

- should be provided at the same rate as in normothermic patients
4. The temperature at which defibrillation should first be attempted in the severely hypothermic cardiac arrest victim and the number of defibrillation attempts is unclear. There are different approaches regarding resuscitation of the hypothermic arrest patient
    - a. Per the American Heart Association (AHA), if the patient has a shockable rhythm (VF/VT), defibrillation should be attempted. It is reasonable to continue defibrillation attempts per AHA protocols concurrently with rewarming strategies
    - b. The state of Alaska's 2014 guidance on management of hypothermic patients in cardiac arrest advises that defibrillation should be attempted once, followed by 2 minutes of chest compressions, then rhythm and pulse checks
      - i. If defibrillation is unsuccessful and the patient's core temperature is less than 30°C (86°F), do not make further attempts at defibrillation until the core temperature has increased to greater than 30°C (86°F)
      - ii. Continue CPR and attempt to rewarm the patient
    - c. An alternate strategy, per the Wilderness Medical Society's accidental hypothermia guideline, suggests that if the patient's core temperature is below 30°C (86°F), attempt defibrillation once, then wait until the patient has been rewarmed at least 1°–2°C or to 30°C (86°F) before attempting additional shocks. It is noted that the likelihood of successful defibrillation increases with every one-degree increase in temperature
    - d. If defibrillation is unsuccessful and the patient's core temperature is greater than 30°C (86°F), follow guidelines for normothermic patients
    - e. If available monitors reveal asystole, CPR alone is the mainstay of therapy
    - f. If monitoring reveals an organized rhythm (other than VF or VT) and no pulses are detected, do not start CPR, but continue to monitor
      - i. While this may represent pulseless electrical activity (PEA), this may also represent situations in which the patient's pulses are not detectable but remain effective due to decreased metabolic needs
      - ii. In the case of PEA, the rhythm will deteriorate rapidly to asystole, in which case, CPR should be initiated
      - iii. Given the potential to cause VF with chest compressions, the Alaska guidance offers that it is better to maintain effective cardiac activity than to start CPR and cause VF
  5. Manage the airway per standard care in cardiac arrest victims [See [Cardiac Arrest Guideline](#)]
    - a. In the absence of advanced airways, ventilate the patient at the same rate as a normothermic patient
    - b. If the patient has an advanced airway, ventilate at half the rate recommended for a normothermic patient to prevent hyperventilation. If EtCO<sub>2</sub> is available, ventilate to maintain normal EtCO<sub>2</sub> levels
  6. There is little evidence to guide use of medications in severe hypothermia with cardiac arrest, however 2010 AHA updates to advanced cardiac life support recommend use of vasopressors according to standard ACLS protocols while the 2014 Alaska guidelines and the Wilderness Medical Society's accidental hypothermia guideline for the management of hypothermic patients advises medications should be withheld until the patient's core temperature is greater than 30°C (86°F)
    - a. Above 30°C (86°F), intervals between medication provision should be doubled until the