Note on Endotracheal Tubes

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The diameter of the lumen of an endotracheal tube is important, but the wall thickness and outside diameter must also be considered. This was brought to our attention sharply during intubation of the trachea of a man with a disposable, cuffed, endotracheal tube which had an inside diameter of 8 mm. The glottis was smaller than expected and did not admit the tube. Another cuffed tube passed easily; later we found that it was a reusable, clear, plastic tube with an inside diameter of 8 mm.

Figure 1 shows both inside and outside diameters of the above-mentioned endotracheal tubes compared and a close-up view of the ends of the tubes. Although the two tubes † have the same inside diameter, 8 mm, the outside diameter of the disposable tube is French #36; the outside diameter of the other tube is French #32.

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† Both tubes marketed by Foregger Company, Roslyn Heights, Long Island, New York.

Fig. 1. Comparison of internal and external diameters of two conventional endotracheal tubes. Reusable tube above; disposable tube below.