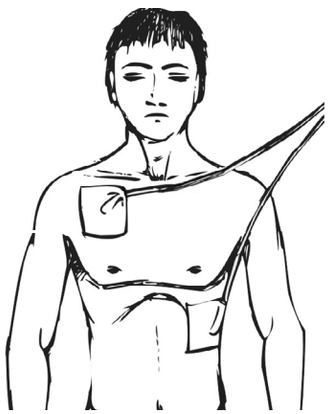
# CPR & AED

# EMERGENCY HANDBOOK



*Certifying organizations in First-aid and CPR (Cardio-pulmonary Resuscitation (CPR)* since 1982

www.linktolifeseminars.com

2026


# EMERGENCY TELEPHONE NUMBERS

1. Post beside all workplace /residential phones.

2. **Location:** Ensure you have a detailed description of your work/home address, cross streets, suite, floor and telephone numbers to give to 911 dispatcher.

MENTAL HEALTH HELPLINE

**Dial 988**

NON-EMERGENCY HEALTH INFO-LINE

1-866-797-0000

# INTRODUCTION

Welcome to the Link to Life™ CPR/AED training seminar.

Since 1982, we have been certifying organizations in First-aid, cardio-pulmonary resuscitation (CPR) and Automated External Defibrillator (AED) meeting the current science of the International Liaison Committee on Resuscitation (ILCOR).

Every five years or so, the Internationa Liaison Committee on Resuscitation reviews current research and procedures for resuscitation and updates the steps for both lay and healthcare responders. This reference book offers the current CPR/AED steps.

As a trained CPR responder you are the most important first link to life™ in a medical emergency. Why? Because when a person stops breathing brain death begins in only 4 minutes, and the response time of an ambulance in most urban centres is within 10 minutes. The faster we begin CPR and get an AED on site, the sooner we slow the clock on brain damage and correct an unhealthy heart rhythm.

We appreciate your attendance.

## SEMINAR OBJECTIVES

1. To certify you in CPR (cardio-pulmonary resuscitation) and/or Automated External Defibrillation (AED).
2. To create a comfortable and relevant learning experience.

## CALLING FOR HELP – 911

1. Ask for the service you need. Police, fire or ambulance.
2. State if person **conscious or unconscious.**
3. Provide your exact location including company name, floor, dept, intersections and phone number.
4. **Send a flagperson to meet the ambulance and hold elevators.**

**DO NOT HANG UP UNTIL THE DISPATCHER TELLS YOU TO.**

**NOTE:** ***Cellphones do not provide exact location.***

***5.*** *Mental Health emergencies-* ***Call 988***

# SCENE SURVEY – MASK UP/ GLOVE UP

## 1. STOP, CALM YOURSELF AND TAKE CONTROL

- Identify yourself as trained in CPR and gain consent to help.
- Protect the scene from dangers to you and the patient(s).
- Protect yourself from infection with mask/gloves and a barrier device.
- Obtain the history from scene survey, patient and bystanders.
- Check the level of consciousness (LOC) and activate 911.

## 2. PRIMARY ASSESSMENT

The primary assessment focuses on life-threatening emergencies and should always be conducted once the scene survey is complete. Whether a person is conscious or unconscious complete the primary assessment first.

### LAY-RESCUERS- ABC- PRIMARY ASSESSMENT

Patient unresponsive – send for 911 and AED.

**A- Open airway**- head tilt-chin lift method.

**B- Check breathing-** Look, listen and watch the chest for movement, facial color (grey or blueish), and sounds of breath for 10 seconds.

**No signs of breathing**-

**C**- start CPR- 30:2 ratio using a barrier device.

## HEALTHCARE PROVIDERS

A — Airway, B — Check for breathing, C- Pulse check (carotid for adults/children. Brachial pulse for infants)

**No signs of breathing or pulse**-

**C**- start CPR- 30:2 ratio using a barrier device.

# UNCONSCIOUS PATIENT

Unresponsiveness is defined as the failure to respond to noise, touch, or pain stimuli. If you cannot get a response from a person after carefully tapping them on the shoulders, calling loudly into both ears and pinching them, call 911 and send for the AED.

## GLOVE UP/MASK UP FIRST.

## MANAGING THE UNCONSCIOUS

Fig. 1 Head-tilt-chin-lift method

The most common danger of leaving an unconscious person on the back is airway obstruction caused by the tongue falling back over the top of the airway. To move the tongue and keep an open airway place one hand on the person's forehead and two fingers under the chin and tilt the head back. (Fig. 1). If the person is breathing, maintain an open airway and monitor signs of breathing until medical help arrives.

