Asymptomatic intestinal amebiasis (non invasive)

- Caused by ***E. dispar***, less frequently by ***E. histolytica***.

- ***E. dispar*** adheres to host cells in very much the same way as ***E. histolytica***, but it produces only very small amounts of amebapore A and B and none of the particularly potent type C at all.
- ***E. dispar*** is lacking several genes that code for certain cysteine proteases.

- The activity of certain proteases in ***E. dispar*** is greatly reduced compared to ***E. histolytica***.

Clinical manifestations

develop as early as two to four weeks after infection with ***E. histolytica*** or after asymptomatic periods of months or even years.

Asymptomatic intestinal form

- ameba colony on intestinal mucosa
- asymptomatic cyst passer (1000 cyst/day)
- non-dysenteric diarrhea, abdominal cramps, other GI symptoms.
- Antibodies to *E. histolytica* antigens are usually not found in serum.

Invasive intestinal form:

Caused by*E. histolytica.*

The acute disease

- **Usually begins with abdominal discomfort and episodes of diarrhea.**
- **The diarrhea of varying duration, at first mushy then increasing mucoid, including blood-tinged, so-called "red currant jelly stools = dysentery = bloody diarhea" in which amebas can detected, including trophozoites containing erythrocytes.**
- **Fever, dehydration and toxemia can also present.**
- **In such cases, antibodies are usually present in serum.**

In **chronic amoebiasis**

- the ulcers sometimes perforate into the peritoneal cavity.

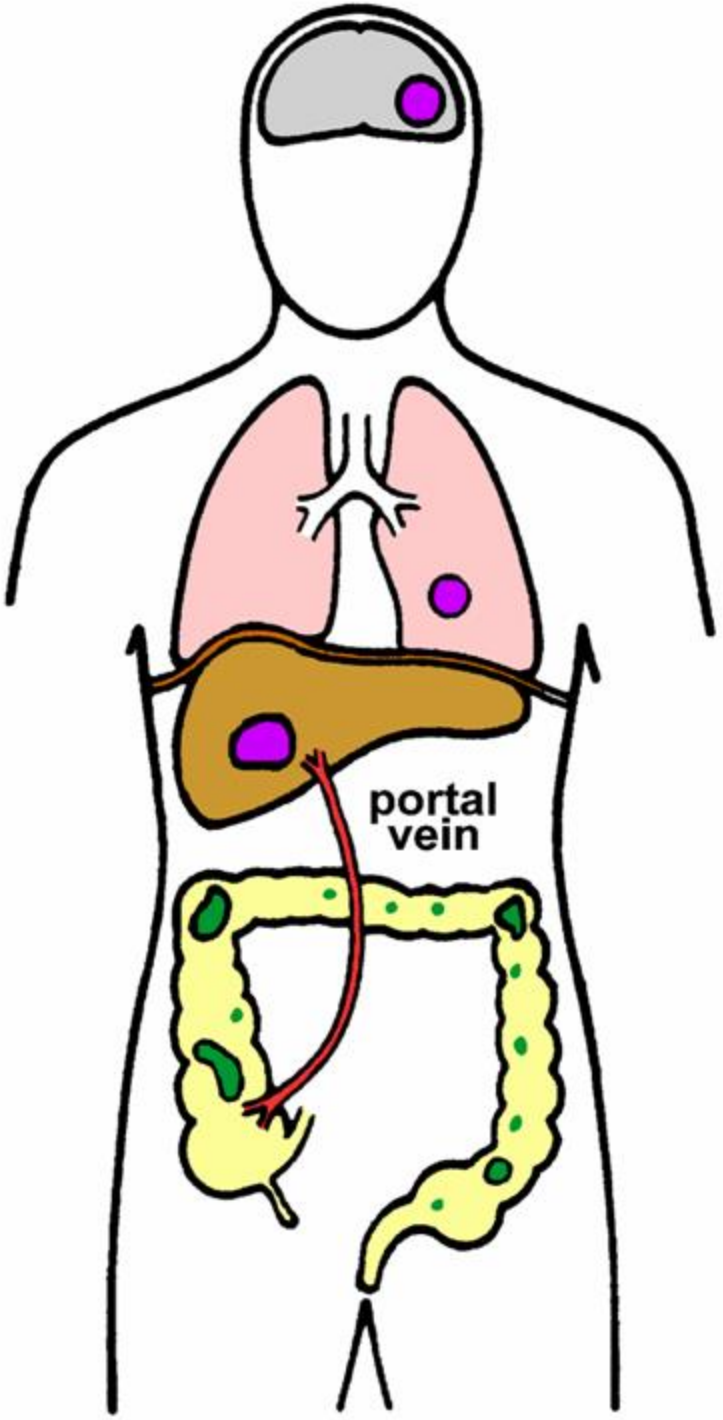
The symptoms include:

