Vanderbilt University Medical Center
Resuscitation Program
Basic Life Support (2006)
Performance Skills Study Guide

OBSTRUCTED AIRWAY: ADULT

A. Conscious – Average size:
1. Ask, “Are you choking?”
2. Perform Abdominal Thrust:
   a. Stand behind victim
   b. Wrap arms around victim, underneath victim’s arms
   c. Make a fist and place (thumb side) against the victim’s midline abdomen just above his/her umbilicus. Grasp fist with other hand.
   d. Press fist into abdomen with quick inward and upward thrusts, then release.
3. Continue abdominal thrusts until the victim expels the foreign body (‘pops out’) or becomes unconscious (‘passes out’).

B. Conscious – Pregnant / Obese:
1. Ask, “Are you choking?”
2. Perform chest thrusts:
   a. Stand behind victim
   b. Wrap arms around victim, underneath victim’s arms
   c. Make a fist and place (thumb side) against the breastbone at armpit level. Grasp fist with other hand.
   d. Press fist inward with quick backward motion, then release.
3. Continue chest thrusts until the victim expels the foreign body (‘pops out’) or becomes unconscious (‘passes out’).

C. Victim Becomes Unconscious / Found Unconscious – Average size:
1. Position victim on back, face up and arms at his/her side.
2. Call for help! Tell someone to activate EMS by calling 911 or specific emergency number of your organization.
3. Look in mouth for foreign body, if you see the object attempt to remove the object. If cervical spine injury is suspected, use the modified jaw-thrust maneuver instead.
4. Open airway with head tilt / chin lift maneuver. Look / listen / feel for breathing (no longer than 10 seconds).
5. If regular breathing is absent, pinch nose and attempt to ventilate with a breath (approx. 1 second).
6. If unsuccessful, reposition airway and try again to ventilate victim.
7. If unsuccessful, begin CPR with chest compressions at ratio of 30:2 compressions to ventilations
8. After 30 compressions, look in the mouth for foreign body and remove if seen.
9. Open airway with head tilt/chin lift maneuver. Pinch nose and attempt to ventilate with a breath.
10. If breath is unsuccessful without chest rise, reposition the head and reattempt the ventilation.
11. If chest does not rise with second attempt, then resume CPR with 30 chest compressions
12. Once you are able to ventilate with 2 breaths (each over 1 second), check for carotid pulse in adult (no longer than 10 seconds):
   a. If pulse present, continue to give 1 slow breath every 5 seconds (12 times / minute) until breathing resumes.
   b. If no pulse present, place the heels of both hands (one on top of the other) in center of chest between nipples. Compress the sternum 1½” – 2” and release. Do this 30 times, and then give 2 breaths (each over 1 second). Repeat this 30:2 cycle for 2 minutes (total 5 cycles) and reassess. Target compression rate: at least 100 compressions / minute!
   c. If breathing and pulse are present, then place victim in recovery position and wait for EMS arrival.
13. If no one has called EMS, leave victim and call. Return to victim after calling EMS.
CPR: ADULT

A. One Rescuer:
   1. Tap or gently shake, asking, “Are you O.K.?”
   2. **Call for help!** Tell someone to activate EMS (911 or other number) or call yourself.
   3. Position victim on back, arms at his/her side.
   4. Open airway using head-tilt / chin-lift maneuver. If suspected cervical spine injury, use the modified jaw-thrust maneuver instead.
   5. Look, listen and feel for breathing (no longer than 10 seconds).
   6. If not breathing, pinch the victim’s nose and give a slow breath (over 1 second). Allow for exhalation and give a second breath.
   7. Check for “signs of circulation” (normal breathing, coughing or movement) and a carotid pulse, placing 2 fingers on the carotid artery closest to you. (No more than 10 seconds).
   8. With no pulse / signs of circulation present, place the heels of both hands (one on top of the other) over the center of the chest between the nipples line. Compress the sternum 1½” – 2” and release. Do this 30 times, followed by 2 breaths (1 second each). Repeat the 30:2 cycles for 2 minutes (total 5 cycles). **Target compression rate: at least 100 compressions / minute.**
   9. Reassess the victim for “signs of circulation”, including carotid pulse check. If no pulse / signs of circulation, then resume CPR until a second rescuer arrives, EMS arrives, the victim is resuscitated, or until you can no longer continue due to physical exhaustion.

