

Pyramidal System

higher order association
area from the visual &
somatosensory system



PREMOTOR CORTEX
Area 6



PRIMARY MOTOR CORTEX (A1/M1)

descending through major
white matter pathways

- corona radiata
- internal capsule
- basal pons
- crus cerebri

Caudal Medulla
"pyramidal decussation"
* Where the corticospinal
tract crosses in the medulla

* Lesions at the T6 result in same sided
weakness from T6 & below

* Lesions above T6 result in same-
sided weakness of whole side

Ventral Horn
grey matter
of the spinal
cord

Remember: somatotopical
organization

↓
descending efferent motor info

UPPER
MOTOR
NEURON

"corticospinal
fibers"

* Lesions here
↳ above =
opposite side
weakness

Lateral
Corticospinal
tract

* Lesions below here
= same-sided weakness

Anterior
Horn Cell
AHC

LOWER
MOTOR
NEURON

Project to
muscle
fibers

* a single AHC
↳ all the muscle
fibers it innervates =
"Motor Unit"

homoculus

"Arm" axons = cervical spinal cord
"Leg" axons = lumbar spinal cord

Medial AHC = Axial skeletal muscles
Lateral AHC = Appendicular skeletal
muscles