

## Kurtzke Functional Systems Scores (FSS)



### Pyramidal Functions

- 0 - Normal
- 1 - Abnormal signs without disability
- 2 - Minimal disability
- 3 - Mild to moderate paraparesis or hemiparesis (detectable weakness but most function sustained for short periods, fatigue a problem); severe monoparesis (almost no function)
- 4 - Marked paraparesis or hemiparesis (function is difficult), moderate quadriparesis (function is decreased but can be sustained for short periods); or monoplegia
- 5 - Paraplegia, hemiplegia, or marked quadriparesis
- 6 - Quadriplegia
- 9 - (Unknown)



### Cerebellar Functions

- 0 - Normal
- 1 - Abnormal signs without disability
- 2 - Mild ataxia (tremor or clumsy movements easily seen, minor interference with function)
- 3 - Moderate truncal or limb ataxia (tremor or clumsy movements interfere with function in all spheres)
- 4 - Severe ataxia in all limbs (most function is very difficult)
- 5 - Unable to perform coordinated movements due to ataxia
- 9 - (Unknown)



Record #1 in small box when weakness (grade 3 or worse on pyramidal) interferes with testing.



### Brainstem Functions

- 0 - Normal
- 1 - Signs only
- 2 - Moderate nystagmus or other mild disability
- 3 - Severe nystagmus, marked extraocular weakness, or moderate disability of other cranial nerves
- 4 - Marked dysarthria or other marked disability
- 5 - Inability to swallow or speak
- 9 - (Unknown)



### **Sensory Function**

- 0 - Normal
- 1 - Vibration or figure-writing decrease only in one or two limbs
- 2 - Mild decrease in touch or pain or position sense, and/or moderate decrease in vibration in one or two limbs; or vibratory (c/s figure writing) decrease alone in three or four limbs
- 3 - Moderate decrease in touch or pain or position sense, and/or essentially lost vibration in one or two limbs; or mild decrease in touch or pain and/or moderate decrease in all proprioceptive tests in three or four limbs
- 4 - Marked decrease in touch or pain or loss of proprioception, alone or combined, in one or two limbs; or moderate decrease in touch or pain and/or severe proprioceptive decrease in more than two limbs
- 5 - Loss (essentially) of sensation in one or two limbs; or moderate decrease in touch or pain and/or loss of proprioception for most of the body below the head
- 6 - Sensation essentially lost below the head
- 9 - (Unknown)



### **Bowel and Bladder Function**

(Rate on the basis of the worse function, either bowel or bladder)

- 0 - Normal
- 1 - Mild urinary hesitance, urgency, or retention
- 2 - Moderate hesitance, urgency, retention of bowel or bladder, or rare urinary incontinence (intermittent self-catheterization, manual compression to evacuate bladder, or finger evacuation of stool)
- 3 - Frequent urinary incontinence
- 4 - In need of almost constant catheterization (and constant use of measures to evacuate stool)
- 5 - Loss of bladder function
- 6 - Loss of bowel and bladder function
- 9 - (Unknown)



### **Visual Function**

- 0 - Normal
- 1 - Scotoma with visual acuity (corrected) better than 20/30
- 2 - Worse eye with scotoma with maximal visual acuity (corrected) of 20/30–20/59
- 3 - Worse eye with large scotoma, or moderate decrease in fields, but with maximal visual acuity (corrected) of 20/60–20/99
- 4 - Worse eye with marked decrease of fields and maximal visual acuity (corrected) of 20/100–20/200; grade 3 plus maximal acuity of better eye of 20/60 or less
- 5 - Worse eye with maximal visual acuity (corrected) less than 20/200; grade 4 plus maximal acuity of better eye of 20/60 or less
- 6 - Grade 5 plus maximal visual acuity of better eye of 20/60 or less
- 9 - (Unknown)



Record #1 in small box for presence of temporal pallor



### **Cerebral (or Mental) Functions**

- 0 - Normal
- 1 - Mood alteration only (does not affect EDSS score)
- 2 - Mild decrease in mentation
- 3 - Moderate decrease in mentation
- 4 - Marked decrease in mentation (chronic brain syndrome – moderate)
- 5 - Dementia or chronic brain syndrome – severe or incompetent
- 9 - (Unknown)

Sources: Kurtzke JF. Rating neurologic impairment in multiple sclerosis: an expanded disability status scale (EDSS). *Neurology*. 1983 Nov;33(11):1444-52.

Haber A, LaRocca NG. eds. *Minimal Record of Disability for multiple sclerosis*. New York: National Multiple Sclerosis Society; 1985.