



Lumbar Puncture

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Lumbar Puncture

- LP is an invasive procedure for obtaining CSF.
- First reports of CSF is in Edwin-Smith Surgical Papyrus written 3700 yrs ago.
- Hippocrates reported CSF presence in brain cavities, 4 centuries B.C.
- Galen described ventricular cavities 2 centuries A.C.
- In 1891 Heinrich Quincke, of Kiel, Germany, introduced this procedure as we know it today. His original intent was to help babies suffering from hydrocephalus by draining away excess fluid, but from the outset he was also interested in lumbar puncture's use as a diagnostic tool, & examined CSF for its pressure, sugar, protein, & cell count.
- Widal introduced CSF cytological studies in 1901.

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LP for Dx

- Infections, e.g. meningitis.
- Demyelinating diseases, e.g., M.S.
- High ICP, e.g., pseudotumor cerebri.
- Bleeding, e.g., SAH.
- Introducing contrast agent for Dx, e.g., DH,....

LP for RX

- Infections, e.g. meningitis.
- High ICP, e.g., pseudotumor cerebri.
- Malignancies, e.g., leukemia.
- Anesthesia
- Others, e.g., CSF leakage.

Lumbar Puncture

Complications

- Low pressure H/A.
- Hematoma.
- Cerebral herniation.
- Infections.
- Neural injury.
- LBP.

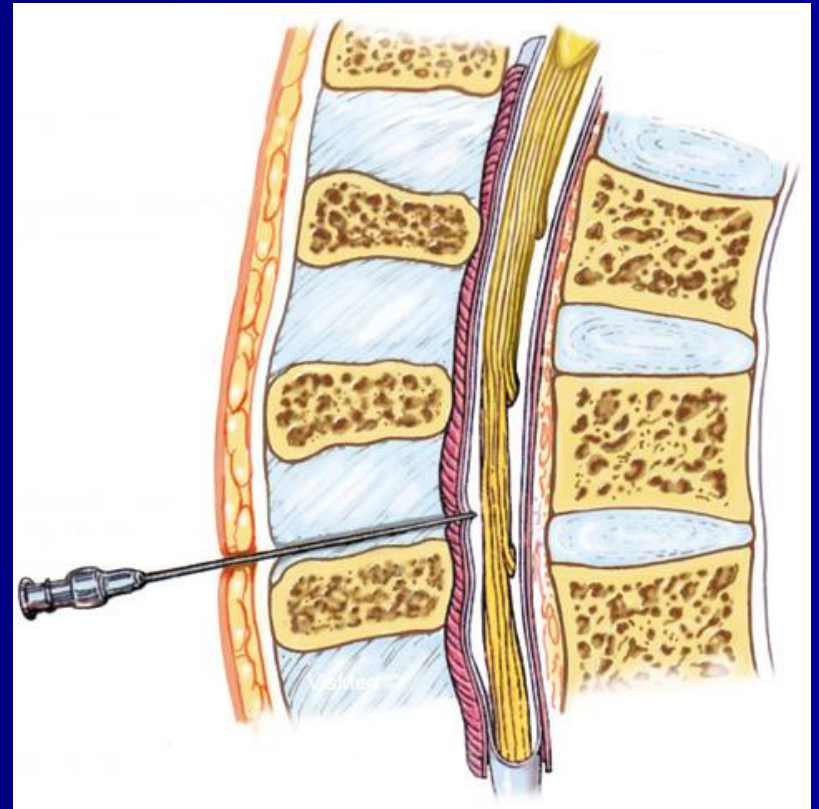
Contraindications

- Infection or wound at the site of LP
- Bleeding tendency.
- Intracranial or intraspinal mass lesions.

