

Push hard

push fast



- Summary of CPR steps for adults, children and infants -
2005 CPR Guidelines

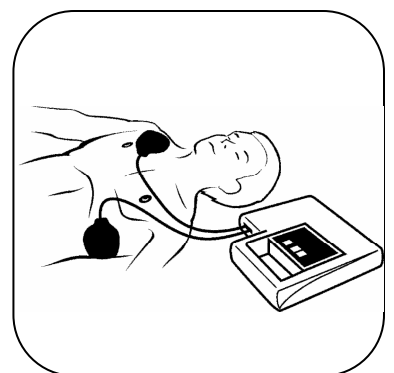
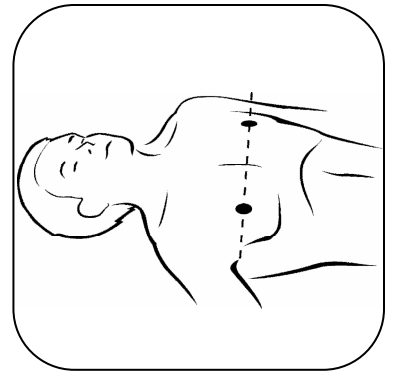
Push hard, push fast

In December 2005 the Lifesaving Society along with other top training agencies met to outline a consistent interpretation of training requirements as presented in the new 2005 CPR guidelines.

These guidelines are based on an extensive evidence review of CPR conducted by ILCOR and the AHA*. The objective is to make it easier for rescuers and healthcare providers alike to learn, remember, and perform better CPR.

We've learned that good, effective CPR results in better outcomes and survival rates. Good, effective CPR is:

- **Push hard, push fast:** forceful, fast compressions provide better circulation of blood and oxygen.
- **Allow for full chest recoil after each compression:** relaxing pressure on the chest between compressions allows the heart to refill and pump more blood.
- **Minimize interruption in chest compressions:** don't stop – blood flow stops when compressions stop.
- **Early defibrillation:** victims have a better chance of surviving when CPR is performed in combination with early defibrillation.



Essentials you need to know

Below find a summary of major CPR changes that impact Lifesaving Society programs, including a brief rationale.

30:2 - The new universal compression-to-ventilation ratio for all rescuers responding to victims of any age – adult, child or infant – is 30:2.

Why? More compressions aim to increase blood flow to the heart, brain and vital organs.

Pulse check – lifesaver vs. lifeguard*

For lifesavers - Deliver two rescue breaths and immediately begin cycles of 30 compressions and 2 rescue breaths (no pulse check). **Why?** Research shows that lay rescuers (lifesavers) often have trouble assessing pulse, and there is less harm in providing chest compressions to a victim who has a pulse, than not providing chest compressions to a victim who does not.

For lifeguards – Deliver two rescue breaths and then check for pulse (no more than 10 sec). If no pulse, proceed with chest compressions. If there is a pulse, continue giving rescue breaths and recheck pulse every 2 minutes. **Why?** Studies show that drowning victims can benefit from rescue breathing. A pulse check in the CPR sequence gives lifeguards the option to give rescue breathing to non-breathing patients who have a pulse.

*On November 28, 2005, the International Liaison Committee on Resuscitation (ILCOR) and the American Heart Association (AHA) released changes to the guidelines for CPR & Emergency Cardiovascular Care (ECC).

*Lifesavers are lay rescuers in programs such as Canadian Swim Patrol, Bronze family, CPR, EFA, SFA and AEC. Lifeguards (NLS) have a duty to respond to emergencies.

Kids and calling EMS - When dealing with an unresponsive infant or child, a lone rescuer should perform five cycles (two minutes) of CPR before calling 911.

Why? In infants and children, hypoxic cardiac arrest is the most common type of arrest. As such, some infants and children may respond to early CPR.

One-second breaths - All rescuers deliver one-second rescue breaths that make the chest rise.

Why? The less time spent delivering breaths, the faster a rescuer resumes compressions. In addition, during CPR, blood flow to the lungs is much less than normal, so the victim needs less ventilation than normal.

“Normal” breathing - Rescuers should start CPR on unresponsive adult victims who are not breathing normally. Agonal breathing or gasping is not normal.

