PUBLIC HEALTH REFERENCE SHEET
Amebiasis

Name	*Entamoeba histolytica* (most common)
Reservoir & Transmission	Humans, usually a chronically ill or asymptomatic cyst passer Person-to-person or through ingestion of fecally-contaminated food or water containing cysts, which are relatively chlorine-resistant
Incubation Period	Variable, from a few days to several months or years; commonly 2–4 weeks
Symptoms	Most infections are asymptomatic and commensal, but some may be invasive and give rise to intestinal or extra-intestinal disease. Intestinal disease varies from acute or fulminating dysentery with fever, chills, and bloody or mucoid diarrhea (amebic dysentery), to mild abdominal discomfort with diarrhea containing blood or mucus, alternating with periods of constipation or remission.
Gold Standard Diagnostic Test	Microscopic demonstration of trophozoites or cysts in fresh or suitably preserved fecal specimens, smears of aspirates, scrapings obtained by proctoscopy, or aspirates of abscesses or sections of tissue Stool antigen-detection test for *E. histolytica* and *E. dispar*. Assays specific for *E. histolytica*, such as EIA and PCR, may require a reference laboratory. Serological tests, particularly immunodiffusion and ELISA in diagnosis of invasive disease in persons living in nonendemic areas
Geographic Significance	Present worldwide, particularly in parts of Africa, Asia, and Central and South America

What is amebiasis?
Amebiasis is an intestinal illness caused by a microscopic parasite called *Entamoeba histolytica*.

How is this amebiasis transmitted?
Most people get amebiasis by eating food or drinking water contaminated by *E. histolytica* or the feces of infected individuals and by consuming the parasite's eggs found on surfaces and fingers. Infected people are the only sources of the parasite. Fecal material from infected people may contaminate water or food, which may then cause spread to other people. Not all E. histolytica strains are equally virulent.

Who is at risk for amebiasis?
Anyone can get amebiasis, but it occurs more often in men who have sex with men as well as those immigrating from or inhabiting areas with poor sanitary conditions, especially tropical or subtropical regions and developmental disability institutions.

What are signs and symptoms of amebiasis?
People exposed to this parasite may experience mild or severe symptoms or no symptoms at all. Fortunately, most infected people do not become seriously ill. Only about 10% to 20% of people who are infected with *E. histolytica* become sick from the infection. The symptoms of amebiasis include diarrhea (that may be bloody), amebic dysentery (diarrhea with visible blood and mucus in stools), nausea, weight loss, abdominal tenderness, stomach cramps, and occasional fever. Rarely, the parasite will invade the body beyond the intestines and cause a more serious infection, such as a liver abscess. In a small number of instances, it has been shown to spread to other parts of the body, such as the lungs or brain, but this is very uncommon. The symptoms may appear from a few days to a few months after exposure but

usually within 2 to 4 weeks. Some people with amebiasis may carry the parasite for weeks to years, often without symptoms.

What are potential complications of amebiasis?
Amebic granuloma (ameboma), sometimes mistaken for carcinoma, may occur in the wall of the large intestine in patients with intermittent dysentery or colitis of long duration. Dissemination through the bloodstream may occur and produce abscesses of the liver and, less commonly, of the lung or brain. Painful ulceration of the skin is a rare manifestation that can occur anywhere, but most commonly in the perianal and genital regions, usually in association with amebic dysentery.

How is amebiasis diagnosed?
Examination of stool samples under a microscope is the most common way to diagnose amebiasis. Sometimes, several stool samples must be obtained because the number of amoeba found in the stool changes from day-to-day. If the infection may have spread to other organs, a blood test is recommended. Other diagnostic tests include stool antigen testing and stool PCR.

How is amebiasis treated?
The treatment regimen will depend on if the patient is symptomatic or asymptomatic, and if any complications have manifested. Symptomatic amebiasis should be treated with a systemically active compound, such as metronidazole, tinidazole, ornidazole, or secnidazole, followed by a luminal amebicide to eliminate any surviving organisms in the colon. A follow-up stool examination is recommended after completion of therapy to rule out cyst carriage.

How can amebiasis be prevented?
Household members and other suspected contacts should have adequate microscopic examination of feces and be treated if results are positive for *E. histolytica*. Adequate handwashing after defecation, sanitary disposal of feces, and treatment of drinking water will control the spread of infection. The use of condoms and avoidance of sexual practices that permit fecal-oral contact can control sexual transmission. Persons diagnosed with amebiasis should refrain from using recreational water venues until treatment with a luminal drug is completed and any diarrhea has resolved. Cysts are killed by desiccation, by temperatures above 50°C (122°F), and by irradiation. Water of undetermined quality can be made safe by boiling for 1 minute (at altitudes >6,562 ft or 2,000 m, water should be boiled for 3 minutes). Chlorination of water as generally practiced in municipal water treatment does not always kill cysts. The most effective treatment of small quantities of water is achieved using portable filters with an absolute pore size of 1.0 mm or less.