If there are **no signs of trauma** place them on the side, in the recovery position. (see below). Treat for shock, and monitor the breathing and check for serious bleeding.

## RECOVERY POSITION - *Is recommended for the following:*

1. Unconscious and breathing with no other injuries.
2. Person is coughing up fluids.
3. After a seizure/stroke. 4. Treating for shock.

**Recovery Position**

# ADULT/CHILD CPR (1 YEAR AND OLDER)– GLOVE UP/MASK UP

**1. UNRESPONSIVE PATIENT**
Call 911 and send for the AED.

**2. PRIMARY ABC ASSESSMENT**

**A- OPEN THE AIRWAY – ONE HAND ON THE FOREHEAD, TWO FINGERS UNDER THE CHIN AND TILT HEAD BACKWARDS.**
This lifts the tongue off the back of the throat.

**B- CHECK BREATHING**- Look, listen and feel for signs of breathing for 10 seconds (skin color – grey or blue, chest movement and sounds of breathing).

**NOTE:** *Some people make agonal or gasping noises-This **IS NOT EFFECTIVE** breathing.*

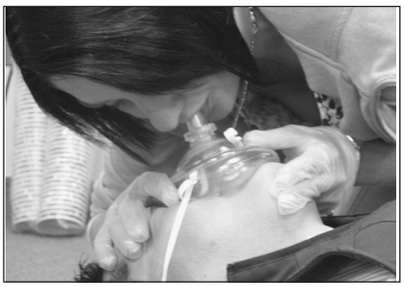
**PERSON NOT BREATHING**

**C-** Start chest compressions. Place the person on firm flat surface, landmark between armpits placing the heel of your hand on the sternum and other hand on top. **Compress 2 inches/5 cm in depth, at rate of 100-120/minute. If a barrier device is available (shield or mask) deliver 2** breaths to make the chest rise and continue 30 compressions and two breaths until an AED or help arrives. If no barrier device- continous chest compressions only. Limit pauses between breaths and compressions.

**CHEST COMPRESSIONS**

**HEALTHCARE PROVIDER (HCP)**
ABC ASSESSMENT AND CHECK CAROTID PULSE FOR ADULTS/CHILDREN FOR 10 SECONDS.

NO PULSE- DELIVER 30 COMPRESSIONS FOLLOWED BY 2 BREATHS USING A BARRIER DEVICE.

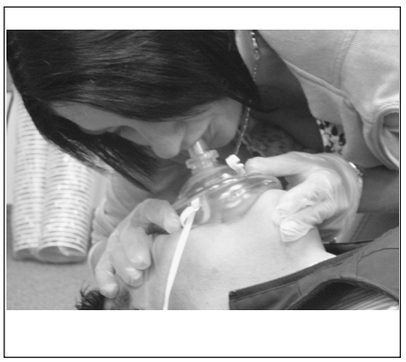


**MOUTH TO MASK BREATHING**

# MOUTH TO MASK – RESCUE BREATHING

First responders should use a barrier device if available for rescue breathing. A shield or mask covers both the nose and mouth to ensure effective seal and effective breathing. **If no barrier device is available** continue chest compressions only until an AED or EMS arrive.

All first-aid stations should have gloves, face masks and barrier devices.



## GASTRIC DISTENSION

Over-inflating the lungs by breathing too hard can cause gastric distension. This results in the stomach filling with air, and can cause vomiting and an obstructed airway. If the stomach begins to rise, re-position the airway and breathe less forcefully. Rescue breaths should be given only enough to make the patient's chest rise.

### VOMITING

If a patient begins vomiting, stop the rescue, carefully roll them onto the side, clear the mouth, check for breathing and resume the rescue.

### PREGNANT WOMAN

Place a towel or pillow under ther right hip for better circulation during CPR.

# AUTOMATED EXTERNAL DEFIBRILLATION (AED)

Sudden cardiac arrest is the leading cause of death in Ontario. When someone's heart stops, minutes count. Providing immediate CPR buys the patient some brain time, but it is the Automated External Defibrillator (AED) that can correct the unhealthy heart rhythm back to a normal one.

