

Amoebic Meningoencephalitis in Kerala

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Why in News?

A recent study has identified exposure to non-chlorinated domestic well water as a primary risk factor driving the surge of Amoebic Meningoencephalitis (AME) in Kerala.

Key Highlights of the Study

- **Increased Odds of Infection-** Individuals using untreated, non-chlorinated well water for bathing or washing their face face ***2.95 times higher odds*** of contracting amoebic meningoencephalitis compared to unexposed populations.
- **High Attributable Fraction-** The study calculated a Population Attributable Fraction (PAF) of **34.2%**, indicating that over a third of AME cases in the state are directly attributable to untreated well water exposure.
- **Emergence of Acanthamoeba** - While historical cases were predominantly Primary Amoebic Meningoencephalitis (PAM) caused by *Naegleria fowleri*, recent case series in Kerala show a significant prevalence of Granulomatous Amoebic Encephalitis (GAE) caused by *Acanthamoeba* species.
- **Drastic Mortality Reduction-** Through early state-wide real-time PCR screening of all unspecified encephalitis cases and standardized protocols, Kerala has reduced the case fatality rate of AME to **~24%**, compared to the global mortality average of over 90-99%.
- **High Reliance on Well Infrastructure** - Kerala's unique settlement patterns rely heavily on private open dug wells, where a lack of routine chlorination allows free-living amoebae to colonize bio-films in warm groundwater.



Reference

[The Hindu | ICMR study identifies amoebic meningoencephalitis](#)



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