1. recurrent attacks of dysentery,
2. constipation,
3. loss of weight,
4. ulcerative colitis and
5. one or more **amoeboma**
6. Obstruction of intestine due to healing processes with scar formation may reduce the intestinal lumen.

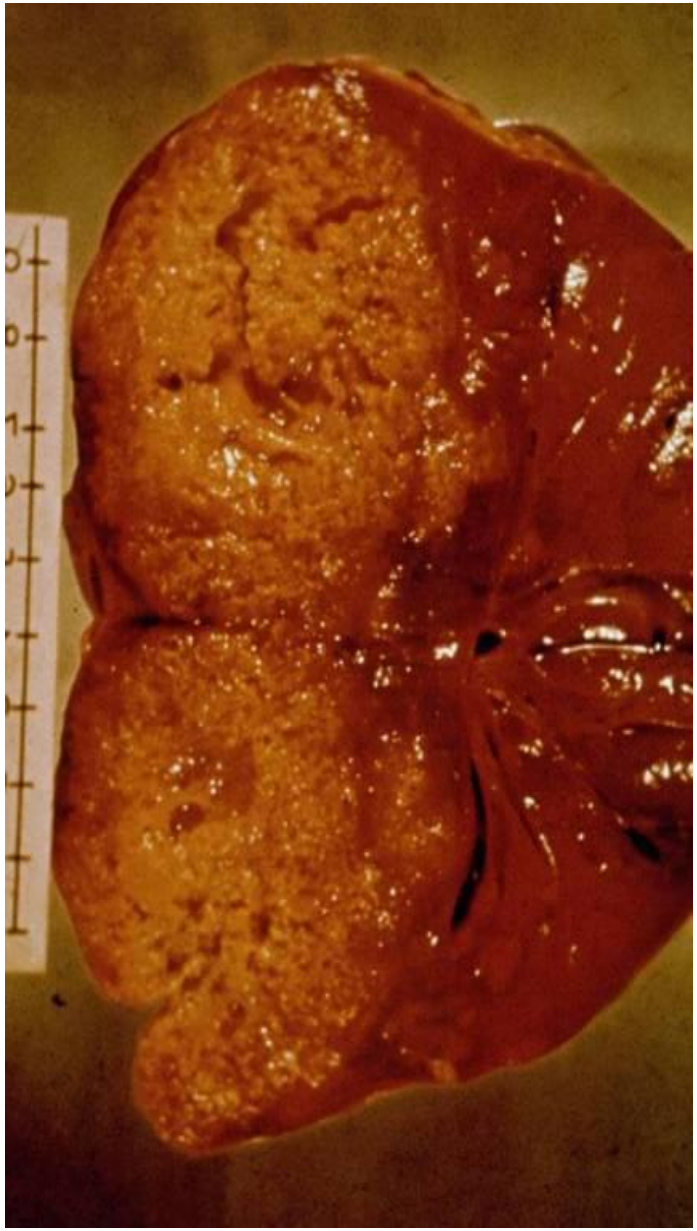
Extraintestinal Amebiasis

- metastasis via blood stream

- primarily liver (portal vein)
- other sites less frequent (lung, brain, skin and spleen)
- ameba-free stools common
- high antibody titers



Liver abscess
Liver amebiasis



Amebic Liver Abscess

- chocolate-colored ‘pus’
  - necrotic material
  - usually bacteria free
- lesions expand and coalesce
- further metastasis

Clinical manifestations:

•The liver abscess causes remittent fever (sometimes high), upper abdominal pain, liver enlargement, elevation of the diaphragm, general weakness, and other symptoms.

•Large liver abscesses that are not treated in time are often lethal. Antibodies are detectable in most cases (around 95%).

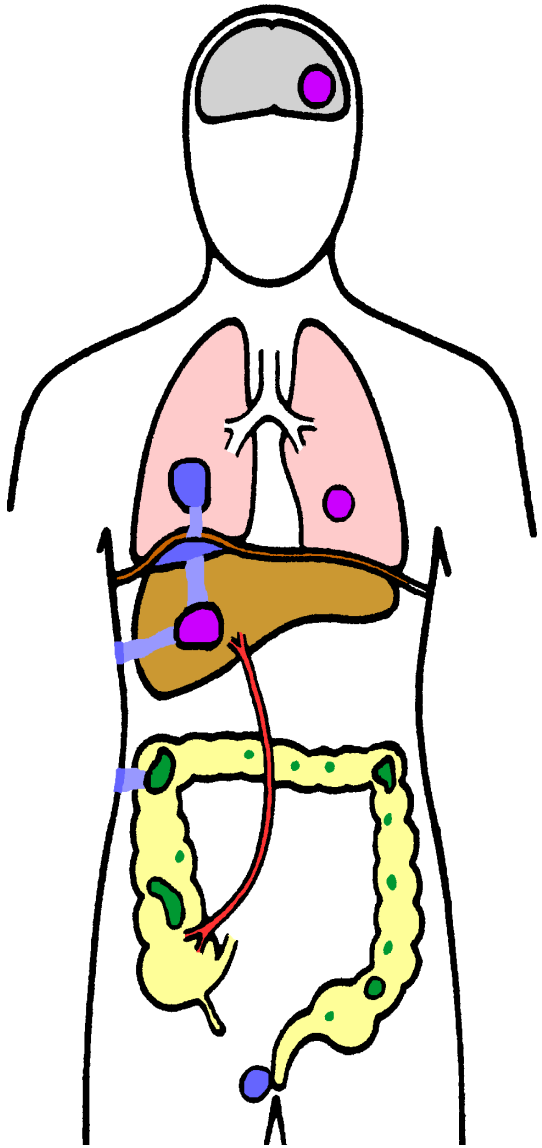
Pulmonary amoebiasis:

•Primary: rare condition occurs even without hepatic amoebiasis. The trophozoites can reach the pulmonary capillaries (single or multiple), via the portal circulation.

•Secondary: arise as a complication of liver abscess from the liver to the base of right lung, resulting in pneumonia.

Pulmonary Amebiasis

- rarely primary
- rupture of liver abscess through diaphragm
- bacterial infections common
- fever, cough.



•Cerebral amoebiasis:

A rare complication of hepatic or pulmonary amoebiasis or of both. It is single and of small size located mostly in one of the cerebral hemisphere.

•Splenic amoebiasis:

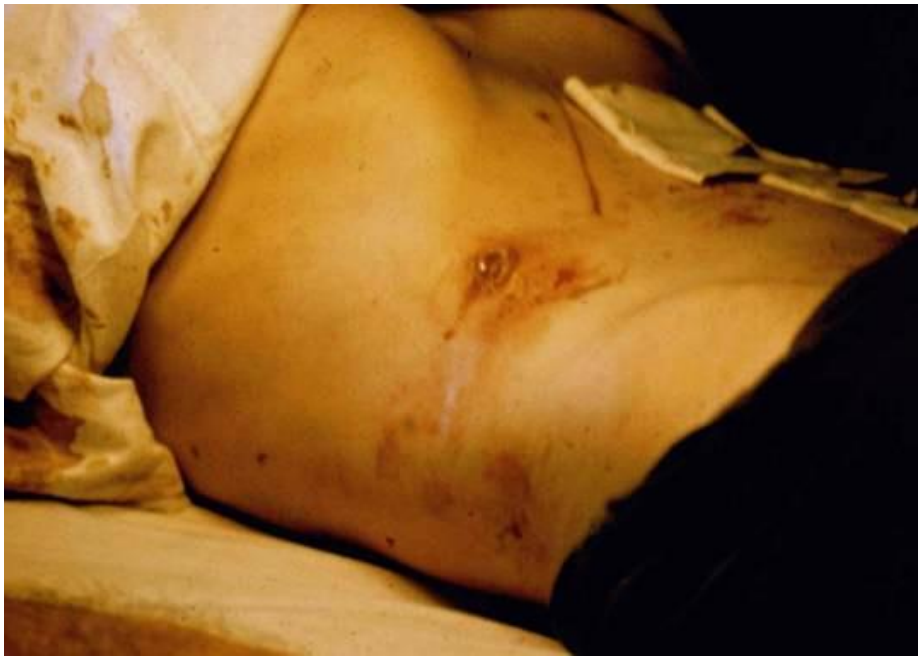
found in association with hepatic abscess.

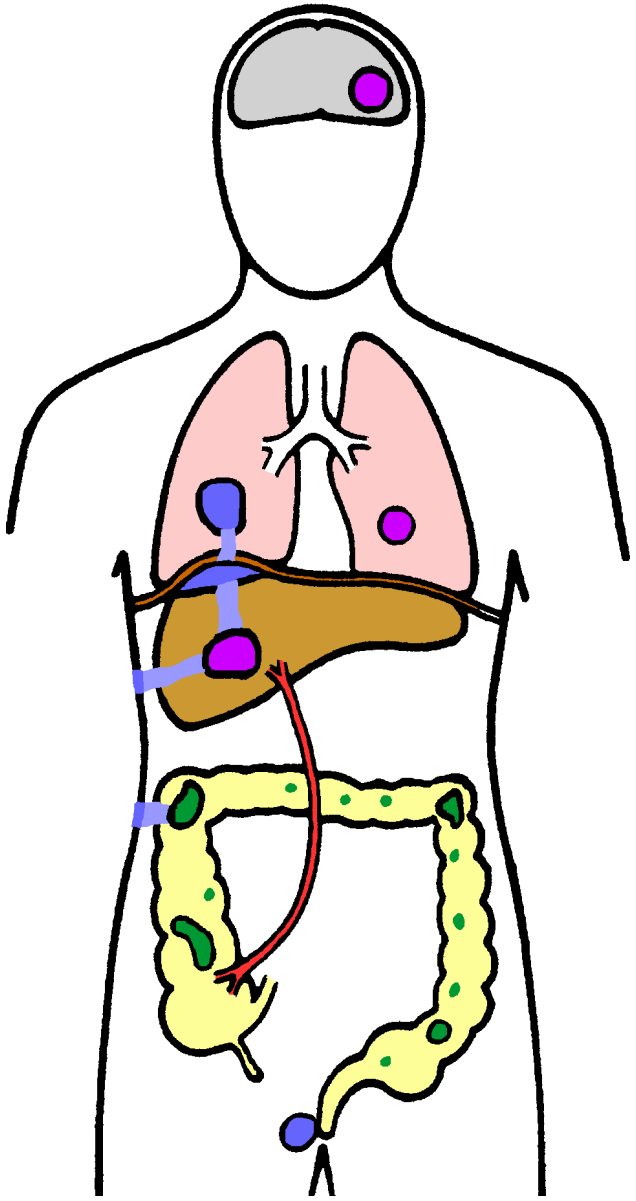
- Cutaneous amoebiasis (Amebiasis cutis)

Cutaneous amoebiasis most frequently occurs in the perianal area, associated with rectal changes or may develop when the skin is in prolonged contact with amoeba from any cause,

Cutaneous Amebiasis (Amebiasis cutis)

- **mucosa bathed in fluids containing trophozoites**
  - **perianal ulcers**
  - **urogenital (eg, labia, vagina, penis)**





Diagnosis:

✓Intestinal amoebiasis:

A. Stool examination to identify:

1. **Cyst in formed stool.**
2. **Cyst and troph in diarrheal stool.**

B. Sigmoidoscopy.

C. Serological tests for chronic & extra intestinal cases.

D. Culture of feces.

E. Animal inoculation.

F. Blood examination for leukocytosis.

✓Extraintestinal amoebiasis:

- **Hepatic amoebiasis: based mainly on aspirate & liver biopsy to identify trophozoites.**
- **Pulmonary amoebiasis: based on identify trophozoites in sputum sample.**

Aspiration from infected liver to identify trophozoites.

Treatment:

For symptomatic intestinal disease, or extra intestinal, infections (e.g., hepatic abscess), the drugs of choice are metronidazole.

Control:

- **Personal hygiene.**
- **Group hygiene.**
- **Protection of water supply from being contaminated with feces.**
- **Avoid using human feces as fertilizer.**