



# AMEBIASIS

1. **Agent:** *Entamoeba histolytica*, a protozoan parasite that exists as a trophozoite and cyst. A related non-pathogenic strain is distinct epidemiologically and biologically from the pathogenic species; this has been renamed *Entamoeba dispar*. *E. dispar* is not pathogenic in humans.

*E. histolytica* is not to be confused with non-pathogenic protozoa found commonly in humans, which require no treatment. These include *E. dispar*, *E. hartmanni*, *E. coli*, *E. polecki*, *Iodamoeba butschlii*, *Endolimax nana*, *Chilomastix mesnili*, *Trichomonas hominis*, *Retortamonas* species, *Enteromonas* species, and usually, *Blastocystis hominis*.

2. **Identification:**

- a. **Symptoms:** Depend on site.

Intestinal: There are four distinct intestinal clinical syndromes with *E. histolytica*. Asymptomatic colonization (cyst passage), acute amebic colitis, fulminant colitis, and ameboma. Asymptomatic cyst passage usually resolves without treatment; many such cases actually may have *E. dispar*. Patients with acute amebic colitis present with lower abdominal pain and have had frequent bloody stools over a period of several weeks; only about 1/3 have fever. Fulminant colitis is an uncommon presentation, most commonly seen in children. There is diffuse abdominal pain, profuse bloody diarrhea, and fever; concurrent liver abscess is common, and 3/4 may develop colonic perforations. Ameboma is a rare (1%) manifestation that may be without symptoms, or present as a tender mass accompanied by symptomatic dysentery.

Extra-intestinal: Amebic liver abscess, with either an acute clinical course with symptoms of <10 days, or a subacute course with symptoms lasting up to 6 months. Other sites of involvement include pleura, peritoneum, pericardium, and brain.

- b. **Differential Diagnosis:** Other bacterial, parasitic and viral causes of gastrointestinal illness. Amebic liver

abscess should be differentiated from pyogenic abscess.

3. **Incubation period:** Variable, a few days to months; commonly 2-4 weeks.
4. **Reservoir:** Humans.
5. **Source:** Cysts from feces of infected case.
6. **Transmission:** Direct fecal-oral transmission, sexual transmission, ingestion of fecally contaminated food or water, colonic irrigation.
7. **Communicability:** Variable, as long a carrier state persists.
8. **Specific Treatment:** Consult the Medical Letter or Pediatric Red Book for specific drugs and dosages. Only *E. histolytica* requires treatment, but since most laboratories do not perform the test to distinguish it from *E. dispar*, treatment is commonly given to all persons with cysts or trophozoites of *E. histolytica/dispar* complex.
9. **Immunity:** None.

## REPORTING PROCEDURES

1. **Reportable:** (Title 17, Section 2500, *California Code of Regulations*). Report within 1 working day of identification of a case or suspected case.
2. **Report Form: PARASITE EPIDEMIOLOGIC CASE HISTORY (T-102, 08/96 fillable).**
3. **Epidemiologic Data:**
  - a. Indicate whether case is:
    - Acute (i.e., diarrhea within the past 6 weeks), chronically symptomatic, or asymptomatic carrier.
    - Intestinal or extra-intestinal (e.g., liver, lung abscess or other).
  - b. Sexual orientation.
  - c. History of colonic irrigation, when and where.



- d. Immigration from or travel to a developing country within 6 months prior to onset. Specific dates and places.
- e. Exposure to carrier and other persons with diarrheal illness within incubation period.
- f. Occupation of case and household members.
- g. Residence in facility for the developmentally disabled.
- h. Attendance in day care.

### CONTROL OF CASE, CONTACTS & CARRIERS

Contact within 24 hours to determine if sensitive occupation or situation (SOS) involved. Otherwise, investigate within 3 days.

#### CASE:

**Precautions:** Enteric precautions until clinical recovery.

1. **Sensitive Occupation or Situation:** Remove from work until 3 consecutive feces specimens taken 3 or more days apart are negative by O&P. First specimen may be taken after patient is on medication for 5 days. Alternatively, if the *E. histolytica* EIA test is negative, the patient does not have amebiasis and is no longer a case. See Diagnostic Procedures below.
2. **Non-sensitive Occupation or Situation:** Release after clinical recovery unless household contacts are in sensitive occupation or situation (SOS).

**CONTACTS:** Household members or persons who share a common source.

1. **Sensitive Occupation or Situation:**
  - a. **Symptomatic:** Treat as a case.
  - b. **Asymptomatic:** Remove from work until at least 1 specimen is negative. Collect specimens weekly until case is cleared or contact with case is broken. If positive, treat as a case.
2. **Non-Sensitive Occupation or Situation:** May obtain specimens on all household contacts

and other suspect contacts to identify source of infection.

**CARRIERS:** Refer for treatment. Release as for case.

### PREVENTION-EDUCATION

1. Stress hand washing and personal hygiene.
2. Advise homosexual men about increased risk with anal and oral-anal sex.
3. Dispose of feces in a safe, sanitary fashion.
4. Take precautions with food and water when traveling to endemic areas.
5. Advise regarding risk associated with colonic irrigation.
6. Protect water supply from fecal contamination.

### DIAGNOSTIC PROCEDURES

1. **Container:** Feces-Parasite.

**Laboratory Form: Test Requisition and Report Form H-3021 or online request if electronically linked to the Public Health Laboratory.**

**Examination Requested:** Ova & Parasites (O&P) for Amebiasis. Check appropriate boxes on laboratory form.

**Material:** Feces. Follow instructions provided with container.

**Amount:** Walnut size.

**Storage:** Do not refrigerate; protect from overheating.

**Remarks:** Mix thoroughly with PVA preservative. Do not collect specimen(s) for 7-10 days after barium, mineral oil, bismuth, antibiotics, anti-malarials or antidiarrheal preparations such as kaolin have been ingested. Specimen must be unpreserved and examined within 24 hours of passage.

**Note:** This test does not distinguish between *E. histolytica* and nonpathogenic *E. dispar*. A frozen, unpreserved stool sample can be submitted for *E. histolytica* EIA test to



distinguish between the two. Please refer to LA County Public Health Laboratory test catalog for more information.

2. **Serology:** (used for extra-intestinal disease only) To California State Department of Health.

**Container:** State Special Serology.

**Laboratory Form:** State Special Serology (Lab 413).

**Examination Requested:** Amebiasis.

**Material:** Clotted blood.

**Amount:** 10 ml.

**Storage:** Refrigerate.

**Remarks:** Diagnostic titer:  $\geq 1:128$  by IHA test  
Allow 2 to 4 weeks for results.