**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 |