Lumbar Puncture

Procedure:

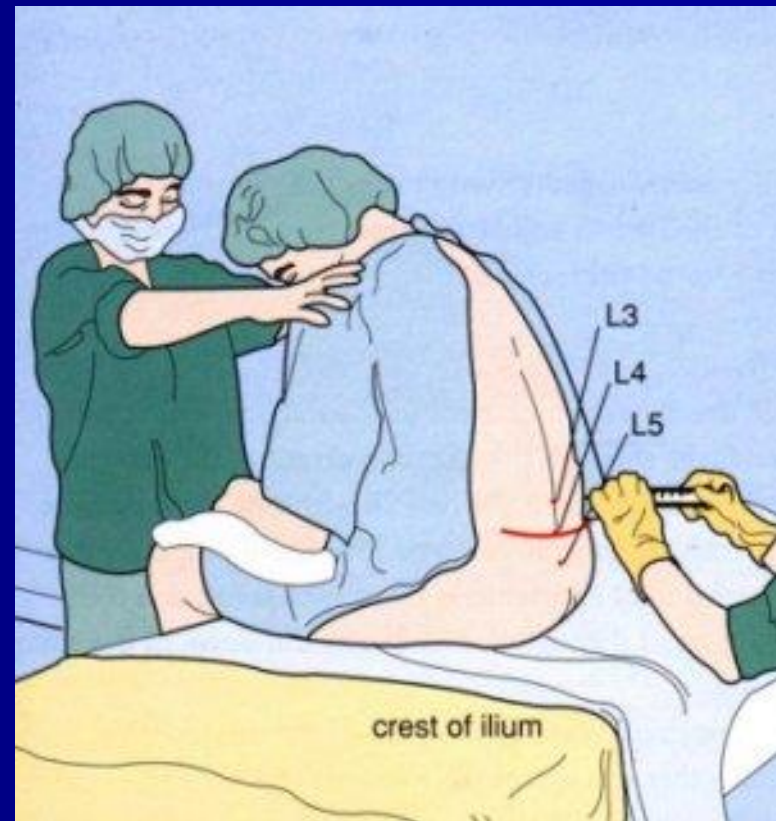
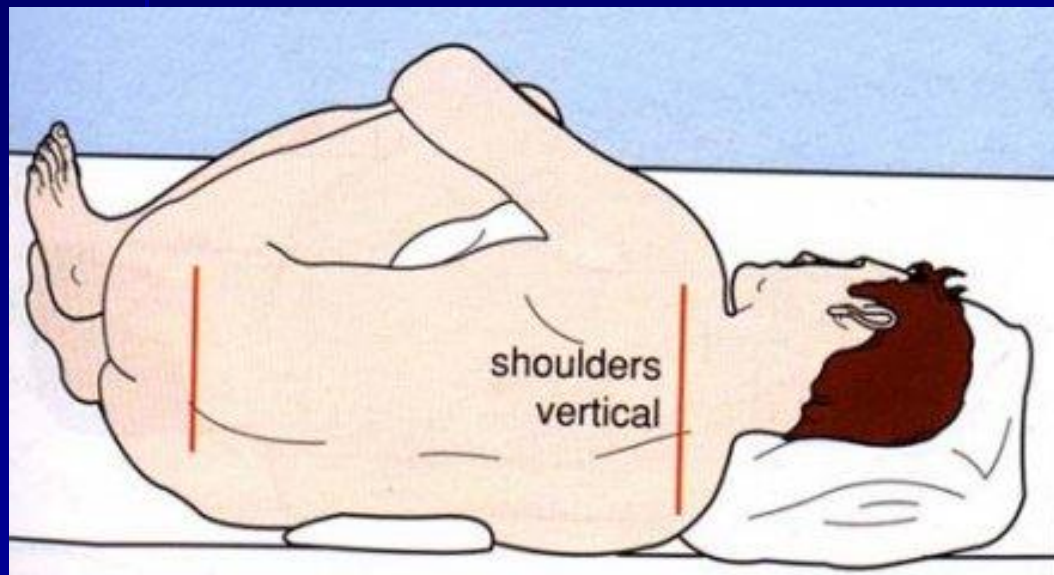
- Sitting
- Lying down
- L2/L3 level downwards
- Needle between 2 spinal processes
- 30* cephalad direction
- Beveled tip direction depends to the aim of LP



Lumbar Puncture



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Quincke needles



Sprotte needle



Touhy needle

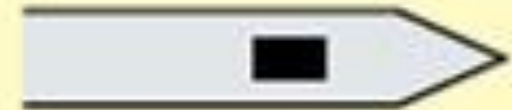
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Common tip designs for spinal needles

Quincke



Whitacre



Sprotte

