

Meningitis - cryptococcal

Cryptococcal meningitis is a fungal infection of the tissues covering the brain and spinal cord. These tissues are called meninges.

Causes

In most cases, cryptococcal meningitis is caused by the fungus *Cryptococcus neoformans*. This fungus is found in soil around the world. *Cryptococcus gattii* can also cause meningitis, but this form can cause disease in patients with a normal immune system as well.

This type of meningitis is not spread from person to person. Usually, it spreads through the bloodstream to the brain from another place in the body that has the infection.

Cryptococcus neoformans meningitis most often affects people with a weakened immune system, including people with:

- AIDS
- Cirrhosis (a type of liver disease)
- Diabetes
- Leukemia
- Lymphoma
- Sarcoidosis
- An organ transplant

The disease is rare in people who have a normal immune system and no long-term health problems.

- Mental status change (confusion)
- Nausea and vomiting
- Sensitivity to light
- Stiff neck

Exams and Tests

Your health care provider will examine you and ask about your symptoms.

A lumbar puncture (spinal tap) is used to diagnose meningitis. In this test, a sample of cerebrospinal fluid (CSF) is removed from your spine and tested.

Other tests that may be done include:

- Blood culture
- Chest x-ray
- Cryptococcal antigen in CSF or blood
- CSF examination for cell count, glucose, and protein
- CT scan of the head
- Gram stain, other special stains, and culture of CSF

Treatment

Antifungal medicines are used to treat this form of meningitis. Intravenous (IV, through a vein) therapy with amphotericin B is the most common treatment. It is often combined with an oral antifungal medicine called 5-flucytosine.

Another oral drug, fluconazole, in high doses may also be effective. If needed, it will be prescribed later in the disease course.

These complications may occur from this infection:

- Brain damage
- Hearing or vision loss
- Hydrocephalus (excessive CSF in the brain)
- Seizures
- Death

Amphotericin B can have side effects such as:

- Nausea and vomiting
- Fever and chills
- Joint and muscles aches
- Kidney damage

When to Contact a Medical Professional

Call your local emergency number if you develop any of the serious symptoms listed above. Meningitis can quickly become a life-threatening illness.

Call your local emergency number or go to an emergency room if you suspect meningitis in a young child who has these symptoms:

- Feeding difficulties
- High-pitched cry
- Irritability
- Persistent, unexplained fever

Alternative Names

Cryptococcal meningitis

Reference:

Perfect JR. Cryptococcosis (*Cryptococcus neoformans* and *Cryptococcus gattii*). In: Bennett JE, Dolin R, Blaser MJ, eds. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*. 9th ed. Philadelphia, PA: Elsevier; 2020:chap 262.

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