

From: "ROOT" <root@sctimst.ac.in>
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Date: 22/07/2025 08:36 AM
Subject: Invitation for CGR

Greetings from AIIMS, Rishikesh !!

The next CGR will be held on July 22, 2025, in the CPD Hall, AIIMS Rishikesh, from **8:00 AM to 9:00 AM**. You can join online through the following link:

Meeting link:

<https://aiimsrishikesh.webex.com/aiimsrishikesh/j.php?MTID=m28c13762795b101eacdafb5e4239ddac>

Tuesday, July 22, 2025, 8:00 AM | (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Meeting number: 2513 033 7226

Meeting password: 220725

Thanks & Regards
Regional Resource Centre
Dept of Telemedicine
AIIMS Rishikesh

DEPARTMENT OF MICROBIOLOGY

(JOURNAL CLUB- 22 JUL 2025)	
Name of article	Naegleria fowleri outbreak in Pakistan: unveiling the crisis and path to recovery
Journal	Frontiers in Public Health
Impact Factor	3.5 (2025 Journal citation reports)
Presenter	Dr Arpit Mishra
Moderator	Dr Yogendra Pratap Mathuria

Abstract

BACKGROUND: *Naegleria fowleri* (also known as the brain eating ameba) is a free-living ameba species belonging to the genus *Naegleria*. It is the only known pathogenic species of this genus and causes a rare but often fatal primary amebic meningoencephalitis (PAM). This review article delves into the various outbreaks of *N. fowleri* in Pakistan since 2008 and the obstacles encountered in fighting the disease.

OBJECTIVE: To review the *Naegleria fowleri* outbreaks in Pakistan to evaluate the epidemiological factors, current treatment options and bring out the importance of early diagnosis and timely intervention. The study also offers recommendations to enhance public health preparedness.

DESIGN: Review article

KEY POINTS: *Naegleria fowleri* is a thermophilic organism that thrives in high temperatures, up to 46°C (115°F). It is commonly found in warm freshwater sources and soil. Additionally, it can be present in inadequately maintained or poorly chlorinated recreational water. Preference for warmer conditions makes infections more common during the summer months.

Infection typically occurs when the amoeba enters the nasal passages during activities like swimming or diving in contaminated water. In some regions, particularly Pakistan, a more common route of infection is nasal irrigation with contaminated water during ritual ablution practices.

PAM is substantially more common in immunologically healthy people, healthy children, and young adults. It can be detected in clinical samples by microscopy, antigen assays, PCR and culture, and in environmental (water) samples by culture. Prevention as well as early diagnosis remain crucial, due to the lack of a definitive cure or vaccine.

CONCLUSION: *Naegleria fowleri* is a rare yet highly lethal pathogen that has become a significant global public health concern. It causes rapidly progressing and nearly always fatal brain infection. The severe consequences and high mortality associated with *N. fowleri* highlight the urgent need for deeper understanding and the development of novel strategies to address this threat.