



## Prevent hypoxia, hypotension, and hyperventilation

B	All patients - Supplemental oxygen therapy to <b>maintain O<sub>2</sub> saturation 100%</b> - Monitor HR, BP and O <sub>2</sub> every 3-5 minutes
P	IV access with 18g IV (document exceptions, e.g. pediatric patient)

B Monitor vital signs closely and initiate treatment before the patient becomes hypoxic or hypotensive.

Prevent hypoxia

B	Treat all TBI patients with a goal saturation of 100%  Provide positive pressure ventilation with BVM with 100% O <sub>2</sub> at <u>age appropriate ventilation rate</u>  <b>Avoid hyperventilation</b> Maintain <u>age appropriate ventilation rate</u> Target EtCO <sub>2</sub> 40 mmHg (range 35-45)
P	If patient is failing BVM and remains hypoxic, consider endotracheal intubation or supraglottic airway placement (if age >8 years old)  If O <sub>2</sub> saturation <90% despite intubation or other advanced airway management, consider tension pneumothorax  <b>Avoid hyperventilation</b> Maintain <u>age appropriate ventilation rate</u> Target EtCO <sub>2</sub> 40 mmHg (range 35-45)

**Age Appropriate Ventilation Rates:**

- Infants (0-24 mos) **25 bpm**
- Children (2-14 yrs) **20 bpm**
- >14 yrs **10 bpm (same as adults)**

Prevent hypotension (SBP <110 or downtrending)

Patients with TBI are often hemodynamically unstable

Recheck vital signs every 3-5 minutes and address any changes

P	Administer <b>NS fluid bolus 20 ml/kg</b> to patient with <u>any</u> SBP reading <110 mmHg (or below age specific SBP) Repeat until hypotension resolves Consider <b>Shock AG</b>
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	Age > 14 yr	Age 6-13 yr	Age 1 w-5 yr	Age < 1 w
Heart Rate	60-130	60-150	60-160	100-180
SBP	> 90	> 80	> 70 + (Age x2)	> 70