## Pretest

1.	What is the target range for normal ETCO <sub>2</sub> in an intubated TBI patient:		
2.	<ul> <li>The main goal of prehospital management of</li> <li>a. Keep blood sugar ≥90</li> <li>b. Maintain SBP ≤ 150</li> </ul>	<ul><li>f a TBI is:</li><li>c. Prevent secondary brain injury</li><li>d. Provide positive pressure ventilation</li></ul>	
3.	At what rate you should ventilate an intubated adult with a TBI?		
4.	In all TBI patients, the minimum pulse oxim a. $\geq 90\%$ b. $\geq 95\%$	eter reading should be: c. ≥85% d. ≥80%	
5.	When managing an adult TBI patient the SB a. $\geq$ 60mmHg b. $\geq$ 100 mmHg	P should be maintained at: c. ≥120 mm Hg d. ≥ 90 mmHg	
6.	When managing a 5 year old TBI patient the a. $\geq$ 60 mmHg b. $\geq$ 70 mmHg	SBP should be maintained at: c. $\geq$ 80 mmHg d. $\geq$ 90 mmHg	
7.	<ul><li>Hyperventilation (decreasing ETCO<sub>2</sub>) will c apply):</li><li>a. Cerebral artery vasoconstriction</li><li>b. Increased secondary injury</li></ul>	ause which of the following? (circle all that c. Decreased cerebral perfusion d. All of the above	
8.	<ul><li>The effect of a <u>single</u> episode of hypoxia in t</li><li>a. Increased morbidity and mortality</li><li>b. Bradycardia</li></ul>	<ul><li>the TBI patient results in:</li><li>c. Hypotension</li><li>d. No impact on neurological outcome</li></ul>	
9.	At what rate should an intubated 5 year old v a. 10 bpm b. 15 bpm	<ul><li>vith a TBI be ventilated? (circle all that apply):</li><li>c. 20 bpm</li><li>d. To keep ETCO2 35-45</li></ul>	
10.	If the EtCO2 in an intubated patient falls bel a. Hypoventilation b. Hypoxia	ow 35, what is the most likely cause? c. Acidosis d. Hyperventilation	

## Post test

1.	What is the target range for normal ETCO <sub>2</sub> in an intubated TBI patient:			
2.	The main goal of prehospital management of a. Keep blood sugar ≥90 b. Maintain SBP ≤ 150	<ul><li>f a TBI is:</li><li>c. Prevent secondary brain injury</li><li>d. Provide positive pressure ventilation</li></ul>		
3.	At what rate you should ventilate an intubated adult with a TBI?			
4.	In all TBI patients, the minimum pulse oxim a. ≥90% b. ≥95%	heter reading should be: c. $\geq 85\%$ d. $\geq 80\%$		
5.	When managing an adult TBI patient the SB a. $\geq$ 60mmHg b. $\geq$ 100 mmHg	<ul> <li>P should be maintained at:</li> <li>c. ≥120 mm Hg</li> <li>d. ≥90 mmHg</li> </ul>		
6.	When managing a 5 year old TBI patient the a. $\geq$ 60 mmHg b. $\geq$ 70 mmHg	s SBP should be maintained at: c. $\geq$ 80 mmHg d. $\geq$ 90 mmHg		
7.	<ul><li>Hyperventilation (decreasing ETCO<sub>2</sub>) will capply):</li><li>a. Cerebral artery vasoconstriction</li><li>b. Increased secondary injury</li></ul>	ause which of the following? (circle all that c. Decreased cerebral perfusion d. All of the above		
8.	<ul><li>The effect of a <u>single</u> episode of hypoxia in t</li><li>a. Increased morbidity and mortality</li><li>b. Bradycardia</li></ul>	<ul><li>the TBI patient results in:</li><li>c. Hypotension</li><li>d. No impact on neurological outcome</li></ul>		
9.	At what rate should an intubated 5 year old v a. 10 bpm b. 15 bpm	with a TBI be ventilated? (circle all that apply): c. 20 bpm d. To keep ETCO2 35-45		
10.	If the EtCO2 in an intubated patient falls bell a. Hypoventilation b. Hypoxia	ow 35, what is the most likely cause? c. Acidosis d. Hyperventilation		

## **EPIC Pre/Post-Test Answer Key**

(Note: pre and post tests are identical)

- 1. What is the target range for normal ETCO<sub>2</sub> in an intubated TBI patient: 40mmhg (range 35-45 mmHg)
- 2. The main goal of prehospital management of a TBI is: a. Keep blood sugar  $\geq 90$ c. Prevent secondary brain injury b. Maintain SBP < 150d. Provide Positive Pressure Ventilation
- 3. What is the rate you should ventilate an intubated adult with a TBI? **10 BPM**
- 4. In all TBI patients, the minimum pulse oximeter reading should be:

a.	≥90%, (keep as high as	c. ≥85%
	possible)	d. ≥80%
b.	<u>&gt;95%</u>	

- 5. When managing an adult TBI patient the SBP should be maintained at:
  - a.  $\geq$  60mmHg c.  $\geq$  120 mm Hg
    - b.  $\geq$  100 mmHg d.  $\geq$  90 mmHg
- 6. When managing a 5 year old TBI patient the SBP should be maintained at:
  - a.  $\geq 60 \text{ mmHg}$ c.  $\geq$  80 mmHg
  - d.  $\geq$  90 mmHg b.  $\geq$  70 mmHg
- 7. Decreasing CO<sub>2</sub> will cause which of the following (Circle all that apply) a. Cerebral artery vasoconstriction c. Decreased cerebral perfusion
  - **b.** Increased secondary injury d. All of the Above
- 8. The effect of a *single* episode of hypoxia results in
  - a. Increased morbidity and mortality c. Hypotension
  - b. Bradycardia d. No impact on neurological outcome
- 9. At what rate should an intubated 5 year old with a TBI be ventilated? (Circle all that apply)
  - a. 10 bpm
    - c. 20 bpm
  - b. 15 bpm
- d. To keep ETCO2 40 (35-45)
- 11. 10. If the EtCO2 in an intubated patient falls below 35, what is the most likely cause?
  - a. Hypoventilation

c. Acidosis

b. Hypoxia

d. Hyperventilation