),
- ✓ Pale (white or greyish), Flushed (red-faced),
- ✓ Jaundiced (yellowish tinge)

Look for Temperature and moisture

- ✓ Cold
- ✓ warm or hot
- ✓ Dry or wet

Pupils

Look for Pupils are Equal, Reactive to the Light (PERL)



Blood Pressure (BP)

Normal systolic blood pressure is considered to be about 100 plus the casualty's age up to about 140 mmHg. (Minus about 8 to 10 mmHg. for women and children). Normal (diastolic blood pressure should be between 65 and 95 mmHg).

- **To be performed by trained first aiders only.**

Triage

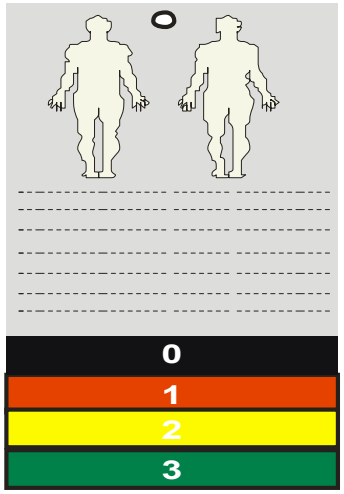
Quickly examining all casualties and prioritizing !

Three levels of priority

- **Highest priority** – casualties who need immediate first aid & transportation to medical help.
- **Second priority** – casualties who probably can wait one hour for medical help without risk to their lives.
- **Lowest priority** – casualties who can wait and receive first aid & transportation last or casualties who are obviously dead.

- *Reverse triage should be implemented in a lightning strike because casualties in cardiac arrest might gain the greatest benefit from CPR.*

To be performed by trained first aiders only.



Triage

Sequence of actions

- ❑ Begin Emergency scene management
- ❑ Go to nearest casualty, if it's safe to do so
- ❑ Assess responsiveness
- ❑ Call 911
- ❑ Assess ABC's
- ❑ Give first aid for life-threatening conditions
- ❑ If obviously dead move on
- ❑ Repeat for each casualty (always nearest first)
- ❑ Prioritize casualties
- ❑ Transport those with highest priority first
- ❑ Re-assess casualties starting with highest priority first
- ❑ Give ongoing care

To be performed by trained first aiders only.

Emergency Childbirth

- ❑ Manage the scene safely & PPE's
- ❑ Establish level of responsiveness (AVPU).
- ❑ Assess and manage the airway, ventilation and circulation.
- ❑ Perform a rapid medical assessment.
- ❑ Initiate treatment according to the appropriate guidelines. (obstetrical kit)
- ❑ Specific treatment for an emergency delivery

1. Place the mother in a position lying on her back, but wedged or slightly tilted to one side with a pillow. Have her draw up her knees and spread her feet apart.

2. Observe the vaginal opening, when the head becomes visible and stretches the tissues between contractions (crowning), the delivery is imminent.

3. Support the head from the above with downward pressure to the floor (anus). Give support to the posterior tissue between the vagina and anus (perineal body). This prevents severe tearing that can cause large amounts of blood loss.

4. As soon as the head is delivered, feel around the neck to make sure that the umbilical cord is not wrapped around it. If it is, with your fingers gently slide it over the newborn's head. Check for multiple loops.

Emergency Childbirth

5. Suction the mouth and nose with a bulb syringe. If not available, just wipe the face gently with a clean or sterile cloth.

6. The shoulders and body of the newborn may come out rapidly and easily, but you may need to assist by placing each hand on either side of the face over the ears. Use gentle traction to the floor first to deliver the anterior shoulder from underneath the pubic bone. Then use upward pressure to lift the posterior shoulder away from the anus. If possible, support the perineal body to prevent tearing. Use that same inferior hand to slide up the baby's back and grasp the feet.

7. Once the baby is born, if it is not crying, suction the mouth and nose again. You can use dry cloth to rub the baby's back further dry it off and stimulate it.

8. Place the baby on the mother, ideally skin to skin to keep it warm. With a dry towel or blanket, cover baby and mom.

9.Tie off umbilical cord and deliver placenta.

10. Keep the mother and baby warm. **To be performed by trained first aiders only.**

First Aid Quiz

Multiple choice quiz

Do not write on the quiz / please use the answer sheet provided

Please ask the instructor, If you need any help with the quiz.

GOOD LUCK !

Expiry date of certification

First Aid certification valid for 3 years of the date of issue.

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