There are **four common heart rhythms** that can occur during a cardiac arrest. Two of these rhythms, **ventricular fibrillation (VF), and ventricular tachycardia (VT), are shockable**. The other two rhythms, pulseless electrical activity (PEA), and asystole (flatline) are **not shockable**.

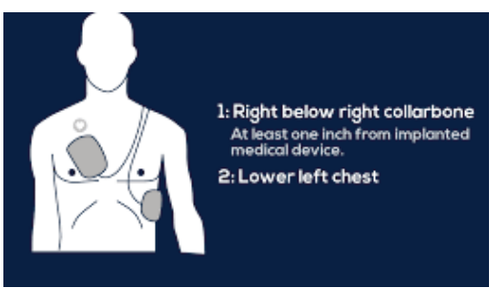
Most AEDs offer both verbal and visual instructions to guide the rescuer after it analyzes the heart rhythm.

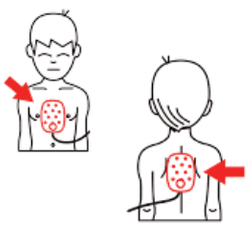
## WHEN THE AED ARRIVES – Turn off oxygen and electrical equipment.

1. Stop CPR, turn the AED on and follow instructions.
2. Bare the patient's chest including all under-garments. **NOTE: For females try to place pads around the bra if possible.** Remove excessive hair, jewelry, and dry wet skin on the chest and your hands. Remove medication patches, and dry skin. Avoid placing the electrode pads over pacemakers or implantable defibrillators.

## ELECTRODE PAD PLACEMENT (Follow package directions)

Place one pad **on bare skin** below the adult's **right collarbone**. Place the second pad on adult's left side **below the armpit** on the side of the ribs. Place the electrode pads away from each other to avoid arcing. For children/infants place one pad mid-sternum on the chest and one in the center of the back.(below right)



# AED ANALYZING

1. Rescuer says, “I’m clear, all clear, analyzing,” and performs a 360 degree visual check to ensure no one is touching the patient or moving nearby.
2. The AED will advise to either **deliver a shock, or no shock, and begin CPR**. The AED will automatically re-analyze the heart at the two minute mark and advise again.

## SHOCK OR NO SHOCK ADVISED

1. The AED decides if the patient has a shockable heart rhythm. If so, it will power up the flashing shock button. Rescuer must press shock button.

   **NOTE**: ***Fully automatic AEDS will immediately shock the patient.***
2. Before pressing the shock button rescuer says, “I’m clear, all clear, shocking.” Then presses the shock button and follows the AED instructions.
3. Begin CPR for two minutes.
4. At the two minute marks, stop CPR and the AED will re-analyze the patient.
5. Continue following the AED instructions until EMS arrives.

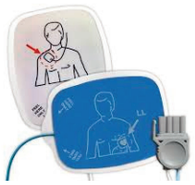
**NOTE**: *AEDs joule (energy) levels range between 100–360 for adults and less for children depending on the brand. Each manufacturer sets their joule levels. Child electrode pads provide less joules for children under 8 years old. Child AED pads can be used on infants.*

**NOTE**: *AEDs should have an accessory pouch with a razor, scissors, pocket mask, gloves, face mask, towel, and an extra set of electrodes.*

# MAINTAINING THE AED

Assign a member of your team to monitor the AED/ accessories monthly.

**BATTERY CHARGE** – Check front of the AED for a light or check mark indicating the battery status.If the battery is low you should order a new one immediately. **NOTE:** *If the battery indicator is low most units can still provide ample energy to shock acardiac arrest victim.* ***Batteries last 3 to 5 years depending on the brand.***



**ELECTRODE PADS** – Check the date on the package to ensure it has not expired. If it has expired, order two sets immediately from Link to Life™ Seminars. Most pads have a shelf life of two to five years depending on the manufacturer. Ensure there is a back up set of pads in the carrying case.

**NOTE:** ***Used pads should be disposed of after a single rescue.***

**CHECK CONDITION OF THE UNIT -** Check **the AED** for leaks cracks/damage.

**ACCESSORY POUCH** – Should contain a razor, scissors, pocket mask/gloves, face mask, towel, extra set of pads, pen and pad for detailing rescues.

**NOTE:** *AEDs conduct a self-check on a regular basis.*

## TRANSFER OF CARE TO PARAMEDICS

Rescuers can provide valuable information to paramedics, including the time CPR began, time of first shock, age of patient, any medical conditions/medications and next of kin. Some AEDs display time and number of shocks delivered.

