

The American Heart Association stipulates that a manual defibrillator is preferred to an AED for defibrillation of infants. If a manual defibrillator is not available, an AED equipped with a pediatric dose attenuator is preferred. If neither is available, an AED without a pediatric dose attenuator may be used (Travers, Rea, Bobrow, et al, 2010). There is still limited evidence to support the safety of AED use in infants, but it may be safe and effective in this group. Appropriate-sized pediatric pads must be used for small children. Health care providers are advised to give children 1 year and older a defibrillatory shock after providing approximately five cycles of CPR ( $\approx$ 2 minutes of cycles of 30 compressions and two ventilations by the lone rescuer), provided the AED is sensitive to pediatric rhythms, the device is capable of delivering a pediatric dose of 2 to 4 joules/kg, and a shockable rhythm (usually ventricular fibrillation) is present. In a hospital situation in which weight-based defibrillation dosing is possible, manual defibrillation is the mode of choice instead of AED. When using an AED, health care providers are advised to give adults and children older than 8 years old a defibrillatory shock within 5 minutes of collapse outside the hospital and within 3 minutes in the hospital.

If two rescuers are present, one rescuer should begin CPR while the second rescuer activates the EMS system by calling 9-1-1 and obtaining an AED. Pediatric rescuers provide five cycles of basic life support ( $\approx$ 2 minutes) before activating EMS; each cycle consists of 30 chest compressions and two ventilations. Because pediatric arrests are most commonly caused by respiratory arrest, maintaining ventilation is key.

### **Pulse Check**

During an emergent situation, palpating the pulse can be a challenge. The patient should be reassessed for a pulse every 2 minutes of CPR. The pulse should not be assessed for longer than 10 seconds. The carotid is the most central and accessible artery in children older than 1 year of age, but the femoral pulse may also be used. An infant's short and often fat neck makes the carotid pulse difficult to palpate. Therefore, in an infant, it is preferable to use the