CPR for Children and Infants (Older Than 1 Year)

Child *cardiopulmonary resuscitation* (CPR) consists of **C**irculation**, A**irway **and B**reathing **(C - A- B).** Child CPR guidelines apply to children approximately 1 year of age until puberty. Puberty is defined as breast development in females and presence of underarm hair in males. CPR for children is *similar* to that for adults. A *few important differences* to remember are given below.

1. **Scene Safety.** Quickly look at the area where the ill and/or injured child is located. Go to help the child only if it appears that the location (a car, street, room, hillside, etc) is safe to enter.
2. **Check for Response.** Gently tap the child and ask "Are you okay?" Call the child's name if it is known. If the child responds and is breathing normally but is ill and/or injured, call for emergency services (911 in U.S.) and wait for help. While waiting, recheck the child frequently.
3. **Shout for Help or in the Case of 2 Rescuers, Get Help. If there is no response and the child is not breathing or only gasping:**
   - If you are by yourself, shout for help AND an Automated External Defibrillator (AED) or defibrillator.
   - If there are 2 rescuers, one begins CPR and the second rescuer calls for emergency services (911 in U.S.). If nearby and easily accessible, the second rescuer should get an AED or defibrillator. After calling for emergency services and possibly getting an AED or defibrillator, the second rescuer should return to the child as soon as possible and use the AED or defibrillator (if available) or assist with CPR.

   The AED or defibrillator provides a shock to the heart which can restart the heart. AED devices are found in many public transportation vehicles, airports and large buildings.
4. **Position the Child.** For best results, the child should be on a hard surface facing up. You may need to roll the child into this position.
5. **Chest Compressions.** These are repeated, rapid, relatively hard up and down compressions of the chest. Kneel next to the child's chest. Use the HEEL of one or both hands to compress the chest. Depress the lower half of the *sternum* (breast bone) at least 1/3 the depth of the chest (about 2 inches or 5 cm). Allow the chest to return completely to its normal position. This needs to be done rapidly so as to give the child at least 100 compressions a minute.

   - If there are 2 rescuers, 1 rescuer will perform chest compressions while the second rescuer opens the airway and gives the rescue breaths as described next.
6. **Open the Airway.** It is best if chest compressions are combined with opening the child's airway and giving rescue breaths. If untrained in providing breaths, or unable to give breaths, the rescuer(s) should just perform chest compressions. If trained and able:

   - If you are by yourself, after every 30 chest compressions, open the airway before giving 2 rescue breaths.
   - If there are 2 trained rescuers, after every 15 compressions, open the airway before giving 2 rescue breaths.

   To open a child's airway:
   - Place one hand on the child's forehead and push with your palm to tilt the head back.
   - Place the fingers of the other hand under the bony part of the lower jaw to gently bring the chin forward.

   Remember "Head Tilt, Chin Lift." If the child has been in a traumatic accident, be careful when moving the head and neck.
7. **Give Rescue Breaths, if Trained and Able.** If trained and able, after opening the airway, give 2 rescue breaths. Give the breaths by kneeling next to the child's head. While kneeling, bend forward to give 2 mouth-to-mouth breaths. Give the breaths while pinching the nose close and holding the airway open. Each breath

should take about 1 second. Make sure the chest rises when you give a breath. If the chest does not rise, reposition the head and try breathing again.

8. **Continue CPR.** After the 2 breaths, resume chest compressions immediately.
   - If there are 2 rescuers, the rescuers should change roles every 2 minutes to maintain quality and rate of chest compressions. The switch should take place as quickly as possible (in less than 5 sec).

9. **Get Help.** If you are by yourself, after 2 minutes of CPR (about 5 cycles), call for emergency services (911 in the U.S.) and attempt to get an AED or defibrillator. Use the AED or defibrillator as soon as possible, or continue CPR (starting with compressions).
10. **Defibrillation.** At any time an AED is available and the child is unresponsive, not breathing or only gasping, use the AED as soon as possible. An AED equipped with pediatric dose capability or a manual defibrillator is preferred. If those are not available, an AED without pediatric dose capability may be used. Follow directions on the device to deliver 1 shock. Once 1 shock is delivered, it is recommended that 2 minutes of CPR be performed before another shock is delivered.
11. **Continue CPR and Defibrillation.** If the child is unresponsive, not breathing or only gasping after the use of the AED, continue CPR starting with compressions. Continue with 2 minutes of compressions and breaths followed by *defibrillation* (shocking the heart) until the child starts breathing normally or ambulance personnel take over care.

CPR is intense and strenuous for the rescuer but can be lifesaving. It is understood that rescuers can become tired fairly quickly. It is also understood that attempts by rescuers give a better chance at saving a life than doing nothing and waiting for ambulance personnel to arrive.

After ambulance personnel arrive, it is important to remain on the scene to give trained rescuers a report of what happened. This is always helpful and an important part of the overall care provided to the infant.

Almost all communities maintain programs for training the public in the skills of CPR. It is always helpful to know CPR in the unlikely event that your help may be needed.

See the following site to search for a CPR course near you:
http://www.americanheart.org/presenter.jhtml?identifier=3012360

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