B. Two Rescuers:
   1. First rescuer taps or gently shakes victim, asking “Are you O.K.?”
   2. Second rescuer leaves to call 911, then returns to help first rescuer.
   3. First rescuer assesses and initiates one rescuer CPR.
   4. Upon return of second rescuer:
      a. First rescuer moves to the victim’s head to give 2 breaths (1 second each) and reassess victim.
      b. Second rescuer kneels beside victim and places hands over the center of the chest between the nipples. Rescuer 2 compresses the sternum 1½” – 2” and release. Repeat this 30 times, followed by rescuer 1 giving 2 breaths (1 second each). Continue the 30:2 cycle for 2 minutes (total 5 cycles). **Target compression rate: at least 100 compressions / minute.**
   5. After 2 minutes of CPR, rescuer 1 reassesses the victim for “signs of circulation”, including a carotid pulse check. If no pulse / signs of circulation, resume CPR.
   6. After 2 minutes of CPR (5 cycles), the rescuers must rotate positions. After completing the 30:2 cycle, rescuer 2 moves to the head, while rescuer 1 moves to the victim’s chest. Rescuer 2 reassesses for pulse/signs of circulation. If no pulse, resume CPR (beginning with chest compressions first).
   7. Repeat step 6 after 2 minutes of CPR. Stop CPR when EMS arrives and takes over, victim is resuscitated, or until you can no longer continue due to physical exhaustion.

OBSTRUCTED AIRWAY: CHILD

A. Conscious:
   Same as for adult

B. Unconscious:
   Same as for adult except for the following:
   1. If rescue breathing is needed, give 1 breath every 3 seconds (20 times / minute).
   2. If CPR is needed, then alternate **30 compressions and 2 breaths** for 2 minutes (5 cycles) and reassess. Leave or carry child with you if possible, and call 911 if no one has already done so.
CPR: CHILD

A. One Rescuer CPR- Child:
   1. Tap or gently shake, assessing unresponsiveness.
   2. **Have someone call for help!** Activate EMS (911).
   3. Position victim on back, arms at his/her side.
   4. Open airway using head-tilt / chin-lift maneuver. If suspected cervical spine injury, use the modified jaw-thrust maneuver instead.
   5. Look, listen and feel for breathing **(no longer than 10 seconds)**.
   6. If not breathing, pinch the victim’s nose and give a slow breath (approx. 1 second). Allow for exhalation and give a second breath.
   7. Check for “signs of circulation” (normal breathing, coughing or movement) and a carotid pulse placing 2 fingers on the carotid artery **closest to you**. **(No longer than 10 seconds)**.
   8. With no pulse / signs of circulation present, place the heel of one hand over the center of chest between nipples. Compress the sternum 1/3 to ½ of chest depth and release. Do this 30 times, followed by 2 breaths each over 1 second. Repeat the 30:2 cycle for 2 minutes (total 5 cycles). **Target compression rate: at least 100 compressions / minute. Note:** if compressions are ineffective using 1 hand, the rescuer may use 2 hands to compress (like an adult victim).
   9. Reassess the victim for “signs of circulation”, including carotid pulse check.
      a. If no one has called EMS, then leave or carry child with you if possible, and call 911.
      b. If someone has called EMS, and there are no pulse/signs of circulation, then resume CPR until EMS arrives, the victim is resuscitated, or until you can no longer continue due to physical exhaustion.

B. Two Rescuer CPR – Child:
   1. First rescuer taps or gently shakes to establish unresponsiveness.
   2. Second rescuer **leaves** to call EMS (911).
   3. First rescuer assesses and initiates one rescuer CPR.
   4. Upon return of the second rescuer:
      a. First rescuer moves to victim’s head to give 2 breaths (each over 1 second) and reassess child.
      b. Second rescuer kneels beside victim and places hands over the center of the chest between the nipples. Rescuer 2 compresses the child’s sternum 1/3 to ½ of chest depth and releases. Do this 15 times, followed by 2 breaths (over 1 second each) delivered by rescuer 1. Repeat the 15:2 cycle for 2 minutes. **Target compression rate: at least 100 compressions / minute.**
   5. After 2 minutes of CPR, reassess the child for “signs of circulation”, including carotid pulse check. If no pulse or signs of circulation then resume CPR.
   6. When the rescuer doing chest compressions completes 2 minutes, he/she must call for a change (like adult 2 rescuer CPR). Rescuers change positions **only after the breath is given.**
   7. Continue CPR until EMS arrives, the victim is resuscitated, or you can no longer continue due to physical exhaustion.

