

1. 4 CNs at each brain stem level

- Midbrain / above the pons: 3, 4
- Pons: 5, 6, 7, 8
- Medulla: 9, 10, 11, 12

deficits will be ipsilateral except CNIV

2. 4 medial "M" structures

- motor (somatic) nuclei of CN
 - deficits: ipsilateral CN
- motor body of corticospinal tract
 - deficits: contralateral UMN face/arm/leg weakness
- medial lemniscus
 - deficits: contralateral loss of vibration + proprioception
- medial longitudinal fasciculus
 - deficits: loss of ipsilateral eye adduction

3. The 4 more medial somatic CN motor nuclei are factors of 12

- aka CN III, IV, VI, XII
- more lateral: CN II, VII, IX, X

4. 4 lateral "S" structures:

- spinocerebellar tracts
 - deficits: ipsilateral extremity ataxia
- spinothalamic tract
 - deficits: contralateral loss of pain + temp.
- spinal nucleus V
 - deficits: ipsilateral loss of facial pain + temp.

- sympathetic pathway

- deficits: ipsilateral Horner's syndrome