





PERFORM ABCs OF RESUSCITATION

What is patient's Glasgow Coma Scale (GCS)? *

GCS 13-15 MINOR HEAD INJURY	GCS 3-12 MAJOR HEAD INJURY	PEDIATRIC HEAD INJURY (Age <16 years)
<p>CT urgently needed if all 3 of the following:</p> <ol style="list-style-type: none">History of blunt head trauma within the last 24hHistory of loss of consciousness, amnesia or disorientationOne or more of the following:<ul style="list-style-type: none">GCS <15 at 2h after injurySuspected open or depressed skull fractureSign of basal skull fracture (hemotympanum, "raccoon eyes", cerebrospinal fluid oto/rhinorrhea, Battle's sign)Vomiting x 2 or more timesAge >65 years <div><div>Minor Head Injury</div><div>Management</div><div><div>Abnormal CT</div><ul style="list-style-type: none">Call Air Medical Critical Care Transport and Trauma Hotline at 1-800-743-1334</div><div><div>Normal CT or no CT indicated</div><ul style="list-style-type: none">Observe until well and discharge homeFollow up with primary care physician</div></div> <p>If GCS deteriorating, or evidence of penetrating head injury, treat as per "Major Head Injury"</p>	<p>Intubate (<i>c-spine in neutral position</i>) for GCS ≤8 or deteriorating GCS; oxygen by mask for all others</p> <p>Spine immobilization (<i>c-spine collar and back board</i>)</p> <p>2 minute neurological assessment:</p> <ul style="list-style-type: none">GCSpupil size and reaction to lightbiceps and knee jerk reflexesBabinski responsesGross motor function (equal movement in all 4 limbs?) <p>Call Air Medical Critical Care Transport and Trauma Hotline at 1-800-743-1334</p> <p>PREPARATION FOR TRANSPORT AS PER PROVINCIAL TRAUMA GUIDELINES</p>	<p>GCS 3-12 (Major Head Injury) Treat as per adult guideline</p> <p>GCS 13-15 (Minor Head Injury) AGE 2-15 years: GCS 13 or 14: <u>CT Head</u> GCS 15: History of LOC or PTA: <u>CT Head</u> or observe overnight</p> <p>No LOC or PTA: <u>CT Head</u> if one or more of the following:</p> <ul style="list-style-type: none">Change in GCSFocal neurological deficitIntoxicationClinical evidence of skull fractureHistory of coagulopathy <p>AGE <2 years: (Consider child abuse as cause)</p> <p>Symptomatic and/or neurologically abnormal: <u>CT Head</u></p> <p>Asymptomatic and normal neural exam: No further imaging studies except if <1 year and scalp hematoma, then do <u>skull x-rays</u></p> <ul style="list-style-type: none">If x-rays normal: No further investigationsIf fracture: CT Head and contact neurosurgery <p><i>Symptomatic: LOC, vomiting, drowsy, irritable</i> LOC: Loss of consciousness PTA: Post traumatic amnesia CT: Computerized tomography</p>

* Calculate Glasgow Coma Scale (E + V + M; Range 3-15)

GCS for age ≥ 5 years			GCS for age < 5 years		
EYE OPENING	VERBAL RESPONSE	BEST MOTOR RESPONSE	BEST MOTOR RESPONSE	VERBALIZATION	EYE OPENING
<div><div>BEST</div><div>GCS</div><div>WORST</div></div> <div><div>4. Spontaneously</div><div>3. To voice</div><div>2. To pain</div><div>1. Not at all</div></div>	<div><div>5. Converses, oriented</div><div>4. Converses, disoriented/confused</div><div>3. Inappropriate words</div><div>2. Incomprehensible sounds</div><div>1. No verbalization</div></div>	<div><div>6. Obeys.....Follows motor commands</div><div>5. Localizes.....Clearly pushes painful stimuli away</div><div>4. Normal flexion.....Only withdraws arm or leg to painful stimuli</div><div>3. Abnormal flexion.....Flexion of arms with extension of legs to painful stimuli</div><div>2. Abnormal extension.....Extension of all extremities to painful stimuli</div><div>1. Flaccid.....No response to painful stimuli</div></div>	<div><div>6. Spontaneous</div><div>5. Localizes</div><div>4. Normal flexion</div><div>3. Abnormal flexion</div><div>2. Abnormal extension</div><div>1. Flaccid</div></div>	<div><div>5. Appropriate for age<ul style="list-style-type: none">fixes and followssocial smile</div><div>4. Cries, but consolable</div><div>3. Persistently irritable</div><div>2. Relentless, lethargic</div><div>1. None</div></div>	<div><div>4. Spontaneously</div><div>3. To voice</div><div>2. To pain</div><div>1. Not at all</div></div>
E = 1-4	V = 1-5	M = 1-6	M = 1-6	V = 1-5	E = 1-4