

Important Information about Out-of-Hospital CPR

When or why is CPR done?

CPR stands for **C**ardio**P**ulmonary **R**esuscitation. C is for Cardio, which means heart. P stands for Pulmonary or lungs. R is for Resuscitation, which means trying to restart what has stopped.

It is a procedure done when someone has NO HEARTBEAT or NO BREATHING. It is not used on people whose heart is still beating and who are still breathing on their own. CPR is most commonly done when someone has a “cardiac arrest”, where the heart suddenly stops pumping.

What is done when CPR is started?

If someone is found with no breathing, CPR starts with forcing air into the lungs of the victim. This might be done initially with mouth-to-mouth forced breathing or with a mask and a bag that pumps air into the lungs. As soon as possible, the victim gets a tube put down the windpipe that is attached to a device to pump the air in. This is called intubation and mechanical ventilation.

If a person has no heartbeat, they will be not be breathing either. Death has occurred. If CPR is begun on the victim, he or she will get all the procedures described above to get air into the lungs. To get some blood to circulate, the one performing CPR pushes forcefully on the victim’s chest 60 or more times a minute.

How well does this work to ‘bring them back’?

In studies looking at persons who had CPR started outside of the hospital, the rate of ‘success’ (defined as getting a return of heartbeat and circulation) ranges from 2% to 20%. Results vary depending on what other illnesses the victim has, how soon the emergency personnel respond, and how soon they get the heart pumping again.

CPR is usually ineffective when patients have multiple chronic illnesses rather than just a heart rhythm problem. For example, data on CPR performed on patients in skilled nursing facilities show success between 1% and 5% of the time. People in the late stages of cancer have even lower rates of survival with CPR.

How healthy are the survivors of CPR?

In several studies of the long-term outcome for survivors of CPR, more than half of the survivors suffered major brain damage¹. These survivors of CPR might still be capable of eating if they are spoon fed, but may need total care in all aspects of daily living; they cannot move themselves in and out of bed, dress, toilet, bathe, or make decisions without full assistance of others.

Even the survivors who have “good” outcome might have some psychological or neurological problems² caused by the spell of poor blood flow.

¹ paralysis, dysphasia, hemiplegia, seizures, permanent mental or memory deficits, dementia, anoxic encephalopathy, vegetative state or coma. Jaffe, AS. Neurology, 1993: 43:2173

² eg. mild dysphasia, non-incapacitating hemiparesis, or minor cranial nerve abnormalities. Troiano F et al. Resuscitation 1989:17:91-98

Would someone want to forego CPR?

Many people with chronic or terminal illness want the time of their death to be a sacred moment of peace and respect, not a time of ineffective invasive procedures. Even some relatively health people reach a time in their life when they are more afraid of living sick than they are of simply dying. Those people may wish to sign a "Pre-hospitalization DNR" (stands for **Do Not Resuscitate**) form and have it signed by their doctor. This form is also called the EMS-DNR form.

How do I make sure that a DNR order is honored?

If 911 is called, the emergency medical service (EMS) responders will begin CPR when they find someone with no pulse and no breathing. In California, the only way to ensure that CPR will not be done is to have a completed EMS-DNR form to show the paramedics, or a MedicAlert bracelet that shows that there is a completed EMS-DNR form on file. The EMS-DNR form is not valid unless signed both by the individual (or that individual's surrogate -- the person they choose to make health care decisions for them) and the individual's physician.

If you choose to complete the EMS-DNR form, give a copy to your physician. If you are a Kaiser member, put your Kaiser number on the form and send a copy to the medical center's Outpatient Chartroom. If you want a Medic-Alert medallion, call 1-800-432-5378 for an order form; they will need a copy of your completed EMS-DNR form as well. See the back of the EMS-DNR form for more information.

Can a DNR be revoked?

In cases where the patient has an illness where CPR would not be effective in restarting the heart, or the patient wishes to be able to die a peaceful, natural death, it would be unusual to revoke an out-of-hospital DNR order. But if there is a special reason to revoke the EMS-DNR order, the form and medallion can be discarded.

DNR orders that are appropriate outside the hospital might be temporarily revoked during hospitalization. The patient might be able to be helped temporarily by cardiac resuscitation if they are in a hospital on a monitor during a procedure or surgery. Or in unusual circumstances where breathing resuscitation might help a patient live a few days longer (for example, in order to see a family member who is arriving), the patient and the family might agree to have a short time of artificial breathing support.

Occasionally a family member who is having trouble coping with the thought of losing a loved one might want to revoke a DNR order that was chosen by the patient. The patient's stated wishes should nonetheless be honored.

Prepared by Dr. Elizabeth S. Menkin for her patients and their families.

**For more information, visit Dr. Menkin's website at:
<http://www.permanente.net/doctor/elizabethmenkin>**

For more information about EMS-DNR repository services, contact MedicAlert Foundation at 888-633-4298.