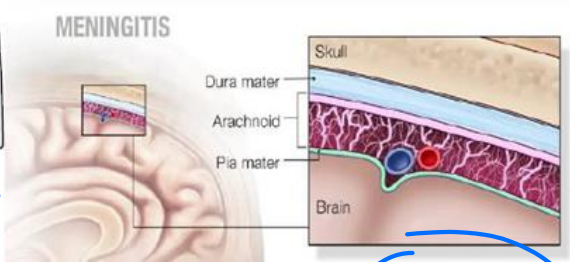
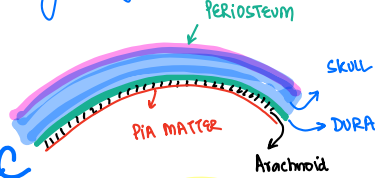


# Meningitis

Definition: Infection of coverings of Brain



## Bacterial meningitis

1. *Strep. pneumoniae*: MCC
2. *Neisseria Meningitidis* → 1°: HCW

1°: HCW

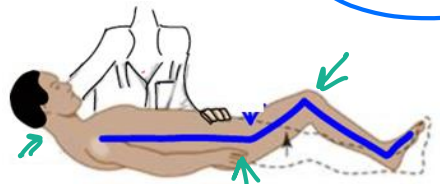
CEFTRIAXONE 1.0g

assisted neck flexion

Brudzinku sign

Spread: DROPLETS

< 72 HOUR of exposure



involuntary " HJ: flexion  
KJ: flexion

Sepsis: septic shock

D.I.C

Adrenal hemorrhage

BP ↓ sugar ↓

addisonian CRISIS: DISTRIBUTIVE SHOCK

WATERHOOF  
FREIDSCHEIN  
Syn

Bacterial meningitis in children and neonates

Step. pneumoniae

gp B Strept or Strep agalactiae  
RARE: LISTERIA MONOCYTOGENES

Viral meningitis in adults → ENTEROVIRUS

Viral encephalitis adult → 1. HERPES SIMPLEX - 1 : global

2. WB, Kerala = Nipah

Fungal meningitis in HIV positive Adults 3. GORAKHPUR = Japanese B encephalitis

↓  
CRYPTOCOCCUS NEOFORMANS

Spread: inhalation of dust containing Pigeon dropping

T. ...

## Transmission

1. Droplet spread : *N. meningitidis* / Meningococcus

2. Sinus infection: Pneumococcus, *H. influenzae*

3. Fracture of skull

↳ S. AUREUS

4. Post brain surgery

5. Post spine surgery

6. AIDS → CRYPTOCOCCAL Meningitis

\* LATERAL flow assay: URINE / CSF

\* INDIA INK stain 2wk

\* Rx: liposomal amphotericin B + 5-flu-cytosine

# Nursing assessment

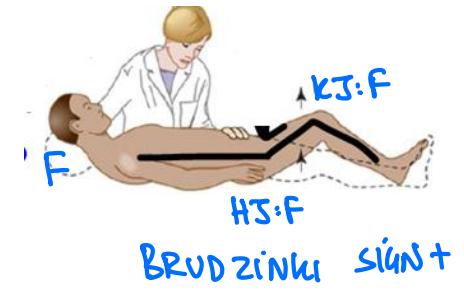
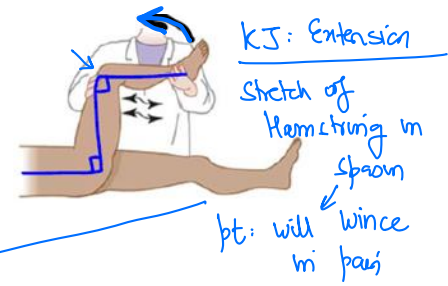
- \* 1. Fever
- \* 2. Headache
- 3. Projectile vomiting
- 4. Photophobia
- \* 5. Nuchal rigidity
- 6. Kerning sign ✓
- 7. Brudzinkski sign ✓

(minus nausea)  
 ⊕ C.T.2  
 aversion to light

oral glucose 10 was

signs of meningeal irritation

1. KERNIG sign
2. BRUDZINKI "
3. Nuchal Rigidity



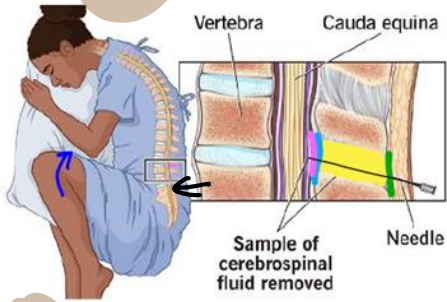
1 + 2 + 5 = TRIAD of meningitis

RAISED ICP: FUNDUS: Papilloedema

Tessie's ...

