



SHIGELLOSIS

(DYSENTERY, BACILLARY DYSENTERY)

1. **Agent:** A gram-negative bacillus, divided into four groups: Group A, *S. dysenteriae*; Group B, *S. flexneri*; Group C, *S. boydii*; Group D, *S. sonnei*. Group A, B and C are further divided into serotypes. Group A is comprised of 12 serotypes, Group B of 10, Group C of 18 serotypes, Group D has only one serotype and there are two provisional serotypes.

2. Identification:

a. **Symptoms:** Acute gastroenteritis characterized by diarrhea, fever, nausea and sometimes vomiting, cramps, and tenesmus. In severe cases the stools contain blood, mucus, and pus. The disease is usually self-limited; complications are rare; mild and asymptomatic infections occur.

b. **Differential Diagnosis:** Other enteric pathogens or toxins.

c. **Diagnosis:** Isolation and serotyping of organism from feces or rectal swab.

3. **Incubation:** 1 to 7 days; usually 1 to 3 days.

4. **Reservoir:** The only significant reservoir is human.

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

6. **Transmission:** Fecal-oral route with or without contamination of foodstuffs. This may include fecally contaminated water and certain sexual behaviors. Up to 80% of transmission is person-to-person with association with contaminated food or water.

7. **Communicability:** Highly communicable with low infective dose. Variable as long as organisms are excreted, usually for no more than 4 weeks after onset. Asymptomatic carriers may transmit infection; rarely the carrier-state may persist for months.

8. **Specific Treatment:** Antibiotics such as trimethoprim/sulfamethoxazole (TMP/SMX), ampicillin and quinolones have been shown to shorten the duration of illness and bacterial

shedding. Usage of antibiotics should be based on the clinical status of patient and sensitivity of organism. Currently circulating strains are resistant to ampicillin or TMP/SMX, or multiply resistant to ampicillin, TMP/SMX, and tetracycline. Cases considered to be a public health risk due to sensitive occupation or situation (SOS) should routinely receive antimicrobial therapy.

9. **Immunity:** There is some evidence of serotype-specific immunity of short duration.

REPORTING PROCEDURES

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

2. **Report Form: LAC DHS Shigellosis (acd-shig6/01)**

CONTACT ROSTER (acd6/01)

The above forms are attached and also available online at:

<http://www.lapublichealth.org/acd/EpiForms/Shigellosis-acd%20shig601.pdf>

All 3 pages of form MUST be submitted. The original form should be submitted as soon as the investigation is complete. Original forms should not be held in the district pending completion of "Sensitive Occupation or Situation" (SOS) clearance. District follow-up for SOS can be continued without the original form.

If a prepared commercial food item is the **LIKELY** source of this infection, a **FOODBORNE INCIDENT REPORT (FBIR)** should be filed. For likelihood determination and filing procedures, see Part 1, Section 7 – Reporting of a Case or Cluster of Cases Associated with a Commercial Food: Filing of Foodborne Incident Reports.

3. Epidemiologic Data:

a. Source of water, food, and milk within incubation period.



- b. Exposure to others with diarrhea in or outside of household.
- c. Attendance at group gatherings where food was served, restaurants, or commercial food establishments within incubation period. Obtain detailed information on date, time, and types of foods or beverages ingested and ascertain whether dining companions had similar symptoms.
- d. Travel history within incubation period. Visitors within incubation period.
- e. If a contact to a child care center, developmentally disabled facility, institution, or babysitting group, obtain detailed information on clientele, caretakers, and conditions at the facility or residence.
- f. For infants 3 months of age and under, if source is not identified, culture care giver (even if asymptomatic) to identify possible source.
- g. Recreational water contact.
- h. Colonic irrigation.
- i. Sexual contacts within incubation period.
- j. Sanitary conditions in the residence or other location(s) of possible exposure.
- k. If an outbreak of shigellosis is identified while investigating an individual case, discuss with supervisor and advise ACDC by telephone.

CONTROL OF CASE, CONTACTS & CARRIERS

Contact within 24 hours to determine if sensitive occupation or situation (SOS) involved. Certain group settings (e.g., day care, long term care and facilities for the developmentally disabled) should be considered a sensitive situation; otherwise, investigate within 3 days.

CASE:

Precautions: Enteric precautions until bacteriologically cleared as described below.

1. **Sensitive Occupation or Situation:**
Remove from work until 2 successive

negative feces specimens or rectal swabs are obtained, at least 24 hours apart and taken at least 48 hours after cessation of antimicrobial therapy.

2. **Non-sensitive Occupation or Situation:**
Release after clinical recovery unless household contact in SOS. Then release after obtaining 2 negative feces specimens or rectal swabs as for case.

CONTACTS:

1. **Sensitive Occupation or Situation:**

- a. **Symptomatic:** Remove from work until negative specimens as for case. Then, weekly negative specimens until case released or contact with case broken.
- b. **Asymptomatic:** Remove from work until 1 negative feces specimen. Then, weekly negative specimens until case released. Release after 2 successive negative specimens if contact with case is broken.

2. **Non-sensitive Occupation or Situation:**
Obtain specimens if symptomatic.

3. **Presumptive Cases:**

- a. **Defintition:** any person who is epi-linked to a confirmed case, who has diarrhea (more than 2 loose stools in 24 hours) and fever, **or** diarrhea and at least 2 other symptoms.
- b. Follow up is the same as for a confirmed cases (i.e., clearance as needed and submission of a case history form for reporting).

PREVENTION-EDUCATION

1. Emphasize hand washing after defecation and before handling food.
2. Wash raw fruits and vegetables thoroughly.
3. Protect from contamination by proper food handling techniques and sanitary storage.
4. Properly prepare infant formula.
5. Protect drinking water or boil drinking water for 20 minutes if it is suspected to be a source of infection.



6. Control flies by screening of doorways and windows, by eliminating fly breeding areas, and by the proper use of insecticides.
7. Dispose of feces properly.
8. Limit occupancy to meet housing codes and ensure adequate toilet facilities are available in group housing situations.
9. Emphasize safe sexual practices, avoiding direct contact with fecal material.

DIAGNOSTIC PROCEDURES

1. Culture:

Container: Enterics.

Laboratory Form: Test Requisition Form H-3021 (Rev. 9/07) or online request if electronically linked to the Public Health Laboratory.

Examination Requested: Shigella

Material: Feces. Follow instruction provided with container.

Storage: Protect from overheating. Maintain at room temperature.

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

2. Culture for Identification (CI):

Container: Enteric CI.

Laboratory Form: Test Requisition Form H-3021 (Rev. 9/07) or online request form available at:

<http://lapublichealth.org/lab/docs/H-3021%20Test%20Request%20Form.pdf>

Material: Pure culture on appropriate medium.

Storage: Same as above.