

## Glasgow Coma Scale

### Eye Opening Response

|   |          |
|---|----------|
| Spontaneous--open with blinking at baseline | 4 points |
| To verbal stimuli, command, speech          | 3 points |
| To pain only (not applied to face)          | 2 points |
| No response                                 | 1 point  |

### Verbal Response

|   |          |
|---|----------|
| Oriented  | 5 points |
| Confused conversation, but able to answer questions | 4 points |
| Inappropriate words                                 | 3 points |
| Incomprehensible speech                             | 2 points |
| No response   | 1 point  |

### Motor Response

|  |          |
|--|----------|
| Obeys commands for movement                                    | 6 points |
| Purposeful movement to painful stimulus                        | 5 points |
| Withdraws in response to pain                                  | 4 points |
| Flexion in response to pain (decorticate posturing)            | 3 points |
| Extension response in response to pain (decerebrate posturing) | 2 points |
| No response  | 1 point  |

### References:

Teasdale G, Jennett B. Assessment of coma and impaired consciousness. *Lancet* 1974; 81-84.

Teasdale G, Jennett B. Assessment and prognosis of coma after head injury. *Acta Neurochir* 1976; 34:45-55.

### Categorization:

Coma: No eye opening, no ability to follow commands, no word verbalizations (3-8)

### Head Injury Classification:

Severe Head Injury----GCS score of 8 or less

Moderate Head Injury----GCS score of 9 to 12

Mild Head Injury----GCS score of 13 to 15

(Adapted from: Advanced Trauma Life Support: Course for Physicians, American College of Surgeons, 1993).

### Disclaimer:

Based on motor responsiveness, verbal performance, and eye opening to appropriate stimuli, the Glasgow Coma Scale was designed and should be used to assess the depth and duration coma and impaired consciousness. This scale helps

to gauge the impact of a wide variety of conditions such as acute brain damage due to traumatic and/or vascular injuries or infections, metabolic disorders (e.g., hepatic or renal failure, hypoglycemia, diabetic ketosis), etc. Education is necessary to the proper application of this scale.

(Teasdale G, Kril-Jones R, van der Sande J. Observer variability in assessing impaired consciousness and coma. *J Neurol Neurosurg Psychiatry* 1978; 41:603-610; Rowley G, Fielding K. Reliability and accuracy of the Glasgow Coma Scale with experienced and inexperienced users. *Lancet* 1991; 337:535-538).

The predictive value of the GCS, even when applied early, is limited (Waxman K, Sundine MJ, Young RF. Is early prediction of outcome in severe head injury possible? *Arch Surg* 1991; 126:1237-1242). Despite these and other limitations (Eisenberg HM. Outcome after head injury: Part I: general Considerations, in Becker DP, Povlishock JR (eds): *Central Nervous System Trauma Status Report*, 1985. Washington, DC: U.S. Government Printing Office, 1988:271-280), health care practitioners continue to use this practical scale widely.

Source: Adapted from Glasgow Coma Scale, Womack Army Medical Center, Fort Bragg, NC, available on internet site: <http://www.wamc.amedd.army.mil/dofpres/gcs.htm>