

Equipment Review

Tube-Stat Lighted Tip Endotracheal Tube Stylette

Reviewer: Patrick Shepler, REMT-P

Clearwater Fire Department; Pinellas County EMS

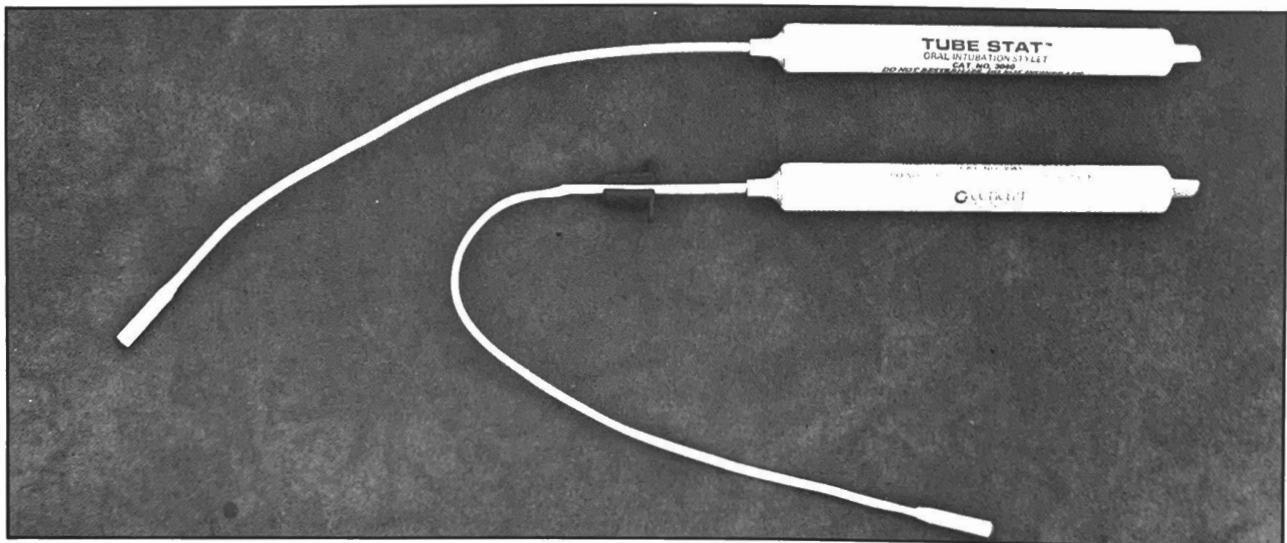
Tube-Stat® (*Concept, Inc., Clearwater, FL*) is a reusable lighted tip stylette which provides transillumination of the trachea for confirming correct placement during the initial procedure of endotracheal intubation and as a periodic recheck. It also provides supplemental lighting during direct laryngoscopy.

The device consists of a light securely affixed to the distal tip of a malleable stylette. The stylette is permanently attached to a battery source about the size of a common penlight (Figure 1). The currently available model is only 25 cm. long, requiring one to trim the proximal end of an endotracheal tube to get sufficient depth into the tube. A new longer model should be available in a few months that will eliminate the need for tube trimming. An adjustable collar will be added to the stylette that will allow control of stylette depth in the tube. A flaccid stylette is also available, which may be used for transillumination during blind nasotracheal intubation.

Transillumination of the trachea is reported to be a reliable indicator of correct tube placement (1). The author has had considerable experience with the device and finds that the bright mid-line transillumination from the trachea is easily distinguished from the dull, diffuse light which appears on the side of the neck with esophageal placement. Bright ambient sunlight during outdoor intubation can obliterate the transillumination. However, these conditions also make it difficult to see in the pharynx using standard laryngoscope illumination with one's pupils constricted by the sunlight. Here, the lighted stylette provides very helpful supplemental lighting in the pharynx to visualize landmarks during outdoor intubation. The extra light is often helpful indoors as well. Blind orotracheal intubation is also facilitated by the stylette.

The flaccid stylette is now in use by the Bayflite helicopter program of the Bayfront Medical Center in St. Petersburg, Florida. They find it helpful in performing in-flight blind nasotracheal intubations and in re-confirming tube placement enroute. The high levels of noise in the helicopter make lung auscultation an unreliable means by which to confirm tube placement. This is also applicable to high ambient noise environments on the ground.

The Tube-Stat® is a useful tool in the prehospital environment for performing standard and various alternative methods of endotracheal intubation. Transillumination is another utilization of the five senses to determine and re-determine proper endotracheal tube placement.



Marshal Dickson

Figure 1 - Tube-Stat® Lighted Tip Endotracheal Tube Stylette - This newer model features an adjustable collar to vary depth of placement inside tube. It is no longer necessary to cut the endotracheal tube prior to use.