## POST INCIDENT REPORTING

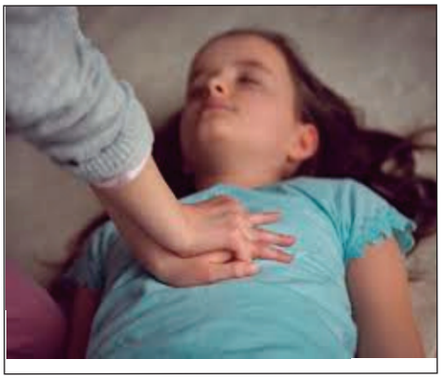
If one of your first-aiders is involved in a rescue and needs to discuss the event, Please call 988, the mental health resource line, or your company employee assistance program. EAP

**AED TRAINING SHOULD BE CONDUCTED ONCE A YEAR.**

# CHILD CPR (1-8 years) GLOVE UP/MASK UP.

1. **Unresponsive child**- call 911 and send for the AED. If alone, perform two minutes of CPR and then call 911.
2. **Open the airway and check for signs of breathing** for 10 seconds. **If not breathing** – place on firm flat surface and begin 30 chest compressions/100 per minute at a depth of 2 inches/5 cm. Stop, and if a barrier device is available deliver two breaths to make the chest rise and continue 30 compressions and 2 breaths until an AED or EMS arrive.

   *Note: For very small children use the heel of one hand for compressions.*



Continuous chest compressions

## INFANT CPR (Under 1 year )

1. **Unresponsive infant** – Send for 911. If alone, perform two minutes of CPR **before** calling 911.
2. Open the airway slightly using the head-tilt-chin lift method, and check for signs of breathing for 10 seconds. **If not breathing** – landmark for CPR by placing the heel of one hand on the lower third of the sternum, and perform 30 chest compressions 1.5 inches (3.8 cm) deep, at a speed of 100 per minute, stop and give 2 small breaths to make the chest rise and continue 30:2 until an AED or EMS arrive.

Infant compressions

## HEALTHCARE PROVIDER:

Check the brachial pulse on the inside of the upper arm for 10 seconds before starting CPR.

# DRUG OVERDOSE MANAGEMENT

There has been a dramatic increase in accidental and intentional drug related overdoses in recent years. In June 2023, Ontario Regulation 559/22 requires some workplaces to have a drug overdose plan and the drug nalaxone on site.

First-aiders should know how to recognize and manage a drug overdose. If you suspect the person is suffering from an overdose, **glove up and mask up.**

If a person stops breathing due to a drug overdose there is a nasal spray medication known as Nalaxone or Narcan, available in Ontario pharmacies. This medication can reverse the effects of a non-breathing person. It should be administered as soon as possible to a non-breathing suspected drug overdose victim.

**SCENE SAFETY:** Ensure the scene is safe to approach. Check for signs of drug residue- bottle of pills, syringes, liquids, powders. **Always glove up first.**

## SIGNS/SYMPTOMS OF DRUG RELATED OVERDOSE

**CONSCIOUS PERSON:** Confused, dizzy, pale, blue lips, unbalanced walk, may have small pupil sizes, difficulty staying awake, slow to respond, signs of drug residue, witnesses account.

**MANAGEMENT**: Glove up. Call 911. Keep the person comfortable and treat for shock.

### UNCONSCIOUS PERSON: May have normal breathing, slow, shallow or gurling sounds.

1. Perform **primary** assessment – Check for chest movement, facial color, sounds of breathing for 10 seconds. *NOTE: Gasping/gurgling sounds known as agonal breathing is not effective breathing.* If after 10 seconds, breathing is normal, place them in the recovery positon and monitor.

2. If there are slow, shallow or agonal breathing sounds- administer narcan if available. **No signs** of breathing, begin **continous chest compressions CPR and** deliver one Narcan nasal spray into a nostril. A new dose of Naxolone can be given every 2 minutes if person is still not breathing. Briefly stop CPR to deliver a new dose.

