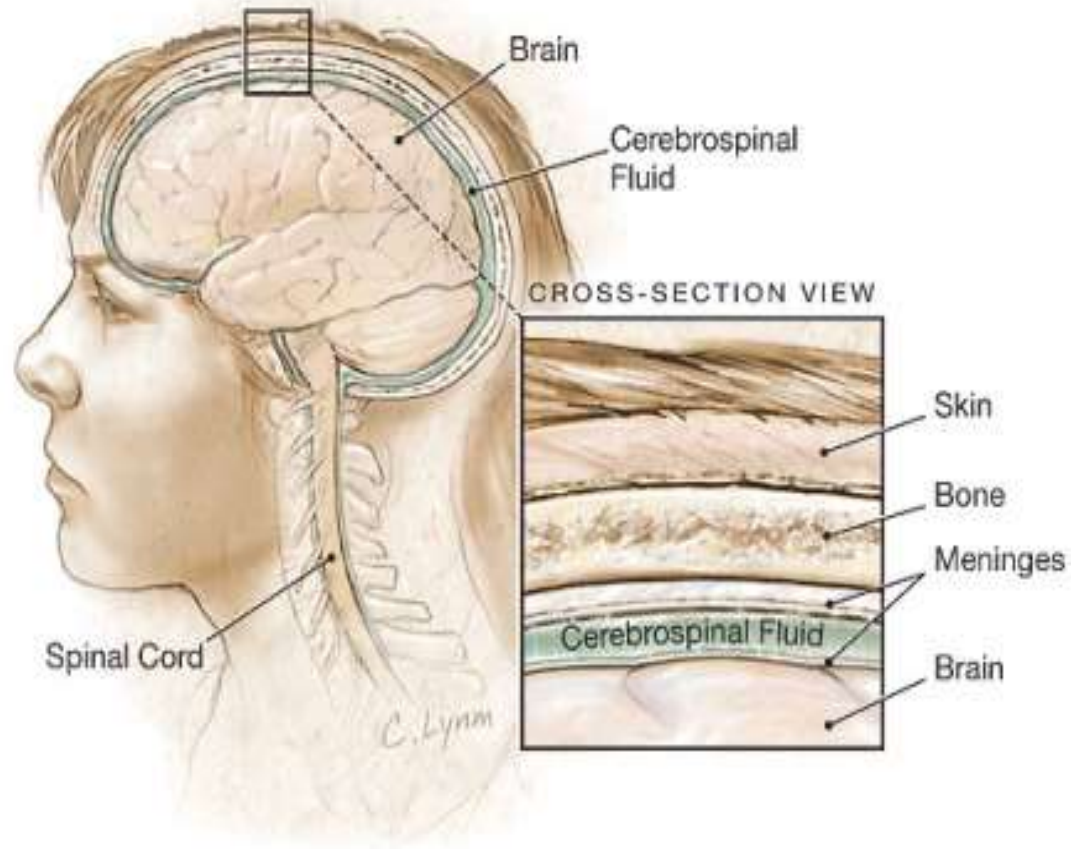


# MENINGITIS



- Meningitis is the most common infection of the CNS.
- It can be caused by a variety of organisms, but the three main types are the following:-
  1. Bacterial or pyogenic: caused by pus forming bacteria, especially the meningococcus, pneumococcus & haemophilus organisms.
  2. Tuberculous, caused by tubercle bacillus.
  3. Viral or aseptic, caused by a wide variety of viral agents.

# Bacterial meningitis

- Bacterial meningitis is an acute inflammation of the meninges and the CNS
- Incidence: it most commonly affects children between ages 1 month & 5 yrs, but it can occur at any age.
- Boys are more frequently than girls, and risk factors increase where individuals are in close contact with one another (day care centers, college dormitories, large families in small dwellings).



# Pathophysiology

# Clinical manifestations

## Neonate:

- Poor feeding, poor sucking
- Vomiting, diarrhea
- Poor muscle tone, poor cry
- Hypo or hyperthermia
- Apnea, seizures, sepsis
- DIC, bulging fontanel

## Infant & preschoolers:

- Fever, poor feeding
- Vomiting, irritability
- Seizures, high pitched cry
- Bulging anterior fontanel
- Lethargy

# BABIES & TODDLERS



Fever – cold hands & feet



Refusing food or vomiting



Fretful, dislike of being handled



Pale blotchy skin



Blank, staring



Drowsy,




Stiff neck,



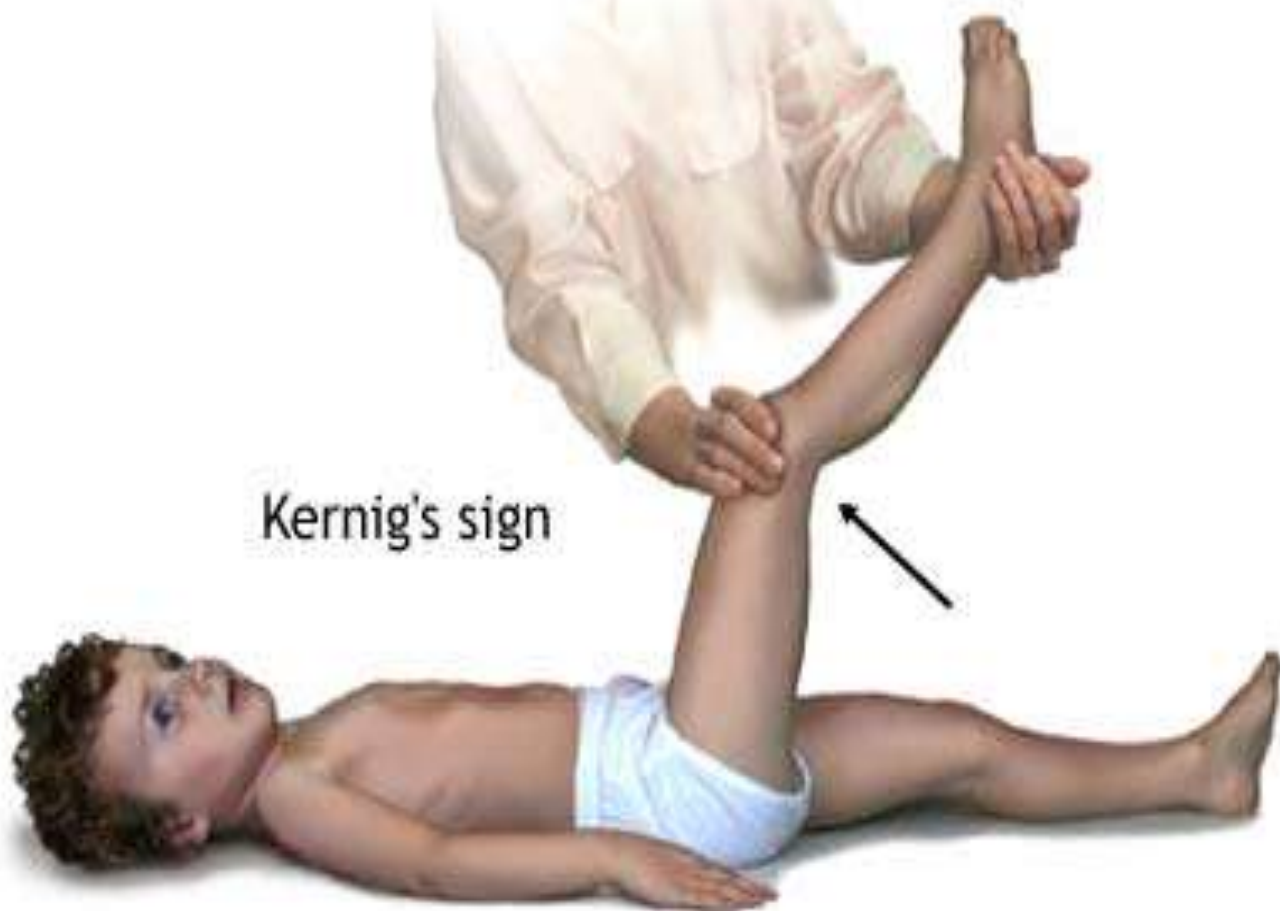
High pitched



# Children & adolescents

- Severe headache, photophobia
  - Nuchal rigidity, fever
  - Altered LOC
  - Decreased appetite, vomiting, diarrhea
  - Drowsiness
  - Kernig's sign (pain with extension of leg & knee)
  - Brudzinski's sign (flexion of head causing flexion of hips & knees)
  - Purpuric rash
- 

Kernig's sign







Brudzinski's neck sign

# Diagnosis

- CSF testing by LP:

Findings: increased CSF pressure

cloudy CSF

Increased protein concentration

low glucose level

- Blood cultures
- Nose & throat cultures occasionally helpful.





# Management

## Acute bacterial meningitis:

- Is a medical emergency
- Isolation precautions
- Initiation of antimicrobial therapy (IV)
- Maintenance of optimal hydration- fluids
- Maintenance of ventilation
- Reduction of ICP
- Control of seizures: anticonvulsive therapy



- Control of extremes of temperature
- Correction of anemia: blood transfusion
- Treatment of complications like electrolyte disturbances & cerebral edema.



# Aseptic meningitis

- Caused by viruses, usually associated with measles, mumps, herpes & leukemia.
- c/m: headache, fever, malaise, GI symptoms, signs of meningeal irritation
- Treatment: symptomatic
  - Acetaminophen for headache & muscle pain
  - Positioning for comfort
  - Antimicrobial agents
  - Isolation

# Nursing management

- ✓ Nurses should protect themselves & others from infection
- ✓ Environment calm & quite: children are sensitive to noise, bright lights & other external stimuli
- ✓ Side lying position is most often comfortable due to nuchal rigidity
- ✓ Observation of vitals, LOC, neurologic signs, urine output.
- ✓ Infant- measure head circumference
- ✓ Allow clear fluids & diet related to age, I/O

# NURSING DIAGNOSES

- Ineffective tissue perfusion rt to alteration of arterial or venous blood flow, increased ICP
- Imbalance nutrition less than body requirements rt to restricted intake, risk for aspiration, nausea or vomiting.
- Anxiety rt to change in child's health status.
- Deficient knowledge rt to unfamiliarity with infectious process & disease process. end



**THANK YOU**