

TYPHOID AND ENTERIC FEVER;DIAGNOSIS: CULTURE-FIRST AND CORE

Topic: TYPHOID AND ENTERIC FEVER | Subtopic: DIAGNOSIS: CULTURE-FIRST AND CORE

INVESTIGATIONS Blood culture is the preferred diagnostic test for enteric fever and should be obtained before antibiotics whenever possible. Culture yield improves with adequate blood volume and prompt processing; a practical target is a cumulative 5–10 mL in older children (smaller volumes in infants), inoculated into appropriate broth, ideally using automated culture systems where available. Yield is highest in the first week of illness, so early sampling matters. If initial cultures are negative and fever persists with ongoing clinical suspicion, repeating a blood culture can be reasonable before declaring a non-typhoidal diagnosis, particularly if prior antibiotics were not given. Any *Salmonella* isolate should undergo antimicrobial susceptibility testing, and clinicians should request quantitative reporting such as MIC values for key agents (for example, ceftriaxone) to support stewardship and escalation decisions. Bone marrow culture has the highest sensitivity and may remain positive even after antibiotics; it is reserved for diagnostically difficult, culture-negative cases when confirmation will change management. Supportive laboratory tests are not diagnostic but can support clinical suspicion and detect complications: complete blood count may show a normal or low total leukocyte count with eosinopenia; mild transaminase elevation is common. Imaging and focused tests should be problem-driven: obtain abdominal ultrasound or radiography for worsening abdominal pain or distension, and evaluate cerebrospinal fluid only when meningitis or an alternative neurologic process is plausibly present.

References:

1. National Treatment Guidelines for Antimicrobial Use in Infectious Diseases (India) — Enteric fever section (NCDC) — <https://ncdc.mohfw.gov.in/wp-content/uploads/2025/08/NTG-Version-31st-July-final.pdf>
2. Typhoid Fever — StatPearls (NCBI Bookshelf) — <https://www.ncbi.nlm.nih.gov/books/NBK557513/>
3. Typhoid fever: control & challenges in India (review, PMC) — <https://pmc.ncbi.nlm.nih.gov/articles/PMC6977362/>
4. The treatment of enteric fever (review, PMC) — <https://pmc.ncbi.nlm.nih.gov/articles/PMC1847736/>