3. Continue CPR until the person begins breathing, an AED or EMS.

**NOTE:** *Some people react aggressively when regaining consciousness so protect yourself.*

# TWO PERSON CPR RESCUE

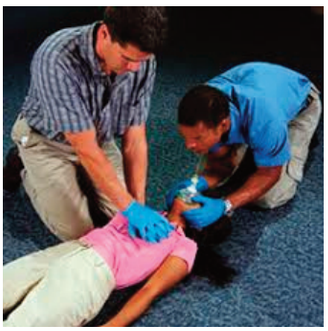
## GLOVE UP

**Laypersons** can work with a partner performing CPR. One person can maintain the airway, while the other person performs 30 compressions, stop and the second rescuer delivers two breaths using a barrier device to make the chest rise. Switch positions every two minutes or when fatigued, and continue until AED or EMS arrive.

## Healthcare providers: Glove up.

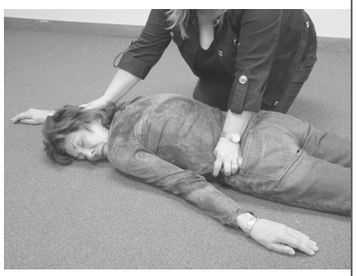
*Single rescuer perform a **ratio of 30:2 compressions/breaths on adults and children** using a barrier device. If working with a partner can switch to 15:2 ratio.*

*Each time you switch positions the person managing the airway checks the carotid pulse for 10 seconds. They instruct the partner to continue or stop CPR depending if the patient has a pulse. If there is a pulse and no breathing- continue rescue breaths 1 every 6 seconds. If no pulse continue 30:2 CPR.*



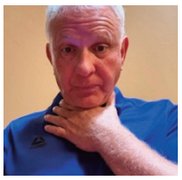
**FACE DOWN (PRONE) ASSESSMENT**

1. Check for responsiveness. If no response- call 911.
2. Place the back of your wet hand in front of the person's nose/mouth while watching the back for movement for 10 seconds. **If they are breathing do not move them**. Check for serious bleeding.
3. If they are **NOT** breathing, roll them onto the back and start CPR.



# CHOKING – ADULT/CHILD

**Common causes of** choking- include talking/laughing with a mouth full of food, not chewing food into small enough pieces, inhaling while trying to swallow food, and intoxication. Good table manners and eating habits are the keys to choking prevention.



## CHOKING RECOGNITION

### MILD CHOKING:

**If they can speak, breathe or cough –**
Encourage them to cough and *do not physically touch them*.

### SEVERE CHOKING:

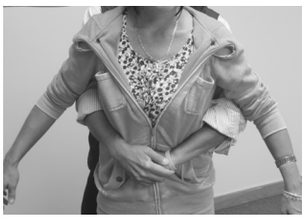
If they **cannot speak, breathe or cough** and are clutching the throat, turning red or blue, and panicked:

1. Send for 911. Identify yourself to the choking person, reassure and lean them forward to deliver **BACK SLAPS using the heel of your hand** between their shoulder blades up to 5 times if needed. If not relieved –


Back slaps/Abdominal Thrusts

2. **ABDOMINAL THRUST:**

   Stand/kneel behind the person and place your fist in the centre of the abdomen above the navel and below the bottom of the ribs. Grasp your fist with your other hand and pull inward and upward. The goal is to press the diaphragm up to expel air. This is called the **abdominal thrust.**



## CHILD RESCUE (over 1 year)

Kneel behind them to deliver thrusts.

Continue **BACKSLAPS/ABDOMINAL THRUSTS** until the person can breathe, becomes unconscious or professional help arrives.

# CHOKING RESCUE

## CHEST THRUSTS

1. For pregnant, obese, or seated choking patients – lean them forward and deliver **BACK SLAPS** between their shoulder blades up to 5 times if needed. If not relieved – offer the **CHEST THRUST TECHNIQUE.**
2. Stand behind the patient and wrap your arms around their chest. Place a fist on the breastbone in the centre of the chest between the armpits. Grasp your fist and pull straight back to expel air from the chest. Repeat slaps/thrusts until person can breathe or help arrives.

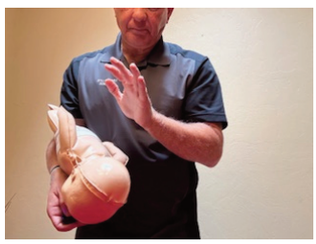
Chest thrust technique

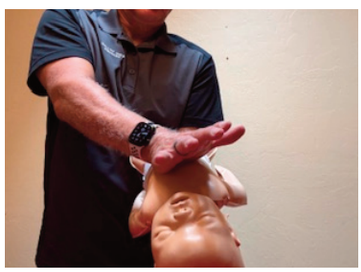
## INFANT CHOKING RESCUE (Under 1 year)

1. Support the infant's head down and give up to five firm back slaps between the shoulder blades. **If unsuccessful.** Turn the infant over face up supporting the head, neck and

Continue back slaps/chest thrusts until the infant can breathe, or becomes unconscious.

