



LIFEPAK® 500

automated external defibrillator

Commonly Asked Questions

What if the victim of cardiac arrest is wet and lying on a wet surface such as on the side of a swimming pool?

Good technique is important. Dry the chest before applying the electrodes. Be sure the electrodes are firmly adhered to the chest. Clear the area and defibrillate as usual.

Can I defibrillate on a metal surface such as a bleacher or stretcher?

Yes, as long as the usual safety rules are observed. Keep the defibrillation electrodes firmly adhered to the chest. Do not place the defibrillation electrodes so lateral that they are in contact with the metal surface. Clear the area and defibrillate as usual.

Can I defibrillate a victim in the rain or snow?

Yes, defibrillators designed for out-of-hospital use have sealed cases to allow use in such environments. Although rainwater and snow are not good electrical conductors, sweat or snow removal chemicals dissolved into the water or snow can make it more likely to conduct stray current. Wipe the chest dry between and around the defibrillator electrode sites. Clear the area and defibrillate as usual.

What should I do if the victim vomits while the AED is analyzing the rhythm?

Although defibrillation should take place as quickly as possible, it is unlikely to be effective if the victim's airway is obstructed. Roll the victim on his side and clear the airway and chest of vomit before attempting to reanalyze the rhythm.

Will defibrillation be successful in a hypothermic (low body temperature) victim?

Ventricular fibrillation can occur spontaneously when the body's core temperature falls below 28°C (83.4°F). Defibrillation attempts are likely to be unsuccessful as long as the core temperature remains below 28 to 30°C (83.4 to 86°F). Try to rewarm the victim by providing warm blankets while continuing the resuscitation effort. Many protocols allow 3 shocks, and if unsuccessful, advise resuming CPR and rewarming efforts with a goal of transporting the victim to an advanced care facility as soon as possible. Learn and follow your local protocols regarding defibrillation of the hypothermic victim.

I work as a flight attendant on a commercial aircraft. Can I defibrillate a victim of cardiac arrest who is sitting in his seat?

Yes, as long as normal safety precautions are taken. Clear passengers from adjacent seats before defibrillating. The patient should be moved to a flat surface as soon as possible since there is a high probability that CPR will be necessary.

I shocked a woman in cardiac arrest 3 times within minutes after she collapsed. The advanced cardiac life support team arrived quickly to continue care. I heard later that she did not survive. Did I do something wrong?

Unfortunately, because of other underlying medical or heart problems, not all victims of cardiac arrest who are in ventricular fibrillation (VF) will survive even if defibrillation is done promptly and correctly.

Why is it so important to be sure that the defibrillation electrodes are firmly adhered to a clean, dry chest?

Successful defibrillation requires electricity to flow from one electrode to the other through the chest. If the electrodes are not firmly adhered and there is sweat or another conductive material between the electrodes, the electricity will be more likely to flow across the chest rather than through it. This will result in ineffective defibrillation and an increased chance of sparks and fire.

When the ACLS team arrived, they pulled the defibrillation electrodes off the victim's chest and put on another set. Did I do something wrong?

No, most likely the defibrillation electrodes you were using were not compatible with their defibrillator. Standardization of electrodes makes transfer of care easier.

Is it okay to place the electrodes directly on a hairy chest?

Electrodes must come in direct contact with the skin. If the chest hair is so excessive as to prevent good adhesion of the electrode, the hair must be removed quickly.

What if I have a pediatric victim?

Follow your protocols regarding the lower age or size limits for pediatric victims. Infant/child reduced energy defibrillation electrodes may be used with biphasic AEDs (all LIFEPAK CR Plus and LIFEPAK 500 AEDs with a pink connector) in children under 8 years of age.

What if the ACLS team arrives when I'm ready to shock?

The ACLS team leader will either direct you to deliver the shock or will take control using the LIFEPAK 500 defibrillator.

What should I do when the ACLS team arrives?

Upon their arrival the ACLS or code team will take charge of the victim. Report your findings to them and then proceed as directed.

What if I'm not certain whether or not I need to apply the defibrillator?

Remember this rule: only put the unit on someone you would do CPR on—unresponsive with no pulse and respirations.

What if the patient has an implanted pacemaker or implanted defibrillator device?

Continue defibrillation protocols as usual. You may have to alter placement of the electrodes so they are not directly over the pulse generator of the device.

Will the spikes from a permanent pacemaker interfere with the rhythm analysis?

The AED should always be applied to those with permanent pacemakers; however, presence of pacemaker spikes may cause the AED to render a NO SHOCK ADVISED decision even if the victim is in VF.

What if the defibrillator malfunctions?

If you are ever in a situation in which the defibrillator malfunctions or you are unsure of what to do, continue basic life support (CPR) until the ACLS team arrives.

Will pulseless ventricular tachycardia be shocked?

The device will deliver a shock if it detects pulseless ventricular tachycardia with a rate above 120 and if other strict criteria are met. The Shock Advisory System™ software (an algorithm) detects a shockable rhythm by precisely measuring certain ECG characteristics. The algorithm decision is conservative, emphasizing specificity over sensitivity with debatable rhythms.

Define sensitivity and specificity as it relates to the Shock Advisory System algorithm.

Sensitivity is the ability of the algorithm to detect rhythms that *should be* shocked, while specificity is the ability to detect the rhythms which *should not be* shocked.

What if I reverse the electrodes, eg., put the electrode with the big heart on it below the collarbone instead of near the heart?

As long as the electrodes are correctly placed on the victim's chest, it does not matter if they are reversed when defibrillating with the AED.

Are there any special considerations when placing electrodes on a female patient?

If the female victim is wearing a bra, it will need to be removed before placing the lateral electrode. The portion of the electrode near the breast should be placed below the breast. Do not place any portion of the electrode directly on the breast.