

- Oral airways (40, 60, 80, 90, 100 mm).
 - Bag-valve-mask (BVM) with attached reservoir bag (adult/adolescent, infant/child, neonatal). Make sure the reservoir bag fills with oxygen and use a flow rate of 15 LPM.
 - Supraglottic Airway device (multiple sizes)
- b. Bag-valve-mask use without endotracheal intubation (*see Table 7-1*)
- Each ventilation should be a one second ventilation which produces visible chest rise. This ensures against under-inflation and lack of oxygenation.
 - Avoid rapid or forceful breaths in order to minimize or eliminate insufflation of air into the stomach with possible vomiting and aspiration as the result.
 - Try to coordinate and synchronize the ventilation with CPR.

Table 7-1 : Bag-Valve-Mask Ventilation

Consider Potential C-Spine Injury (e.g., pool incident/accompanying fall/motor vehicle collision) and position accordingly (see “P” below)

Oral Airway (properly sized to push the tongue up and out of the way)

Position the Head (neutral position if there is a risk of c-spine injury; sniffing position if no suspicion of c-spine risk; do not hyperextend children’s necks)

Elevate the jaw (usually with the tips of the fourth and fifth fingers, bilaterally, placed at the angle of the jaw, lifting it directly upward and perpendicularly to the ground)

Seal the Mask with Two Hands (forming two opposed “C-shaped clamps”, by placing the thumbs on the bridge of the nose, and the index fingers over the chin)

Squeeze (each ventilation delivered in 1 second with enough volume to produce visible chest rise)

Oxygen (delivered at a rate to maintain reservoir bag inflation)

- c. Bag-valve use with endotracheal intubation:
- In an adult patient, the 19-22 cm mark on the endotracheal (E.T.) tube should generally be at the front teeth.
 - In a pediatric patient, depth size varies. Consult the Pediatric Dosing Guidelines for recommended depth.
 - If the E.T. tube is moved, tell the paramedic immediately.
 - The paramedic should note the right depth when he/she intubates.
- d. Tell the paramedic immediately if:
- Air is blowing out of the patient’s mouth; it probably means there is a “leak” or deflated E.T. tube cuff. It may also mean the tube is not in the trachea.
 - The patient’s chest is not rising equally (right and left side).
 - The resuscitation bag becomes hard to squeeze.
 - Any problems are noticed during bagging with either a BVM or with the E.T. tube in place.
- e. Ventilation Rate:
- During Pediatric / Adolescent / Adult CPR, when the patient is pulseless, give synchronized ventilations along with chest compressions with enough volume to produce visible chest rise.
 - Once pulses are restored, ventilate according to guidelines below.
 - Neonate : 40 to 60 breaths per minute
 - Infant : 15 to 20 breaths per minute
 - Children : 15 to 20 breaths per minute