What are some public health considerations?
- Document the anatomical site of infection (intestines, liver, lung, brain, etc.).
- Document relevant travel and deployment history occurring within the incubation period.
- Microscopic test from stool reported as positive for *Entamoeba histolytica* and *Entamoeba dispar* should only be reported as probable if trophozoites with ingested red blood cells are seen.
- Generally, it is not necessary to exclude an infected person from work or school. Casual contact at such locations is unlikely to transmit the disease, provided that infected persons carefully wash their hands after using the toilet.

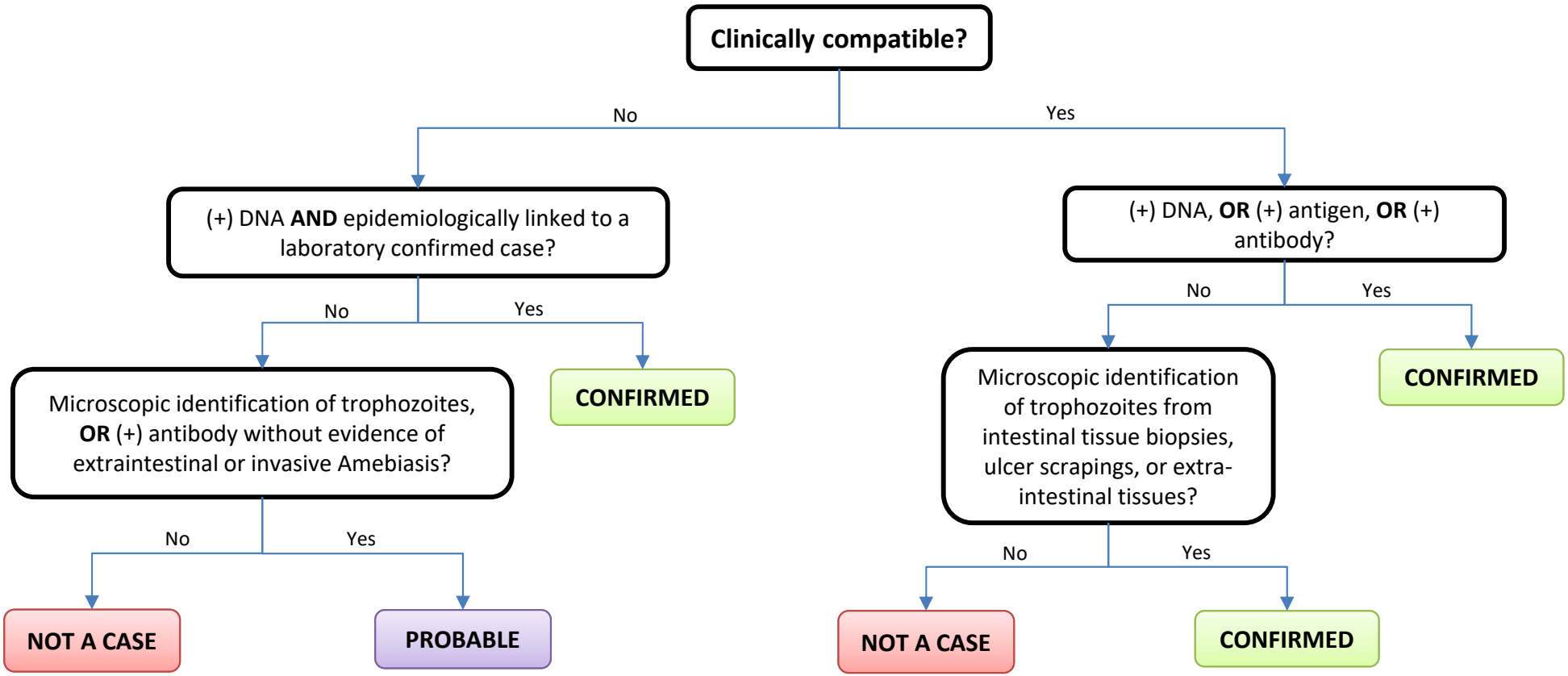
References:

Defense Health Agency. 2022. *Armed Forces Reportable Medical Events: Guidelines and Case Definitions.* https://www.health.mil/Reference-Center/Publications/2022/11/01/Armed-Forces-Reportable-Medical-Events Guidelines

Heymann, David L. ed. 2022. *Control of Communicable Diseases Manual*. 21st Edition. Washington, DC: APHA Press.

"Parasites – Amebiasis – *Entamoeba histolytica* Infection," Centers for Disease Control and Prevention (CDC), last reviewed December 3, 2021. https://www.cdc.gov/parasites/amebiasis/index.html.

