

Naegleria Fowleri

Naegleria fowleri is a protozoan parasite that can lead to rapidly fatal meningoencephalitis in those infected. It is typically contracted from swimming in freshwater lakes, and then invades and attacks the brain and CNS after penetrating the cribriform plate. Diagnosis can be made when amoebas are found in the CNS, and treatment is started with amphotericin B, however there are few survivors.



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Pathophysiology

Protozoa

Propeller-protozoa

The parasite, Naegleria fowleri, is a protozoan.

Rapidly Fatal Meningoencephalitis

Rapid Death of Men-in-jewels with Brain-in-flames

Those who contract Naegleria fowleri develop rapidly fatal meningoencephalitis, hence the nickname "brain-eating amoeba."

Swimming in Freshwater Lakes

Swimming in Lake

This protozoan is typically found in warm bodies of fresh water (ponds, lakes, rivers, and hot springs). It can also be found in soil and poorly or unchlorinated swimming pools.

Travels Through Cribriform Plate

Traveling Through Crib Plate

Once in the nasopharynx, Naegleria fowleri attacks the brain and CNS after traveling through the cribriform plate.

Diagnosis

Amoebas in CSF

Amoeba in Brain-Spine-Fluid

Diagnosis of Naegleria fowleri infection is made with a lumbar puncture after examining the CSF. After extracting a CSF sample, a flagellation test confirms Naegleria ameboid presence.

Treatment

Amphotericin B

Amphibian-terminator with (B) Bee

Patients who are found to be infected by Naegleria fowleri are treated with Amphotericin B.

Death is Still Common

Grim Reaper

Survival after infection is rare, and there is a 95% fatality rate in diagnosed patients.