2. Place the heel of one hand on the lower third of the sternum and press the breastbone five times (**chest thrusts-similar to CPR)**.





Back slaps/chest thrusts

## ALONE AND CHOKING

1. Cough forcefully and apply the **ABDOMINAL THRUST** on yourself, or firmly press your abdomen below the ribs against a stationary object. e.g.: back of a chair.
2. Call 911 and get outside so you can be seen.

# UNCONSCIOUS CHOKING PATIENT

When the airway is obstructed, the brain is deprived of oxygen and the person will quickly progress into unconsciousness.

1. Carefully lower the patient to the floor on their back protecting the head.
2. Deliver 30 chest thrusts similar to CPR (Fig. 1) if needed.
3. Open the mouth and perform a visual check of the mouth with gloved hand. If you do not find the object or hear breathing sounds– open the airway and attempt 2 breaths to make the chest rise. If not breathing- REPEAT steps 2 and 3.

   Continue until the person begins breathing or help arrives.

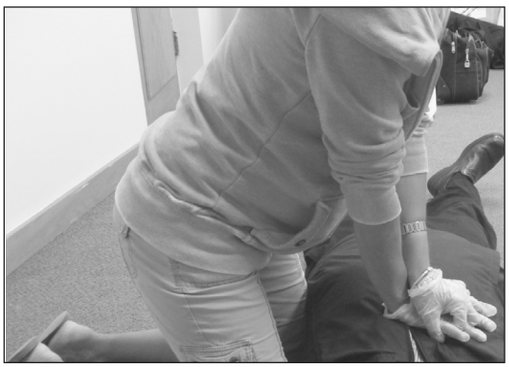
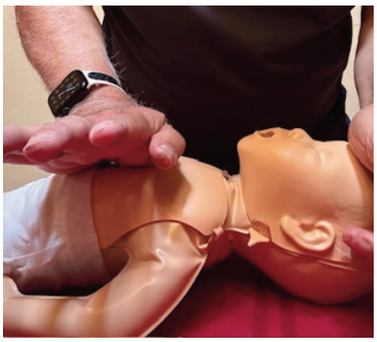


Fig. 1 Deliver chest thrusts

## INFANT – UNCONSCIOUS CHOKING



1. Place infant on flat surface or head lower than the body and perform 30 chest compressions if needed.
2. Check the mouth for any objects. Do not attempt a blind finger sweep. If nothing in the mouth and **the infant is not breathing**
3. Attempt 2 small breaths to make the chest rise. If no breating-

   **Repeat 1-3 until they are breathing or help arrives.**

# EMERGENCY PROCEDURES RECOMMENDATIONS

## Please share at staff meetings and review often:

(a) All telephones should be labeled with your exact address and emergency numbers for your city. **Cellphones do not provide exact location.**

(b) A list of all CPR-trained personnel should be included in your company's internal directory and posted on every floor and beside all first-aid kits and AEDs.

(c) **Receptionists and switchboard staff** should have a list of emergency procedures and the names of all trained staff with their direct telephone numbers.

(d) First-aid kits, AEDs (automated external defibrillators) and should be clearly posted, accessible and known by all staff members. They should be checked monthly to ensure battery and pads have not expired.

e) Keeping gloves available throughout the workplace.

## INTERNAL RESPONSE

1. CONSCIOUS PERSON - If you have on- site medical staff contact them. If not call your first-aiders or 911.
2. **If the person is unconscious** call 911 first, then contact CPR trained staff and get the AED. Ensure someone meets and escorts the emergency crews.

## NEW STAFF

1. Should be briefed on emergency procedures.

# ACKNOWLEDGEMENTS

Since 1982 we have been certifying organizations across southern Ontario. We are grateful to the hundreds of thousands of citizens that have completed our first-aid/CPR AND AED training.
We would like to express our sincere appreciation to the following organizations and individuals who contributed to this publication: Medical Advisor, Dr. Tom Currie MD, The International Liaison Committee on Resuscitation (ILCOR), an the LINK TO LIFE™ teaching staff and the thousands of graduates who have attended our seminars since l982.



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