

## The Rappaport Disability Rating Scale (DRS)

Overview: Rappaport et al developed a disability rating scale for patients who have had severe head injury with coma. This can help evaluate a patient's level of disability and monitor rehabilitation into the community. The authors are from the University of California in San Francisco and the Santa Clara Valley Medical Center in San Jose.

Parameters:

- (1) arousability awareness and responsivity (based on a modified Glasgow Coma Score using eye opening verbalization and motor response)
- (2) cognitive ability for self-care activities in: feeding toileting grooming
- (3) dependence on others and level of functioning
- (4) psychosocial adaptability and employability

where:

- The Glasgow Coma Score elements are scored as 1 or higher. The modified score used here is reversed (better functioning scored lower) and has 0 as lowest value. The usual GCS ranges from 3 to 15. The modified score would range from 12 to 0.

| Parameter            | Finding         | Points |
|----------------------|-----------------|--------|
| eye opening          | spontaneous     | 0      |
|                      | to speech       | 1      |
|                      | to pain         | 2      |
|                      | none            | 3      |
| best verbal response | oriented        | 0      |
|                      | confused        | 1      |
|                      | inappropriate   | 2      |
|                      | incomprehensive | 3      |
|                      | none            | 4      |
| best motor response  | obeying         | 0      |
|                      | localizing      | 1      |
|                      | withdrawing     | 2      |
|                      | flexing         | 3      |
|                      | extending       | 4      |
|                      | none            | 5      |

|                           |  |   |
|---------------------------|--|---|
| ability to feed self      | complete   | 0 |
|                           | partial  | 1 |
|                           | minimal  | 2 |
|                           | none   | 3 |
| ability to toilet by self | complete   | 0 |
|                           | partial  | 1 |
|                           | minimal  | 2 |
|                           | none   | 3 |
| ability to groom self     | complete   | 0 |
|                           | partial  | 1 |
|                           | minimal  | 2 |
|                           | none   | 3 |
| level of functioning      | complete independence  | 0 |
|                           | independent in special environment   | 1 |
|                           | mildly dependent (needs limited assistance)                                  | 2 |
|                           | moderately dependent   | 3 |
|                           | markedly dependent (needs assistance with all major activities at all times) | 4 |
|                           | totally dependent (needs 24 hour nursing care)                               | 5 |
| employability             | not restricted   | 0 |
|                           | selected jobs (competitive)  | 1 |
|                           | sheltered workshop (non-competitive)   | 2 |
|                           | not employable   | 3 |

total score = SUM(poitns for all 8 measures)

Interpretation:

- minimum score: 0
- maximum score: 30 (to indicate death 29 maximum by tallying values)
- The higher the score the greater the level of disability.

| <b>Total Score</b> | <b>Level of Disability</b> |
|--------------------|----------------------------|
| 0                  | none                       |
| 1                  | mild                       |
| 2 – 3              | partial                    |
| 4 – 6              | moderate                   |
| 7 – 11             | moderately severe          |
| 12 – 16            | severe                     |
| 17 – 21            | extremely severe           |
| 22 – 24            | vegetative state           |
| 25 – 29            | extreme vegetative state   |
| 30                 | dead                       |

References:

Rapport M Hall KM et al. Disability rating scale for severe head trauma: Coma to community. Arch Phys Med Rehabil. 1982; 63: 118-123. (form page 119).