



# Brain Infections

## Meningitis and Encephalitis

### What is Meningitis and Encephalitis?

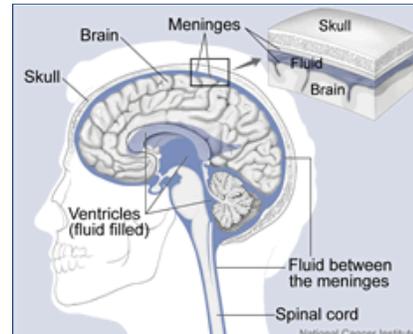
- Meningitis is inflammation of the meninges (a protective membrane) surrounding the brain and spinal cord
- Encephalitis is when there is swelling of the brain

### Symptoms in Adults May Include

- Flu-like symptoms
- Fever
- Headache
- Achy muscles and joints
- Fatigue
- Abnormal weakness
- Confusion
- Difficulty with speech and/or hearing
- Decreased sensation
- Paralysis in face or body
- Seizures
- Meningitis specific
  - Skin rash
  - No appetite or thirst
  - Extra sensitive to light
  - Stiffness in neck

### Causes

- Encephalitis
  - Exact cause is often unknown, but the most common known cause is a viral infection
  - Herpes Virus Simplex
  - Enterovirus
  - Mosquito-borne virus
  - Tick-borne virus
  - 2 types exist
    - Primary: when there is a direct infection of the brain
    - Secondary: the result of a reaction to an infection somewhere else in the brain
- Meningitis
  - Viral (most common), bacterial (can be life-threatening), and fungal infections



### Risk Factors May Include

- Encephalitis
  - Age: young children and older adults are often more susceptible
  - Compromised immune system
  - Geographical regions / season of the year: For example, mosquito born viruses are more common in some areas
- Meningitis
  - Not getting vaccination
  - More common in specific age groups (viral under 5 and bacteria under age 20)
  - Living in a community setting such as a college dorm or child care facilities
  - Increased risk to listeria bacteria during pregnancy which may also cause meningitis
  - Compromised immune system

### Diagnosis

- Physical Examination
- Imaging Tests—CT, X-ray, MRI, etc.
- Spinal Tap
- Blood, urine, or throat excretion collection for inspection of infectious agents
- Biopsy

### Treatment

- *Medications*
- *Physical, Occupational, and Speech Therapy:* Help manage the disease by providing therapeutic intervention with strengthening, endurance training, home modifications to improve/maintain independence, reduce impact of symptoms, work evaluations, improve mobility, prescribe mobility devices and adaptive equipment, improve oral motor control, and improve overall independence in self care and life activities.