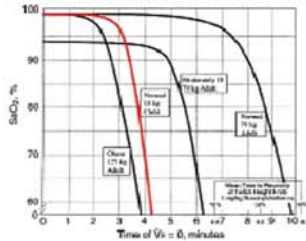




- The functional residual capacity is small and basal metabolism is high
 - Children may desaturate rapidly despite pre-oxygenation, especially if the indication for intubation was hypoxemia
 - Be prepared to perform optimal BVM ventilation and have the appropriately sized extraglottic airway available

TIME TO HEMOGLOBIN DESATURATION WITH INITIAL $F_{i}O_{2} = 0.87$



From Benumof J, Dagg R, Benumof R. Critical hemoglobin desaturation will occur before return to an unparalyzed state following 1 mg/kg succinylcholine. *Anesthesiology* 1997;87(4):979-982 with permission.

- High resting vagal tone
 - Hypoxemia, airway stimulation and medications (especially succinylcholine) may all result in bradycardia
 - Atropine should be readily available at the bedside during any pediatric RSI, especially if using succinylcholine
- Small lungs
 - Children are more prone to barotrauma from over-aggressive ventilation
 - ♦ Use the lowest possible tidal volume to achieve gentle chest rise
 - ♦ Watch ventilator pressures closely and use pressure-controlled ventilation when possible
 - ♦ When bagging use the “squeeze, release, release” method to allow adequate exhalation time and avoid breath stacking

So I'm confused. Is it straight-blades or curved-blades for children? Many of us were taught that you must use a straight-blade for children to control the relatively large and floppy epiglottis. If this were always true there would be no reason that we all carry curved-blades in pediatric sizes! It turns out that it is a case-by-case decision depending on whether the obstacle to laryngoscopy is the epiglottis (straight-blade may be better) or a big, floppy tongue (curved-blade is probably better). I usually start with a straight blade but always have an appropriately sized curved blade ready to go.



What's the deal with all the cuffed ET tubes being used on kids these days?

Even though the narrowest portion of the pediatric airway is below the vocal cords it is not surprising that an uncuffed endotracheal tube may not seal the airway well for optimal ventilation or airway protection. When used, you may need to select a cuffed tube one-half size smaller than the appropriately sized uncuffed tube for that patient. The cuffs are not generally inflated unless an air leak is detected and then only the minimum amount of air necessary to overcome the leak is used; this pressure is then meticulously monitored. It is still appropriate to use an uncuffed tube and most EMS services and general EDs are not stocking cuffed tubes unless specifically requested by the pediatric ICU specialists in their area.

RSI Pharmacology for Children

Visual estimates are notoriously inaccurate. In children it is very important to base dosages upon body weight. If the child's weight is not accurately known the parent's estimate is the next best thing. After that use the length-based Broselow tape or another validated estimation tool. Note that with many medications children require a higher, rather than lower, dose per body weight, i.e. propofol and midazolam.

All of the pre-medications, induction agents, paralytics, sedatives and analgesics included in this text are appropriate for children. Some providers consider succinylcholine relatively contraindicated in children due to the propensity for bradycardia and the risk of fatal hyperkalemia in the setting of undiagnosed muscular dystrophies. While a non-depolarizing agent is a modestly better choice for children, millions of children have been intubated uneventfully with succinylcholine. It is highly recommended, however, that atropine be readily available. *Atrway911* is no longer recommending routine pretreatment with atropine.

