BLS 2020 Instructor Update | Science Updates

### **Infant Compressions**



A single rescuer may now use 2 thumbs or the heel of 1 hand for infant compressions.

**2020 (New):** For infants, single rescuers (whether lay rescuers or healthcare providers) should compress the sternum with 2 fingers or 2 thumbs placed just below the nipple line (mammary line).

**2020 (New):** For infants, if the rescuer is unable to achieve guideline-recommended depths (at least one third the diameter of the chest), it may be reasonable to use the heel of 1 hand.

**Why:** Systematic reviews suggest that the 2-thumb–encircling hands technique may improve CPR quality when compared with 2-finger compressions, particularly for depth. However, there are limited data comparing the various hand positions.

### Changes to the Pediatric Assisted Ventilation Rate

#### Rescue Breathing

**2020 (Updated):** For infants and children with a pulse but absent or inadequate respiratory effort, it is reasonable to give 1 breath every 2 to 3 seconds (20 to 30 breaths/min).

#### Ventilation Rate During CPR With an Advanced Airway

**2020 (Updated):** When performing CPR in infants and children with an advanced airway, it may be reasonable to target a respiratory rate range of 1 breath every 2 to 3 seconds (20 to 30 breaths/ min), accounting for age and clinical condition. Rates exceeding these recommendations may compromise hemodynamics.

**Why:** New data show that higher ventilation rates (at least 30 breaths/min in infants less than 1 year of age and at least 25 breaths/min in older children) are associated with improved rates of ROSC and survival in pediatric inhospital cardiac arrest.

Although there are no data about the ideal ventilation rate during CPR without an advanced airway, or for children in respiratory arrest with or without an advanced airway, for simplicity of training, the respiratory arrest recommendation was standardized for all situations.

# Aspirin for Adults With Nontraumatic Chest Pain

**2020 (Updated):** While awaiting the arrival of emergency services, first aid providers may encourage alert adults experiencing nontraumatic chest pain to chew and swallow aspirin, unless the person experiencing pain has a known aspirin allergy or has been advised by a healthcare provider not to take aspirin.

Why: Aspirin, when given early to a patient having a heart attack, can improve survival. In prior versions of the Guidelines, first aid providers were advised to offer aspirin only to persons with chest pain symptoms suggestive of a heart attack. However, it can be difficult to distinguish chest pain due to a heart attack from other causes of chest pain. While there are no studies that evaluate the benefits or risks of first aid providers administering aspirin to individuals experiencing nontraumatic chest pain, it was the opinion of the First Aid Writing Group that the potential benefits of early administration of aspirin outweighs the potential risk of a single dose of aspirin.

## **Opioid Overdose Training for Lay Rescuers**

**2020 (New):** It is reasonable for lay rescuers to receive training in responding to opioid overdose, including provision of naloxone.

**Why:** Multiple studies have found that targeted resuscitation training (for opioid users and their families and friends) is associated with higher rates of naloxone administration in witnessed overdoses.