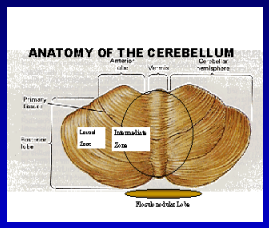
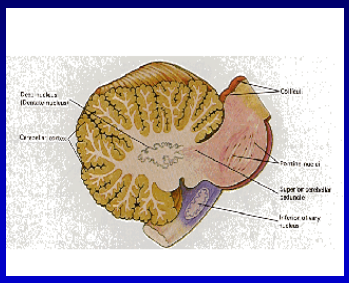
Cerebellum

- In fossa posterioir below tentorium cerebelli
- Vermis – paleocerebellum
- Hemisfers - neocerebellum



Cerebellum



- Grey matter – cortex and nuclei
- nc. fastigii – in white matter of vermis
  nc. dentatus – in white matter of hemisfers
  nc. interpositus (nc. emboliformis a nc. globosi) – between first two
- White matter of cerebellum – pathways

Cerebellum - functions

- Regulation of muscle tone
- Spinal cerebellum – decrease
- Neocerebellum – increase
- Balance
- Paleocerebellum
- Koordination of movements
- Agonists, antagonists, synergists
- Cerebellar hemisfer coordinate movements of homolateral side – pathways are crossing 2x

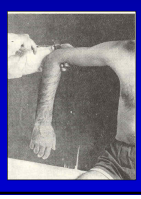
Cerebellum clinical feature

Muscle tone

- Hypotonia – increased pasivity (tone of antagonists is not increased)
  muscle turgor is not decreases
  reflexex are normal
- Pendular reflexes

ERP

•Decreased ERP on the side of lesion



Hypermetry

- Failure of coordination – hypermetry
- Failure of coordination of synergists– asynergy
- Bradyteleokinesis – slowness of movement before the goal

Hypermetry

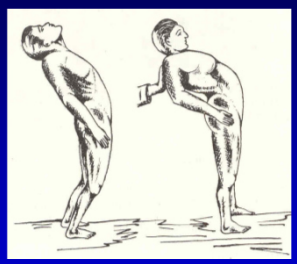
- During spontaneous and automic movements – gait, synkinesis
- Makrography

Adiadochokinesis

- Failure of coordination of alternating movements
- Failure of rhytm
- Movements are slower
- Failure of continuity of movements

Assynergy

- Failure of coordination of muscle groups of various parts of the body
- Small assynergy – on the extremities
- Big assynergy – during automatic and lokomotoric movements – inclination and falls backword (paleocerebellar lesion)
- Dysartria – (assynergy + hypermetry) –



Cerebellar ataxia

- Falls backword
- It does not depend on the position of the head and visual control

Intention tremor

- **Coarse, irregular nonrytmic, during voluntary movement, increased before goal – nc. dentatus lesion**