CPR/DNR

Being asked to make a decision about cardiopulmonary resuscitation (CPR) can be complicated. Few of us have ever seen CPR performed. Our understanding of CPR may come from what we see on TV…where it looks easy and seems to be very successful without any complications. Unfortunately, these TV images of CPR are not completely accurate.

This brochure provides answers to some common questions about what CPR involves and what else is important to think about when making a decision about CPR.

WHAT DOES CPR LOOK LIKE?

CPR is a longer process than most people realize. It is an attempt to re-start the heart when the heart has stopped beating. The person is placed on a hard board or on the ground and the center of the chest is pushed in about 2 inches (to provide 100 to 125 pounds of pressure). These chest compressions must be done 100 times each minute. Artificial respiration using a special mask and bag over the person’s mouth to pump air into the lungs may be started. When the emergency team arrives, a breathing tube may be inserted into the windpipe to provide oxygen, and a number of electrical shocks may be given with paddles that are placed on the chest. An intravenous line (IV) will be placed in a vein and medications will be given through the IV line.

If the heart continues to respond to these treatments, the person is taken to the emergency department. Those who survive will then be transferred to the intensive care unit at the hospital and attached to a ventilator (breathing machine) and a heart monitor. At this stage, most persons are still unconscious.

WHO IS LEAST LIKELY TO BENEFIT FROM CPR?

Risk factors that are more frequent among older persons may contribute to lower chances of CPR survival as age increases. Most older adults do not have the type of heart rhythm that responds to CPR. Having any chronic disease that affects the heart, lungs, brain and kidneys can lower chances for survival after cardiac arrest. If a person has multiple advanced chronic illnesses, CPR survival will be even lower.

Individuals in advanced stages of dementia have CPR survival rates three times lower than those without dementia. Several studies that looked at survival of frail nursing home residents in advanced stages of illness who were dependent on others for all of their care showed CPR survival rates of 0 – 5% even if they were transferred from the nursing home to the hospital before the cardiac arrest.

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Older adults in terminal stages of cancer had CPR survival rates 0 – 1%. Unlike younger persons whose healthy bodies may be able to withstand the shock of a cardiac arrest and respond to treatment, those at an advanced age with serious underlying health problems may be dying from progressive organ failure. Their bodies do not have enough reserve to tolerate the lack of oxygen that occurs with cardiac arrest, their hearts may not be able to pump effectively enough to respond to CPR attempts. Those with liver or kidney failure may not be able to use the emergency drugs that are given.

**WHO IS MOST LIKELY TO BENEFIT FROM CPR?**

The success of CPR depends on the reason the heart stopped, how healthy the person was before the heart stopped, and how long the heart has been stopped before CPR is started. It is hard to know in advance how effective CPR will be for a specific person, but many studies have shown who is most likely to benefit from CPR and who is not. In general, about 15% of all those who have CPR will survive. This number may increase for those who have no major health problems, have a sudden, unexpected collapse, have CPR started within a few minutes of when the heart stops, and have the type of heart rhythm that responds to electrical shocks.

**ARE THERE ANY COMPLICATIONS FROM CPR?**

On TV CPR looks fast and uncomplicated. It is different in real life situations. Serious complications are likely. The most common complications are rib fractures that have been documented in up to 97% of CPR attempts, and breastbone fractures documented in up to 43% of cases. The risk of these fractures increases with age as does the chance for multiple fractures. This may be due to a decrease in muscle mass and an increased rate of osteoporosis with age. Approximately 59% of those who have CPR will have bruising of the chest, and about 30% may have burns from the defibrillator. Permanent brain damage may occur from lack of oxygen in up to 50% of those who have CPR attempted.

Other less frequent complications of CPR that have been identified include bleeding in the chest (0-18%), damage to the trachea or esophagus (0-20%), damage to abdominal organs (0-31%), lung damage (0-13%), and damage to lips and teeth (0-8%).

**WHAT HAPPENS IF I DECIDE NOT TO HAVE CPR?**

After careful consideration of all possible benefits and risks, many individuals decide that they do not want CPR attempted. However, some people are afraid that if they say they don’t want CPR they won’t get the kind of care they should. A decision not to have CPR applies only to the CPR process. Overall care and treatment will not be affected by choosing not to have CPR. If you do not want CPR done, an order will be written in the medical record so that CPR will not be attempted if the heart stops beating and breathing stops. The order is called a DNR (Do NOT Resuscitate) order and is used to protect a person from unnecessary attempts at CPR.