Pediatric Intubation Resource
The following is excerpted from the 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science published in Circulation November 2, 2010, Volume 122, Issue 18 suppl 3

Ventilation With an Endotracheal Tube
Endotracheal intubation in infants and children requires special training because the pediatric airway anatomy differs from that of the adult. The likelihood of successful endotracheal tube placement with minimal complications is related to the length of training, supervised experience in the operating room and in the field, adequate ongoing experience, and use of rapid sequence intubation (RSI).

Rapid Sequence Intubation (RSI)
To facilitate emergency intubation and reduce the incidence of complications, skilled, experienced providers may use sedatives, neuromuscular blocking agents, and other medications to rapidly sedate and neuromuscularly block the pediatric patient. Use RSI only if you are trained, and have experience using these medications and are proficient in the evaluation and management of the pediatric airway. If you use RSI you must have a secondary plan to manage the airway in the event that you cannot achieve intubation. Actual body weight, rather than ideal body weight, should be used for some non-resuscitation medications (eg, succinylcholine).

Cricoid Pressure During Intubation
There is insufficient evidence to recommend routine cricoid pressure application to prevent aspiration during endotracheal intubation in children. Do not continue cricoid pressure if it interferes with ventilation or the speed or ease of intubation (Class III, LOE C).

Cuffed Versus Uncuffed Endotracheal Tubes
Both cuffed and uncuffed endotracheal tubes are acceptable for intubating infants and children (Class IIa, LOE C). In the operating room, cuffed endotracheal tubes are associated with a higher likelihood of correct selection of tube size, thus achieving a lower reintubation rate with no increased risk of perioperative complications. In intensive care settings the risk of complications in infants and in children is no greater with cuffed tubes than with noncuffed tubes. Cuffed endotracheal tubes may decrease the risk of aspiration. If cuffed endotracheal tubes are used, cuff inflating pressure should be monitored and limited according to manufacturer's instruction (usually less than 20 to 25 cm H2O).

In certain circumstances (eg, poor lung compliance, high airway resistance, or a large glottic air leak) a cuffed endotracheal tube may be preferable to an uncuffed tube, provided that attention is paid to endotracheal tube size, position, and cuff inflation pressure (Class IIa, LOE B).
In the setting of respiratory failure, providers have several recognized options for choice of artificial airway for positive pressure ventilation.

- In the child who is not at risk for aspiration, an LMA (laryngeal mask airway) may be considered.

- In a child with needs for high airway pressures (drowning, pulmonary contusion, ARDS) a cuffed tube may be placed in a child less than 8 years of age. When using a cuffed ET, ensure that the cuff pressure is less than 20-25 cm H₂O by measuring cuff pressures with a manometer.

**Remember:** In certain circumstances (eg, poor lung compliance, high airway resistance, or a large glottic air leak) a cuffed endotracheal tube may be preferable to an uncuffed tube, provided that attention is paid to endotracheal tube size, position, and cuff inflation pressure (Class IIa, LOE B). ⁸⁸ ⁹¹ ⁹²
References


Illinois EMSC, March 2014


80. Johnson TN. **The problems in scaling adult drug doses to children.** *Arch Dis Child.* 2008;93:207–211.


