



PARATYPHOID FEVER

(See also TYPHOID FEVER)

1. Agent:

- a. *S. Paratyphi* A.
- b. *S. Paratyphi* B tartrate negative.
- c. *S. Paratyphi* C.

[Please note: *S. Paratyphi* B tartrate positive (formerly *S. Java*) is NOT followed as paratyphoid fever]

2. **Identification:** Same as for typhoid fever but disease is usually milder.

3. **Incubation:** 1-3 weeks for enteric fever; 1-10 days for gastroenteritis.

4. **Reservoir:** Human, rarely animals.

5. **Source:** Feces or urine of infected persons.

6. **Transmission:** Fecal-oral route. Ingestion of contaminated food, milk, water, raw shellfish from contaminated water.

7. **Communicability:** As long as organisms are excreted, which is from appearance of prodromal symptoms, throughout illness, and for periods up to several weeks or months but commonly 1-2 weeks after recovery. May become chronic carriers.

8. **Specific Treatment:** For enteric fever or septicemia only; a fluoroquinolone (ciprofloxacin, levofloxacin), azithromycin, chloramphenicol, ampicillin, trimethoprim-sulfa.

9. **Immunity:** Some species-specific immunity.

REPORTING PROCEDURES

1. Reportable. *California Code of Regulations*, Section 2500.

2. **Report Form:**

[Typhoid and Paratyphoid Fever Case Report \(CDPH 8567\)](#)

[RELEASE OF ACUTE OR CONVALESCENT TYPHOID/PARATYPHOID FEVER CASE](#)

Note: Due to the delay in serotyping of *Salmonella* isolates, most paratyphoid fever cases will be initially reported as salmonellosis with serotype pending. Once ACDC receives information identifying the case as *S. Paratyphi*, ACDC will notify the district and work with the district to complete the appropriate forms. District staff will continue with assessment and recommended clearance for case and household contacts.

3. **Epidemiologic Data:** Same as for typhoid fever. Contact to other persons with illness and identifying unknown carriers is most important.

a. Date and source of first positive culture.

b. Onset, symptoms, birthplace, travel history within incubation period, and treatment of case.

c. Household contact roster. Include visitors within incubation period, especially those who may have cooked for the case. Include: name, address, relationship, occupation, and dates of contact. Describe history of paratyphoid or exposure or similar illness; and if so, where and when. Identify those persons in SOS.

d. Travel itinerary during incubation period. Include places and dates. If homes visited, obtain information as in "c" above. If travel out of country, include mode of travel. If possible, identify suspect food or beverage ingested, where it was obtained and how it may have been contaminated.

e. If case occurred in commercial travel group, investigate all members of group.



CONTROL OF CASE, CONTACTS & CARRIERS

Public Health Nursing Protocol:

Home visit is required – a face to face interview is required

Refer to “Public Health Nursing Home Visit REQUIRED Algorithm” ([B-73 Part IV Public Health Nursing Home Visit Protocol](#)).

Contact within 24 hours to determine if SOS involved; otherwise, investigate within 3 days. For definition of **SOS**, see B-73, **Part I**, Section 12. Individuals living in a group setting, including a skilled nursing or intermediate care facility, are in a sensitive situation.

Protection of the public health is a priority in the management of SOS. Reasonable efforts to contact the case must be made by the PHN. If unable to locate or the case is uncooperative, refer to PHI in a timely manner to assist in locating case and determining SOS.

Note: Case cannot be released from supervision until cleared according to B-73. For paratyphoid fever, clearance of cases and contacts is the same as for typhoid fever cases.

Prior written approval from the Area Medical Director (AMD), after consultation with ACDC, is required before admission to a skilled nursing or intermediate care facility (B-73, **Part II**, Section 2A).

CASE:

Same as for typhoid fever.

1. **Precautions:** Blood or body fluid and enteric precautions until clinical recovery.
2. **Sensitive Occupation or Situation:** Remove from work until **3** consecutive feces and urine cultures taken at least 24 hours apart, **beginning at least 1 week after discontinuation of specific therapy and not earlier than 1 month from onset**, are negative for *S. Paratyphi* at **Public Health Laboratories**.
3. **Non-Sensitive Occupation or Situation:**
 1. Do not remove from work. Collect 3 consecutive feces and urine cultures at least 24 hours apart, **beginning at least**

1 week after discontinuation of specific therapy and not earlier than 1 month from onset, are negative for *S. Paratyphi* at Public Health Laboratories.

2. If **any** one of the clearance specimens is positive for *S. Paratyphi*, the case must begin surveillance for convalescent carrier. A set of stool and urine should be collected at **one-month** intervals until **three consecutive negative** sets are obtained. The case should be managed as such and continue to have monthly cultures until convalescent carrier clearance is completed. If the case has been shedding for over 12 months then the case must be reported and followed as a chronic carrier.

CONTACTS:

Household members or persons who share a common source.

1. **Sensitive Occupation or Situation:** Same as for typhoid fever.
 - a. **Symptomatic:** Remove from work until **2** consecutive feces and urine cultures are taken at least 24 hours apart, are negative for *S. Paratyphi* at Public Health Laboratories. If positive, follow as a case. If negative, release contact back to work and continue collecting weekly specimens until case released or contact with case broken. If contact to carrier, consult ACDC.
 - b. **Asymptomatic:** Remove from work until 2 feces cultures, taken at least 24 hours apart, are negative. Then, weekly specimens until case release or contact with case broken. If contact to carrier, consult ACDC.
2. **Non-Sensitive Occupation or Situation:** May continue to work. Obtain 2 feces cultures at least 24 hours apart for additional case finding or identification of unidentified carriers.



CARRIERS:

Do Not Report to State. Otherwise, identification and management is the same.

PREVENTION-EDUCATION

(Same as *Salmonella* with emphasis on preventing exposure to human fecal material).

1. Emphasize hand washing, cleaning fingernails and personal hygiene.
2. Dispose of feces, urine, and fomites properly.
3. Avoid the use of unpasteurized milk or the ingestion of raw or undercooked eggs or meat.
4. Avoid cross-contamination of other foods. All utensils, including chopping boards that have been in contact with raw meat or poultry products, should be washed before using for preparation of other food. After working with raw meat or poultry products, the hands should be washed before preparing other foods.
5. Wash fresh produce before cutting or consuming.
6. Recommend removal of known or suspected animal sources (e.g., pet turtles and iguanas).
7. Thoroughly cook all food derived from animal sources.
8. Properly refrigerate perishable food.

DIAGNOSTIC PROCEDURES

1. **Culture:** (Same as *Salmonella*.)

Container: Enteric.

Laboratory Form: [Test Requisition and Report Form H-3021 \(01-14\)](#)

Examination Requested: Salmonella.

Material: Feces and urine. Urine only if original positive culture was the urine. Follow instructions provided with container.

Storage: Protect from overheating. Maintain at room temperature. Specimen should be delivered to the Public Health Laboratory no later than 4 days after collection.

Remarks: Mark "SOS" (sensitive occupation or situation) in red on specimen, if appropriate.

2. **Culture for Identification (CI)** (Same as salmonellosis.)

Container: Enteric

Material: Pure culture on appropriate medium.

Storage: Same as above.