



Pediatric Endotracheal Intubation

OBJECTIVE

- Demonstrate the proper technique for inserting an endotracheal tube.

REFERENCE

- *Pediatric Education for Prehospital Professionals*, 4th Edition

EVALUATION

- The instructor will verify the student's ability to correctly insert an endotracheal tube in a manikin simulating a patient by means of observing the student's procedures and technique.

EQUIPMENT

- Pediatric airway manikin
- Airway adjuncts of various types and sizes
- Pediatric/infant bag-valve mask device and reservoir
- Manikin lubricant
- Towel or blanket
- Suction unit and catheters
- Capnography
- Oxygen tank
- Personal protective equipment (PPE)
- Endotracheal tubes and stylets of various sizes
- Laryngoscope and blades

INSTRUCTOR GUIDELINES

1. Ensure that each student has all required materials.
2. Read the objective and the evaluation statement to the students.

PERFORMANCE STEPS

1. The student prepares the equipment.
2. The student verbalizes that body substance isolation (BSI) precautions were considered.
3. The student verbalizes the need for airway and ventilatory assistance.

4. The student positions the patient supine with a 1-inch pad under the torso (if needed) to achieve a neutral inline position.
5. The student uses head tilt-chin lift (nontrauma) or trauma jaw thrust/trauma chin lift (suspected trauma) to further position the airway.
6. The student elevates the patient's tongue and inserts an oropharyngeal airway (OPA).
7. The student ventilates the patient with the bag-mask device unattached to oxygen.
8. The student attaches an oxygen reservoir to the bag-mask device and connects it to high-flow oxygen regulator (12–15 L/minute).
9. The student ventilates the patient at a rate of 10–12 breaths/minute with appropriate volumes.
INSTRUCTOR: After 30 seconds, report to the student that breath sounds are present and equal bilaterally and that medical direction has ordered insertion of an endotracheal tube to secure the airway. The student's partner (instructor may substitute as partner) must now take over ventilation.
10. The student directs the partners to preoxygenate and denitrogenate the patient for at least 3 minutes prior to intubation attempt.
11. The student checks/prepares the endotracheal tube selected.
12. The student lubricates the distal tip of the device (may be verbalized).
13. The student elevates the mandible with the laryngoscope.
14. The student inserts the endotracheal tube to the proper depth.
 - a) Cuffed tube: Inflates cuff and removes syringe.
15. The student's partner resumes ventilations while the student confirms proper tube placement by auscultation bilaterally over the patient's lungs and over the epigastrium.
16. The student verifies proper tube placement by secondary confirmation such as capnography, capnometry, EDD, or colorimetric device.

17. The student's partner adjusts the ventilation rate, as necessary.
18. The student secures the device in the patient.
INSTRUCTOR: Ask the student: "How would you know if you are delivering appropriate volumes with each ventilation?"
19. The student confirms that the device remains properly secured.
20. The student's partner ventilates the patient at a proper rate and volume while the student continues to observe capnography/capnometry and pulse oximeter.

CRITICAL CRITERIA

- The student does not place the patient in the neutral position by using padding as needed.
- The student fails to direct their partner to preoxygenate the patient prior to insertion of the endotracheal tube.

- The student fails to select the appropriately sized endotracheal tube for the patient.
- The student fails to insert the endotracheal tube at a proper depth or location within three attempts.
- The student fails to verify proper tube placement by auscultation bilaterally over lungs and over epigastrium and by secondary confirmation such as capnography, capnometry, EDD, or colorimetric device.
- The student fails to confirm that patient is being ventilated properly to avoid overinflation and that an appropriate ventilation rate is being maintained.
- The student performed the procedure and/or used an adjunct in a manner that was dangerous to the patient.