

Meningitis

Community-Acquired:

No recent neurosurgery or invasive neurological procedure (e.g. intrathecal pump insertion). Absence of encephalitis.

Post-Neurosurgical:

Recent neurosurgery or invasive neurological procedure - infection attributable to device implantation in neural tissue (e.g. spine stimulator). Absence of encephalitis.

Encephalitis:

Patient has symptoms of seizures, altered mental status, and focal neurologic signs.

Absence of neck stiffness or jolt accentuation.



Community-Acquired Meningitis

Treatment duration is based on causative organism (see below). Aseptic meningitis is often caused by viruses. For other organisms, please contact Infectious Diseases or Medical Microbiology. Tailor treatment once cultures are available, if culture is negative by day 3, consider discontinuing antibiotics.

Empiric therapy

Drug	Dose	Route	Duration
Ceftriaxone	2 g q12h	IV	2-3 days then reassess

If ceftriaxone allergy: Meropenem 2 g IV q8h x 2-3 days then reassess

→ If elderly/immune-suppressed **ADD** to ceftriaxone **ONE** of:

Ampicillin	2 g q4h	IV	2-3 days then reassess
TMP-SMX	5 mg/kg q6h	IV	2-3 days then reassess

→ If suspected *S. pneumoniae* resistance, **ADD** to ceftriaxone:

Vancomycin	Load 30 mg/kg, then 20 mg/kg q8-12h	IV	2-3 days then reassess
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Directed therapy (if susceptible)

<i>S. pneumoniae</i>	Penicillin	4 MU q4h	IV	10-14 days
<i>H. influenzae</i>	Ampicillin	2 g q4h	IV	10 days
<i>N. meningitidis</i>	Penicillin	4 MU q4h	IV	5 days
<i>L. monocytogenes</i>	Ampicillin	2 g q4h	IV	21 days

Meningitis

Community Acquired:

Recent travel to high risk regions or contact with persons of recent travel to high risk regions. Absence of signs of encephalitis.

Post NeuroSurgical

The patient has had a recent neurosurgical procedure or the infection is attributable to a device implanted in recent time (e.g. Shunt, reservoir, drainage of CSF, etc.). Absence of signs of encephalitis.

Encephalitis

The patient has a positive CSF or other test of CSF, serology, blood, or other tests, evidence of rash, diarrhea, all encephalitis.

TMP-SMX = trimethoprim-sulfamethoxazole (cotrimoxazole)



Remember to check cultures, revise your diagnosis and consider oral Rx by day 3



Post-Neurosurgical Meningitis

Meningitis developing after neurosurgery or CNS manipulation is commonly caused by organisms introduced at the time of surgery, which may include coagulase-negative staphylococci and non-fermenting gram negative rods such as *P. aeruginosa*. Empiric therapy should cover broadly, but be narrowed as soon as the causative pathogen is identified.

Treatment duration for proven post-surgical meningitis is dependent on the pathogen, presence of prosthetic hardware, and other factors. Please contact Infectious Diseases to assist in determining the duration of therapy.

Drug	Dose	Route	Duration
Meropenem	2 g q8h	IV	10 days then reassess
OR			
Ceftazidime	2 g q8h	IV	10 days then reassess
AND			
Vancomycin	Load 30 mg/kg, then 20 mg/kg q8-12h	IV	10 days then reassess

Meningitis

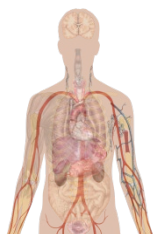
Community Acquired:
The patient has had a recent (usually within 1 year) manipulation of meninges (e.g., craniotomy) or the presence of a shunt or other device in the CNS.

Post NeuroSurgical:
The patient has had a recent (usually within 1 year) manipulation of meninges (e.g., craniotomy) or the presence of a shunt or other device in the CNS.

Encephalitis:
The patient has a system involving altered level of consciousness, focal neurologic signs, seizures, absence of meningeal signs, and abnormal CSF.



Remember to check cultures, revise your diagnosis and consider oral Rx by day 3



Encephalitis

Encephalitis is distinguished from meningitis by seizures, changes in behaviour, confusion and disorientation, without prominent meningitic signs. It is most commonly caused by viruses (e.g. herpes simplex virus, arthropod-borne [West Nile virus]), although most causes are never identified.

Drug	Dose	Route	Duration
Acyclovir	10 mg/kg q8h	IV	14 days then reassess

Step-down option

Antiviral therapy should be stopped if herpes virus is determined to not be responsible for infection. Other viral infections require supportive care alone, since anti-virals have not been shown to be beneficial. If a specific virus is identified, contact Infectious Diseases for further guidance. Once patient is clinically improving and able to take or absorb oral medications, consider step-down:

Drug	Dose	Route	Duration
Valacyclovir	1000 mg TID	PO	Up to 14-21 days of total therapy

Meningitis

Community Acquired:
The patient has had a recent respiratory tract infection, meningitis, or other infection of the head, neck, or face.

Post NeuroSurgical:
The patient has had a recent neurosurgical procedure, or the infection is attributed to a direct or indirect spread from the brain, spinal cord, or meninges.

Encephalitis

The patient has a systemic infection, altered level of consciousness, focal neurologic signs, seizures, absence of meningeal signs, and abnormal CSF.



Remember to check cultures, revise your diagnosis and consider oral Rx by day 3

