**Cerebellar Lobes**

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| **Anatomic name** | **Phylogenetic name** | **Functional name** | **Function** | **Input (afferent)** | **Output (efferent)** | **Lesion** |
| **Anterior lobe** | Paleo-  cerebellum | Spinal  cerebellum | -Control posture and locomotion  -Strong connections to cord | Sensory info fm limbs via cord | To **interposed** nuclei 🡪 distal limb muscles (mm) | -Hypotonia of distal limb mm  -appendicular ataxia (dysmetria, intention tremor) |
| **Posterior lobe** | Neo-  cerebellum (newest) | Cerebral  cerebellum | -Planning of complex, conscious motor action  -Also helpful in cognition regarding ***perception***  -Lateral parts: learning and storage of sequential components of skilled movements | From cortex via pontine nuclei | To **dentate** nucleus 🡪 sup cerebellar peduncle: (1) 🡪 red nucleus 🡪 inf. olivary nuc OR (2) 🡪thalamus | -Improper movement patterns  -The need to think about movement that is normally subconscious  **-Intention tremor**  **-Dysmetria**  **-Ataxia**– specifically ***dysrhythmia***  ***-DYSDIADOCHOKINESIA*** – inability to complete repetitive, alternating movement |
| **Flocculonodular lobe**  **(FL lobe)** | Archi-  cerebellum (oldest) | Vestibulo-cerebellum | Depends on visual and vestibular input to effect ***MEDIALLY*** oriented muscles | - fibers from ***vestibular nuclei*** for motion and position of the head  -Receives afferent fibers from ***occipital lobe*** and ***sup colliculus*** for info regarding **vision** and ***visual reflex***, respectively | **-FL lobe** – projects to 4 vestibular nuclei  **- FL lobe AND Vermis**: connect to the **fastigial** nucleusto coordinate medially placed muscles | -***truncal ataxia***  -Incoordination of proximal muscles  -Inability to perform tandem gait  -Romberg test – fall with eyes open or closed  -EX – Carsickness and vestibular apparatus (as passenger)  -Cortex is lesioned and can’t inhibit deep nuclei – sickness perceived  -Treatment – Theraband exercises/wobble board on ipsilateral side  -EX - Medulloblastoma – tumor in roof of fourth ventricle |
| **Vermis** |  |  |  | - fibers from visual, auditory, and vestibular areas  - fibers from spinal cord regarding medially placed muscles, such as paraspinal muscles | -**Vermis** – projects to head, neck, trunk muscles  -Connects to **fastigial** nuclues | Same as FL lobe |