**PERFORMANCE OBJECTIVES**
The examinee will demonstrate proficiency in the use of an aspiration type esophageal intubation detector device (EID) to verify endotracheal intubation.

**CONDITION**
The examinee will be asked to verify placement of an endotracheal tube (ETT) using either the bulb or syringe esophageal intubation detector device (EID) on a simulated patient previously intubated with an ETT. Necessary equipment will be adjacent to the patient.

**EQUIPMENT**
Adult intubation manikin intubated with an ETT, esophageal detector device (bulb or syringe), bag-valve-mask device, gloves, and goggles.

**PERFORMANCE CRITERIA**
100% accuracy required on all items for training program skills testing

Confirmation must be completed within 10 seconds

Must use appropriate body substance isolation precautions—personal protective equipment (PPE)

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**Preparation**

1. Take body substance isolation precautions (PPE)
2. Remove EID from packaging
3. Test EID for air leak:
   - **Bulb** - compress bulb to expel air, seal end of bulb and release — if air enters bulb discard
   - **Syringe** - seal syringe tip and retract plunger — if air enters syringe discard
4. Ready the EID:
   - **Bulb** - compress to expel air in device
   - **Syringe** - seat plunger toward front of syringe

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**Procedure**

1. Attach EID to ETT while maintaining ETT placement by using pincer grip to stabilize tube
2. Evaluate ETT placement:
   - **Bulb** - allow bulb to self-expand; if bulb expands in <5 sec, the ETT is in the trachea → ventilate and clinically check placement:
     - Check for chest rise
     - Auscultate epigastric and lung sounds
3. Ventilate patient with BVM device and clinically reconfirm ETT placement:
   - Check for chest rise
   - Auscultate epigastric and lung sounds
4. Secure the ETT if tracheal placement is confirmed (need only verbalize)

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**Comments**

If bulb expands slowly (>5 sec) tracheal intubation is questionable → clinically check placement:
- Check for chest rise
- Auscultate epigastric and lung sounds

***Remove ETT if indicated

If bulb remains collapsed or gastric contents obtained, the ETT is in the esophagus → remove the ETT immediately and ventilate with BVM device
- **Syringe** - retract plunger over 2-3 seconds

If air fills syringe completely, the ETT is in the trachea → ventilate and clinically check placement:
- Check for chest rise
- Auscultate epigastric and lung sounds

If resistance and no air enters the syringe, or if gastric contents obtained, the ETT is in the esophagus → immediately remove the ETT and ventilate with BVM device

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**Developed : 3/98**
**VERBAL TEST ITEMS (Program Option)**

**Indications:**
- When an aspiration type of esophageal intubation detector device is part of local protocols during ETT placement.

**Contraindications**
- Children under 5 years old or less than 20kg

**Complications**
- Hypoxia
- ETT dislodgement
- False negative from confirmation procedure

**Note**
- An EID takes the advantage of the fibromuscular esophagus which will collapse when negative pressure (aspiration) is applied. The tracheal is rigid and remains patent, allowing for free aspiration of air.
- If an air leak is detected during the initial preparation of the device - discard the bulb or syringe (do not use).
- Placement of ETT should be determined within 5 seconds of attaching the EID to the ETT.