



# Cholera

## Why in News?

Researchers identified the decline of **antimicrobial resistance in Cholera-Causing Bacteria.**

## What are the Findings?

- More than two hundred serogroups of **Cholera bacterium** are known, of which **only O1 and O139 Genomes are known to cause such infection that leads to [epidemics and pandemics](#).**
  - Researchers studied the **genome of O139 and traced the reason for its dying down** after taking over from O1.
- Two key genomic evolutionary changes took place in **O139, the first related to the type of cholera toxin** it produced and the second **related to a loss of [Antimicrobial Resistance \(AMR\)](#).**
- Two main modifications were in the **cholera toxin genes and in the Antimicrobial Resistance (AMR) portfolio.**
- With the reduction in AMR capacity of O139, **it potentially lost its competitive advantage against the O1.**

## What is Cholera?

- **About:**
  - It is a **life-threatening infectious disease** and a public health hazard.
  - Cholera is an **acute, diarrheal illness caused by infection of the intestine with the bacterium *Vibrio cholerae*.**
  - The infection is often mild or without symptoms, but sometimes can be severe.
- **Symptoms:**
  - Profuse watery diarrhoea
  - Vomiting
  - Leg cramps
- **Transmission:**
  - A person may get **cholera by drinking water or eating food contaminated with the cholera bacterium.**
  - The disease can spread **rapidly in areas with inadequate treatment of sewage and drinking water.**
- **Vaccine:**
  - Currently there are **three WHO pre-qualified oral cholera vaccines (OCV), Dukoral, Shanchol, and Euvichol-Plus.**
  - All three vaccines require two doses for full protection.

## What are the Recommendations?

- Continuous surveillance is necessary **to monitor if any of the serotypes and serogroups are gaining antibiotic resistance over time** and may become major outbreak lineages at any time.
- To stay ahead of the curve and ensure best public health outcome, it is important **that vaccines and treatments are regularly re-evaluated** for efficiency to any newly evolving variants.

[Source: TH](#)

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