Education

Cardiopulmonary Resuscitation (CPR)

What is CPR?

CPR stands for cardiopulmonary resuscitation. Cardio refers to the heart. Pulmonary refers to the lungs. CPR is a way to give oxygen and keep the heart pumping when it has stopped beating. It is an emergency procedure that can save the life of someone whose heart has stopped beating and who is not breathing.

When is it used?

Almost 75% of cardiac arrests occur in the home. When someone has a cardiac arrest, the heart stops beating. When this happens, someone should call 911 and the person should be given CPR until he or she starts moving or emergency medical help arrives. If CPR is not done, the person can have brain damage or die in 5 to 10 minutes.

What happens during CPR?

CPR is done by blowing air into a person's lungs with mouth-to-mouth resuscitation and by pushing on their chest. The mouth-to-mouth resuscitation gives the person some oxygen and pushing on the chest pumps the heart to keep blood flowing. Here are the steps a lay rescuer should follow to give CPR to an adult (a lay rescuer is someone who is not a healthcare professional):

1. **See if the person can respond to you.** For example, speak to or tap the person. If there is no response, start CPR. If someone else is with you, they can call 911 for emergency help while you start CPR. If you are alone with an unresponsive adult, call 911 before you start CPR.
2. **Tilt the person's head, lift the chin, and check for breathing.** Carefully position the person flat on their back. Kneel by their side and place one hand on the forehead and the other under the chin. Tilt the head back and lift the chin until the upper and lower teeth almost touch. Look, listen, and feel for normal breathing. Take no more than 10 seconds to check for breathing.
3. **Give 2 rescue breaths.** If the person is not breathing, pinch the nose closed and cover their mouth with yours. Take a normal breath and give the person a rescue breath lasting for 1 second. The breath should make the person's chest rise. If the person's chest does not rise when the first rescue breath is given, perform the head tilt and chin lift again before giving a second breath.
4. **Give 30 chest compressions.** After giving 2 rescue breaths, begin chest compressions. Put your hands in the center of the person's chest between the nipples. Place one hand on top of the other. Firmly push down 2 inches deep with the heel of your hand on the chest, keeping your elbows locked. Push on the chest 30 times at a rate of about 100 pushes per minute (faster than one per second).
5. **Repeat steps 2 through 4.** Continue with 2 breaths and 30 pushes until the person starts moving or medical help arrives.

What happens after CPR?

Normally, the person who needed CPR will be taken to an emergency room at a hospital. He or she may need to stay in the intensive care unit for several days.

What are the benefits of CPR?

Thousands of lives are saved each year by people who do CPR.

What are the risks associated with CPR?

Pressing on the chest may result in a sore chest, or even broken ribs.

The person you are giving CPR to may start to vomit even though he or she is not breathing. If this happens, turn the person to the side and try to sweep out or wipe off the vomit. When the throat and mouth are clear, continue with CPR if there is still no normal breathing.

The spread of infection from the person receiving CPR to the rescuer is very rare. There is no record of HIV or AIDS being transmitted via CPR.
How can I learn CPR?

You need to take a class to be certified to give CPR. In classes for adult CPR, information is provided on the signs and symptoms of a stroke or heart attack as well as ways to reduce the risk of developing these problems. Classes are also available for infant and child CPR. It is important that a special class be taken for giving CPR to children because the procedures are different. Some classes combine the training for both the adult CPR and infant and child CPR certifications.

CPR classes are open to the public and are held in hospitals, fire departments, and community centers. The American Red Cross and the American Heart Association set the standards for CPR certification.

For more information about cardiopulmonary resuscitation and other life-saving skills, contact your local chapter of the American Heart Association or the American Red Cross.

Adult Health Advisor 2006.4; Copyright © 2006 McKesson Corporation and/or one of its subsidiaries. All Rights Reserved. Developed by McKesson Provider Technologies. This content is reviewed periodically and is subject to change as new health information becomes available. The information is intended to inform and educate and is not a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional.