

# A How to Use a JEM Endotracheal Tube Changer

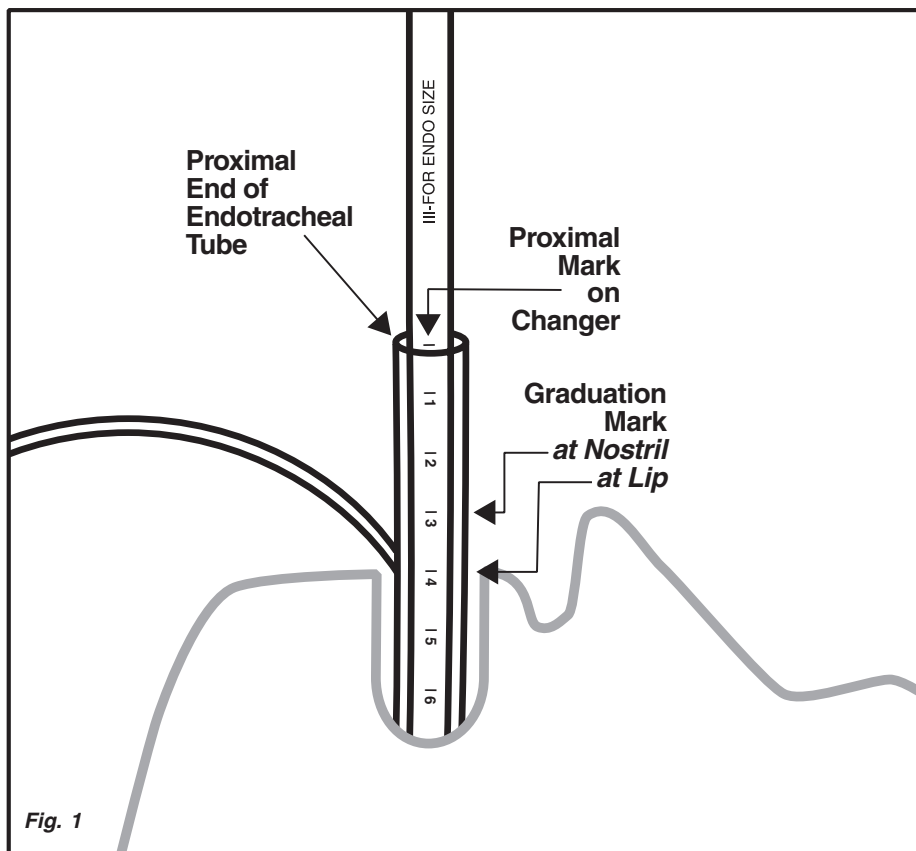
## General Information

- JEM Series Endotracheal Tube Changers are Single Patient Use Only.
- Either end of the JEM Endotracheal Tube Changer may be inserted into the endotracheal tube.
- There are **GUIDE MARKS** in one-centimeter graduations on each JEM Endotracheal Tube Changer which are used to help determine and maintain precise depth of insertion.
- Instrumentation Industries, Inc. JEM Endotracheal Tube Changers must be used only by Qualified Trained Medical Professionals. It is recommended that **TWO** people work together to perform the exchange procedure.

**CAUTION!** The length and diameters of the Endotracheal Tube Changers are size specific. They are not interchangeable. You must use the model Changer designed for the Endotracheal Tube size you are changing. Do not use JEM Series Endotracheal Tube Changers to change to a different size Endotracheal Tube! (i.e. JEM 370 is only to be used to change a 7.0mm endotracheal tube to another 7.0mm endotracheal tube. See panel C for size chart.)

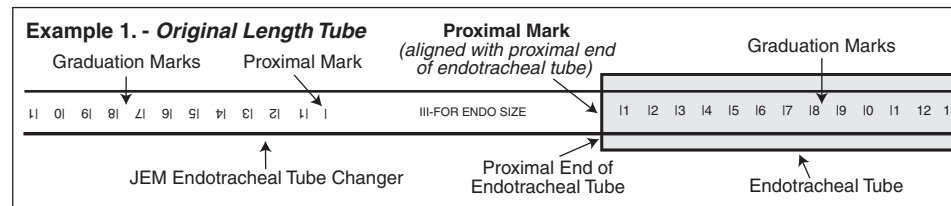
## How to Use

1. JEM Endotracheal Tube Changers must be sterilized or disinfected before use. (See Panel D for processing recommendations.)
2. Prepare the patient and NEW endotracheal tube for exchange procedure.
3. Remove the adapter from patient's EXISTING endotracheal tube.

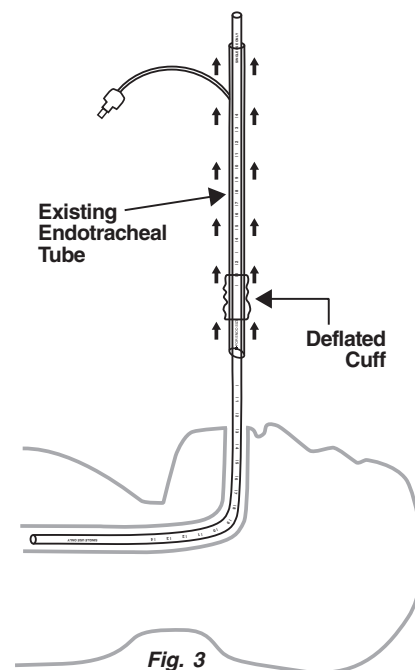
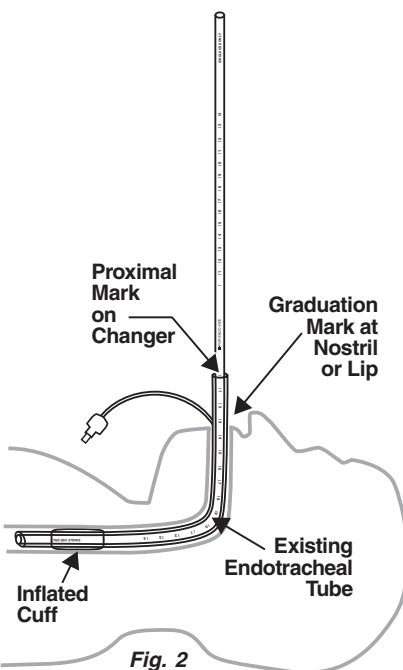


Changing an **ORIGINAL LENGTH, UNSHORTENED** endotracheal tube:  
 – (If the Endotracheal Tube has been shortened, see steps 4a - 4c.)▶

4. Carefully insert JEM Endotracheal Tube Changer into **EXISTING** endotracheal tube until the **PROXIMAL MARK** on the inserted end of the changer is even with the **PROXIMAL END** (not adapter) of the endotracheal tube (Example 1, Figs. 1 & 2).



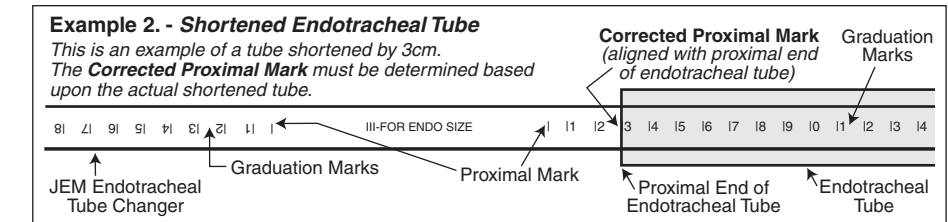
5. Determine the **GUIDE MARK** at the lip or nostril (Fig. 1, Fig. 2). During the tube exchange process, this marked position must be maintained as closely as possible. Special care must be taken to prevent further advancement of the Changer into the patient.
6. Deflate **EXISTING** endotracheal tube cuff.
7. While stabilizing the JEM Endotracheal Tube Changer, remove the **EXISTING** endotracheal tube over the Changer (Fig. 3).
8. While continuing to stabilize the JEM Endotracheal Tube Changer, pass the **NEW** endotracheal tube over the JEM Endotracheal Tube Changer (Fig. 4) until the **PROXIMAL END** of the endotracheal tube is aligned with the **PROXIMAL MARK**, or the **CORRECTED PROXIMAL MARK** (if **Corrective Allowance** has been made for a shortened tube) on the Changer. Ensure that the Changer is in the original position, based upon the **GUIDE MARK** at the lip or nostril, prior to setting final depth of endotracheal tube (Fig. 5).  
 — If you encounter an obstruction, STOP. Do not try to advance the endotracheal tube through the obstruction, as patient harm may result.
9. Secure **NEW** endotracheal tube. Remove and dispose of the JEM Endotracheal Tube Changer. The Changer is not intended to be in patient longer than the time it takes to change an endotracheal tube (less than 5 minutes).
10. Reattach adapter to endotracheal tube and inflate cuff.
11. Following re-intubation, verify the position of the endotracheal tube by auscultation, radiography, or other suitable technique.



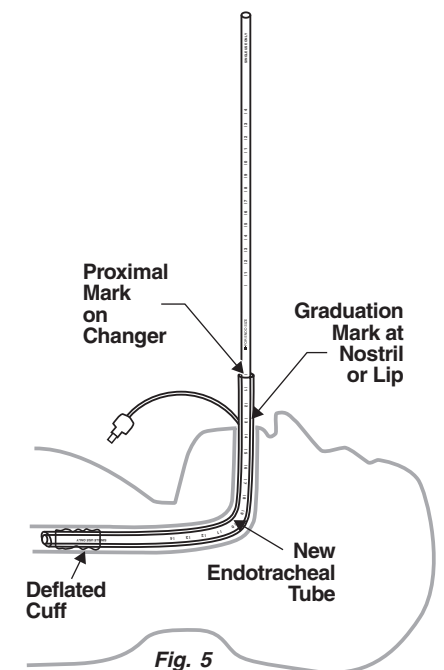
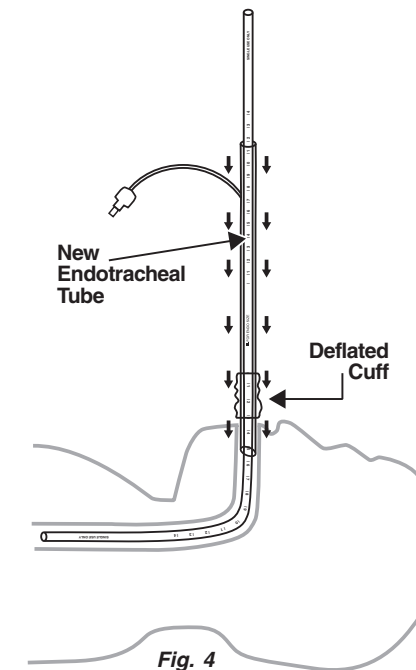
Changing a **SHORTENED/CUT-OFF** endotracheal tube:

**CAUTION!** Advancing a JEM Endotracheal Tube Changer without a proper corrective allowance into an endotracheal tube that has been shortened will cause the JEM Endotracheal Tube Changer to protrude beyond the bevel, potentially causing tracheal and/or endobronchial mucosal trauma.

- 4.a A **Corrective Allowance** must be determined **before** insertion of the JEM Endotracheal Tube Changer for proper **GUIDE MARK** alignment. The **Corrective Allowance** is equal to the length of the cut-off portion of the endotracheal tube. This can be determined by:
  - 1.) Measuring the length of the cut-off portion of the endotracheal tube, if available.
  - 2.) Relying on an **ACCURATE** written record of the length of the cut-off portion of the endotracheal tube.
  - 3.) Comparing an **IDENTICAL** endotracheal tube to the visible portion of the **SHORTENED/CUT-OFF** tube and determining the difference in length.
- 4.b Starting at the **PROXIMAL MARK** on the inserted end of the JEM Endotracheal Tube Changer, add amount of **CUT-OFF** length in the direction of **GUIDE MARKS** (i.e. 3cm). The closest **GUIDE MARK** is the **CORRECTED PROXIMAL MARK**. If cut-off length is between **GUIDE MARKS**, round up to the next **GUIDE MARK**. (i.e. Area between **GUIDE MARK 2 and 3 becomes 3.**)
- 4.c Carefully insert JEM Endotracheal Tube Changer into **EXISTING** endotracheal tube, aligning **CORRECTED PROXIMAL MARK** with the **PROXIMAL END** (not adapter) of **EXISTING** endotracheal tube (Example 2).



Return to steps 5-11



## B Indications for Use

JEM Series Endotracheal Tube Changers provide a simple, rapid technique for changing endotracheal and orotracheal tubes, with specific inside diameters.

## C Product Specifications



Model #	JEM Series
Type	Single Patient Use Endotracheal Tube Changer
Material	High Density Polyethylene
Color	Translucent
Package Info	Sold in packages of 10 (JEM 401 is a package of 1 each of all 9 sizes.)

### Size Chart

The length and diameters of the JEM Endotracheal Tube Changers are size specific. They are not interchangeable. You must use the JEM Endotracheal Tube Changer designed for the Endotracheal Tube size you are changing.

JEM Series Product Number	Endotracheal Tube Size
JEM 325	2.5mm I.D. <i>Black Printing</i>
JEM 330	3.0mm I.D. <i>Blue Printing</i>
JEM 340	4.0mm I.D. <i>Magenta Printing</i>
JEM 350	5.0mm I.D. <i>Blue Printing</i>
JEM 355	5.5mm I.D. <i>Black Printing</i>
JEM 360	6.0mm I.D. <i>Magenta Printing</i>
JEM 365	6.5mm I.D. <i>Green Printing</i>
JEM 370	7.0mm I.D. <i>Blue Printing</i>
JEM 400	7.5mm I.D. <i>Black Printing</i>
<b>JEM 401</b> Package of 1 each of all 9 sizes	

## D Sterilization and High Level Disinfection Procedures

**Endotracheal Tube Changers** are single-patient use devices.

**Note: Steam Autoclave, Gas Plasma, Sterrad, and Gamma Radiation** are **NOT** recommended processing methods.

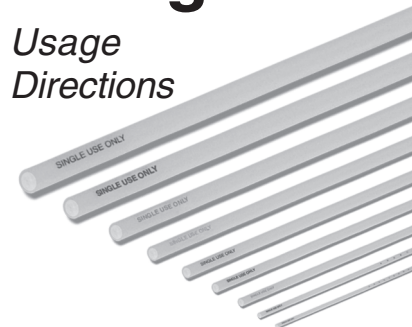
**Ethylene Oxide:** Sterilize in ethylene oxide at 129°F (54°C) for 60 minutes. Sterilized tubes must be aerated within the chamber for no less than 12 hours to dissipate any residual gas.

**Pasteurization:** Pasteurize at 160°F - 170°F (71°C - 77°C) for no less than 30 minutes.

**Chemical Disinfectants:** Disinfect according to validated parameters. Follow the chemical manufacturer's recommendation for temperature and soak time. Chemical disinfection must be followed by a sterile rinse and device must be allowed to thoroughly dry before use.

# Endotracheal Tube Changers

Usage Directions



**CAUTION!**  
Federal Law Restricts this Device to Sale by or on the Order of a Physician

**JEM 325**    **JEM 360**  
**JEM 330**    **JEM 365**  
**JEM 340**    **JEM 370**  
**JEM 350**    **JEM 400**  
**JEM 355**    **JEM 401**