Amebiasis



Clinical Description:
An illness caused by infection of the large intestine that is characterized by symptoms ranging from mild, chronic diarrhea to severe and sudden onset diarrhea containing mucus, blood, or both. Extraintestinal or invasive infections can also occur and may present as an acute abscess in the liver, lung, brain, or other organs. A granulomatous lesion in the intestine may be discovered on rare occasion.

Critical Reporting Elements and Comments:
- Document the anatomical site of infection (intestines, liver, lung, brain, etc.).
- Document relevant travel and deployment history occurring within the incubation period (incubation period can vary from a few days to several months or years; commonly 2–4 weeks).
- Microscopic test from stool reported as positive for *Entamoeba histolytica* and *Entamoeba dispar* should only be reported as probable if trophozoites with ingested red blood cells are seen.

INVESTIGATION WORKSHEET

Defense Health Agency ®

☐ Entered in DRSi?

☐ Reported to health dept?

POC: _____

(_____) - _____ - _____

Amebiasis

Confirmed ○ Probable ○ Not a Case

https://drsi.health.mil/ADRSi

Please see the 2022 Armed Forces Reportable Medical Events Guidelines and Case Definitions for reference

Outbreak investigations must be reported immediately to DRSi through the outbreak module.

DEMOGRAPHICS

NAME: *(Last)*_____ *(First)*_____ *(MI)*_____ **PARENT/GUARDIAN:** _____

DOB: _____/_____/_____ **AGE:** _____ **FMP:** _____ **SEX:** ☐ M ☐ F ☐ Unk **RACE:** _____

UNIT: _____ **SERVICE:**_____ **RANK:** _____ **DUTY STATUS:**_____

ADDRESS: *(Street)*_____ **DoD ID:** _____

(City) _____ *(State)* _____ *(Zip)* _____ (_____) - _____ - _____ *(h)*

PHONE:

*(County)*_____ *(Country)*_____ (_____) - _____ - _____ *(c)*

CLINICAL INFORMATION

Provider: _____ **Clinic/hospital:** _____

	Y	N	
Hospitalized	☐	☐	**Admit date:** ____/_____/_____ **Discharge date:** ____/_____/_____
Deceased	☐	☐	**Date of death:** ____/_____/_____ **Cause of death:** _____

	Y	N	
Symptomatic	☐	☐	**Onset date:** ____/_____/_____ **Clinic date:** _____/_____/_____ **Diagnosis date:** _____/_____/____
Fever	☐	☐	**Max Temp:** _____°F/°C (☐ Unk)
Diarrhea	☐	☐	
Loose stools	☐	☐	
Stomach pain	☐	☐	
Cramping	☐	☐	
Bloody stools	☐	☐	

TREATMENT

Treated with antibiotics? Y ☐ N ☐

Type of antibiotic	**Date Started**	**Duration**
1. _____	_____/_____/_____	_____
2. _____	_____/_____/_____	_____
3. _____	_____/_____/_____	_____

Treated with anti-parasitics? Y ☐ N ☐

Type of anti-parasitics	**Date Started**	**Duration**
1. _____	_____/_____/_____	_____
2. _____	_____/_____/_____	_____
3. _____	_____/_____/_____	_____

LABORATORY RESULTS

COMMENTS

Test *(type of test performed)*	Collection Date	Source *Circle Type*	Result	
☐ Antibody	_____/_____/_____	Serum CSF Urine Other	☐ Positive	☐ Negative
☐ Antigen	_____/_____/_____	Serum CSF Urine Other	☐ Positive	☐ Negative
☐ PCR (DNA)	_____/_____/_____	Serum CSF Urine Other	☐ Positive	☐ Negative
☐ Culture	_____/_____/_____	Serum CSF Urine Other	☐ Positive	☐ Negative
☐ Screen	_____/_____/_____	Serum CSF Urine Other	☐ Positive	☐ Negative
☐ Other *Describe below*	_____/_____/_____	Serum CSF Urine Other	☐ Positive	☐ Negative

TRAVEL HISTORY

In the (INCUBATION PERIOD)* before illness onset (when symptoms started), did the case.....

1. **Recently travel?** Y ☐ N ☐ Unk ☐
2. **Was travel out of country?** Y ☐ N ☐ Unk ☐
3. **Did case receive theater/ country clearance before recent out-of-country trip?** Y ☐ N ☐ Unk ☐

(If yes) **Reason for travel**

☐ Deployment
☐ TDY
☐ Vacation
☐ Visiting Friends
☐ Business (non-DoD)
☐ Other: _____

*Incubation period: Variable, from a few days to several months or years; commonly 2–4 weeks.

Travel History (Deployment history) - Details (start with most recent travel/deployment)

Location (City, State, Country)	*# In Group (if applicable)*	*Principal reason for trip*	*Date Travel Started*	*Date Travel Ended*