Why? The word “normal” helps rescuers identify adult victims who need CPR. Research shows that adult victims of sudden cardiac arrest may gasp for the first minute after collapse. Rescuers should treat gasping as *no breathing* since unresponsive adult victims who are gasping are probably in cardiac arrest and need CPR.

Nipple-line landmarking - Place the heel of one hand in the centre of the chest between the nipples for adults and children. Infant landmarking remains the same (one finger width below the centre of the nipple line and use two fingers for compressions).

Why? This is a simplified method of achieving the correct hand position.

Child compressions: 1 or 2 hands - For child compressions, the rescuer can use 1 or 2 hands as long as the suitable chest compression depth is achieved.

Why? Rescuers and children come in all sizes – also simplifies instruction.

Compression depth - Adult depth remains the same (4-5 cm or 1 ½ - 2 in.). Infant and child depth is now measured as 1/3 to 1/2 the depth of the chest.

Why? Depths measured in centimetres/inches may not be appropriate for infants and children since the sizes of these victims vary.

Obstructed airway (mild versus severe) - Act if you see signs of severe obstruction, i.e., poor air exchange and increased breathing difficult, a silent cough, cyanosis or an inability to speak or breathe.

Why? The goal is to simplify the assessment and to get rescuer’s to act.

Two-rescuer CPR: reduce rescuer fatigue - Two options: each rescuer takes turns doing 1-rescuer CPR or one rescuer does chest compressions while the second rescuer does rescue breathing. Rescuers switch roles approx. every 2 min. (5 cycles of 30:2), with as little interruption as possible.

Why? Fatigue can begin to affect the effectiveness of compressions in as little as 2 minutes.

Increased AED awareness - In CPR-related items, candidates must attempt to obtain AED and AED-trained responder (if available) after activating EMS.

Why? Victims have a better chance of surviving when CPR is performed in combination with early defibrillation. As AEDs become increasingly common, rescuers need to know the purpose of an AED and when to use it.

Airway procedure for a suspected spinal – lifesaver vs. lifeguard*

For lifesavers - Use a head-tilt/chin-lift for all victims. **Why?** All methods of opening the airway may cause movement of the spine; the jaw-thrust is more difficult to perform and may not be safer than a head-tilt/chin-lift.

For lifeguards - Opening the airway remains a priority for an unresponsive trauma victim with suspected cervical spine injury; if a jaw thrust without head extension does not open the airway, lifeguards should use the head-tilt/chin lift technique. **Why?** The jaw thrust may not effectively open the airway and it may cause spinal movement – opening the airway is the priority.

Summary of CPR steps for adults, children and infants – CPR levels A, B and C –

CPR	Adult (8 years of age & older)	Child (1 – 8 years of age)	Infant (Less than one year of age)
Establish responsiveness	Phone EMS right away	If you are alone, phone EMS after giving five cycles of CPR	
Open airway	Use head-tilt/chin-lift		
Check breathing: if victim is not breathing, give two breaths that make the chest rise	Open the airway; look, listen, and feel Take at least five seconds and no more than 10 seconds		
First two breaths	Give two breaths (one second each) that make the chest rise.		
Start CPR*	Immediately start CPR if victim is unresponsive and not breathing after giving two rescue breaths		
Compression location	Centre of breastbone between nipples	Just below nipple line on breastbone	
Compression method	Two hands: heel of one hand, other hand on top (or one hand for children)	Two fingers: middle & ring	
Compression depth	1½ to 2 inches or 4 to 5 cm	1/3 to 1/2 depth of chest	
Compression rate	100 per minute		
Compression ventilation ratio	30:2 (One- or two-rescuer CPR)		

*In the NLS program, a pulse check (for no more than 10 sec) is included in the CPR sequence.

CPR Training		
CPR Level	Content	Target Audience
A	One-rescuer adult CPR; choking procedures; barrier device/pocket mask; AED intro	General public: Family, parents, public who have no duty to respond to emergencies in the workplace.
B	One-rescuer adult, child, infant CPR; choking procedures; barrier device/pocket mask; AED intro	
C	One- and two-rescuer adult, child, infant CPR; choking procedures; barrier device/pocket mask; AED intro <i>Pulse check and rescue breathing can be covered.</i>	First responders: Those who have a duty to respond to emergencies in the workplace, lifeguards, police, firefighter, childcare workers, etc.

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