OBSTRUCTED AIRWAY: INFANT

A. Conscious:
   1. Assess for complete obstruction by looking, listening, and feeling for air movement, stridor, coughing or gagging.
   2. Place infant along the rescuer’s thigh, supporting the head with the rescuer’s hand. Be sure the infant’s head is lower than the trunk.
   3. Deliver 5 back blows rapidly and forcefully between the infant’s shoulder blades using the heel of the hand.
   4. Supporting the infant’s head and body as a unit, rotate and deliver 5 chest thrusts (using the same position and technique as external chest compressions, making sure the head is lower than the trunk).
   5. Repeat steps 2-4 until the airway is cleared or infant becomes unconscious.

B. Becomes Unconscious / Found Unconscious:
   1. Tap on feet or gently rub torso to establish unresponsiveness.
   2. “**Help!**” Send someone to call EMS (911).
   3. Position victim on back, arms at his/her side.
4. Open airway using head-tilt / chin-lift maneuver. If suspected cervical spine injury, use the modified jaw-thrust maneuver instead.
5. Look, listen and feel for breathing (no longer than 10 seconds).
6. Place mouth over infant’s mouth and nose and attempt to ventilate with a gentle breath over 1 second. If unable to obtain a good seal, you may try mouth-to-nose ventilation.
7. If unsuccessful, reposition the infant’s airway and try again to ventilate.
8. If still unsuccessful, begin CPR with 30:2 compressions to ventilations
9. Look in the infant’s mouth and remove obstruction only if visualized by rescuer (no blind finger sweeps) prior to each set of ventilation attempts.
10. Repeat steps 4-9 until obstruction is removed and you are able to ventilate the infant.
11. Once effective ventilation occurs, assess for a brachial pulse (no longer than 10 seconds):
   a. If pulse is present and infant resumes breathing, place in recovery position.
   b. If pulse is present but infant remains apneic, continue giving 1 gentle breath every 3 seconds until normal breathing resumes.
   c. If no pulse present or heart rate less than 60 beats per minute, begin chest compressions (CPR).
12. If after 2 minutes of intervention and no one has called 911, leave or carry the infant with you and call 911.

CPR Infant

A. One Rescuer CPR– Infant:
1. Tap or gently shake to establish unresponsiveness.
2. Have someone call for help! Tell someone to activate EMS (911 or other number).
3. Position victim on back, arms at his/her side.
4. Open airway using head-tilt / chin-lift maneuver. If suspected cervical spine injury, use the modified jaw-thrust maneuver instead.
5. Look, listen and feel for breathing (no longer than 10 seconds)
6. If not breathing, seal the victim’s nose and mouth and give a gentle breath (approx. 1 second and enough to see chest rise / fall). Allow for exhalation and give a second breath.
7. Check for “signs of circulation” (normal breathing, coughing or movement) and a brachial pulse, placing 2 fingers on the brachial artery closest to you. (No longer than 10 seconds).
8. With no pulse / signs of circulation present, place the 2 fingers of one hand 1 finger width below the intermammary line (over the lower ½ of the victim’s sternum, making sure you are not over the xyphoid process). Compress the sternum approx. 1/3 to ½ of chest depth and release. Do this 30 times, followed by 2 breaths (over 1 second each). Repeat the 30:2 cycle for 2 minutes (total 5 cycles). Target compression rate: at least 100 compressions / minute.
9. After 2 minutes of CPR, reassess the victim for “signs of circulation”, including brachial pulse check.
   a. If no one has called EMS, then leave or carry infant with you if possible and call 911.
   b. If someone has called EMS, and there are no pulse/signs of circulation, then resume CPR until EMS arrives, the victim is resuscitated, or until you can no longer continue due to physical exhaustion.

B. Two Rescuer CPR – Infant:
8. First rescuer taps or gently shakes to establish unresponsiveness.
9. Second rescuer leaves to call EMS (911).
10. First rescuer assesses and initiates one rescuer CPR.
11. Upon return of the second rescuer:
   a. First rescuer moves to the infant’s head to give 2 breaths (each over 1 second) and reassess infant.
   b. Second rescuer encircles the infant’s chest, placing his/her thumbs (one on top of the other) 1 finger width below the intermammary line. Rescuer 2 compresses the infant’s sternum 1/3 to ½ of chest depth and releases. Do this 15 times, followed by 2 breaths (over 1 second each) delivered by rescuer 1. Repeat the 15:2 cycle for 2 minutes. Target compression rate: at least 100 compressions / minute.
12. After 2 minutes of CPR, reassess the infant for “signs of circulation”, including brachial pulse check. If no pulse/signs of circulation or pulse less than 60, then resume CPR.
13. When the rescuer doing chest compressions completes 2 minutes, he/she will call for a change (like adult 2 rescuer CPR). Rescuers change positions only after the breath is given.
14. Continue CPR until EMS arrives, the victim is resuscitated, or you can no longer continue due to physical exhaustion.