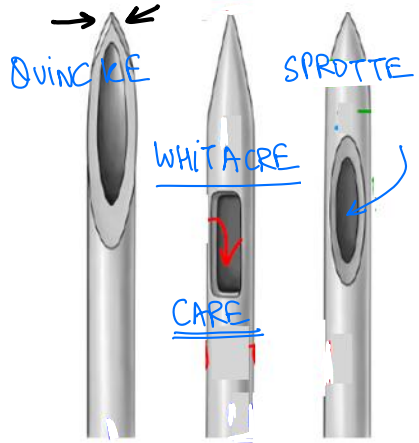
Site: L3-L4 > L4-L5

LOWER line: L2-L4



### Position of Client

1. LATERAL decubitus
2. knee Chest position
3. neck flexion



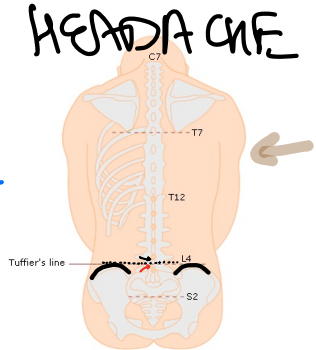
C1 To LP

Raised ICP, Bleeding diathesis  
 Kyphoscoliosis, local site infection



### POST DURAL PUNCTURE HEADACHE

- 1°: THIN BORE needle
  - ATRAUMATIC needle
- WHITACRE  
SPROTTE



BLACK - 22G  
 BLUE - 23G  
 PURPLE - 24G

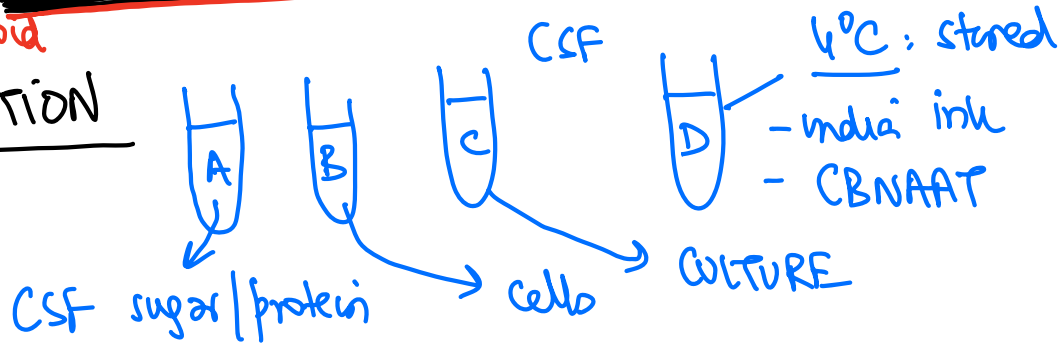
Quincke needle for spinal anaesthesia	Specification	Needle		Color	Needle length	
		ID	OD			
					<b>24G</b>	<b>Purple</b>
	18G	0.92	1.23	Pink	<b>23G</b>	<b>Blue</b>
					<b>22G</b>	<b>Black</b>
	19G	0.72	1.03	Cream		
	20G	0.61	0.91	Yellow		
	21G	0.52	0.82	Green		
	22G	0.42	0.72	Black		
	23G	0.34	0.64	Blue		
	24G	0.31	0.57	Purple		
	25G	0.26	0.52	Orange		
	26G	0.25	0.46	Brown		
	27G	0.21	0.42	Grey		

# LAYERS **PIERCED** DURING PROCEDURE

1. SKIN SC
2. SUPRASPINOUS Ligamentum
3. INTRASPINOUS L "
4. Ligamentum FLAVUM
5. DURA

6. Arachnoid

## TUBES FOR COLLECTION



CSF parameters	Normal	Pyogenic / bacterial meningitis
Cells	0-5 lymphocytes / $\mu\text{mm}$	> 1000 PMN
Sugar	> $\frac{2}{3}$ (Bld sugar)	$\downarrow$ < 0.6
Protein <span style="color: red;">mg/dL</span>	15-45	$\uparrow\uparrow\uparrow$
Opening pressure	10-20 mm Hg 50-180 mm H <sub>2</sub> O	$\uparrow$
Color	Clear	TURBID

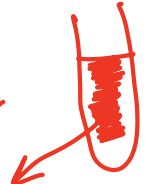
TB meningitis  $\Rightarrow$

> 100-1000 lymphocytes

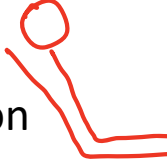
Sugar:  $\downarrow$

Protein:  $\uparrow\uparrow\uparrow$  1gm/dL

GPB WEB Coagulum



# Nursing interventions

1. Watch for signs of raised ICP *HR ↓ BP ↑ PERIODIC BREATHING*
2. Initiate seizure precautions *Raise Railing of Bed*
3. Head and elevation avoid neck flexion and hip joint flexion 
4. Respiratory isolation of meningococcal patient *droplets*

5. As per orders, document administration of

Mannitol → Raised ICP  
Vancomycin || empirical antibiotics : < 60 min of admission Time  
Ceftriaxone ||  
Steroids → ↓ CEREBRAL OEDEMA  
IVF