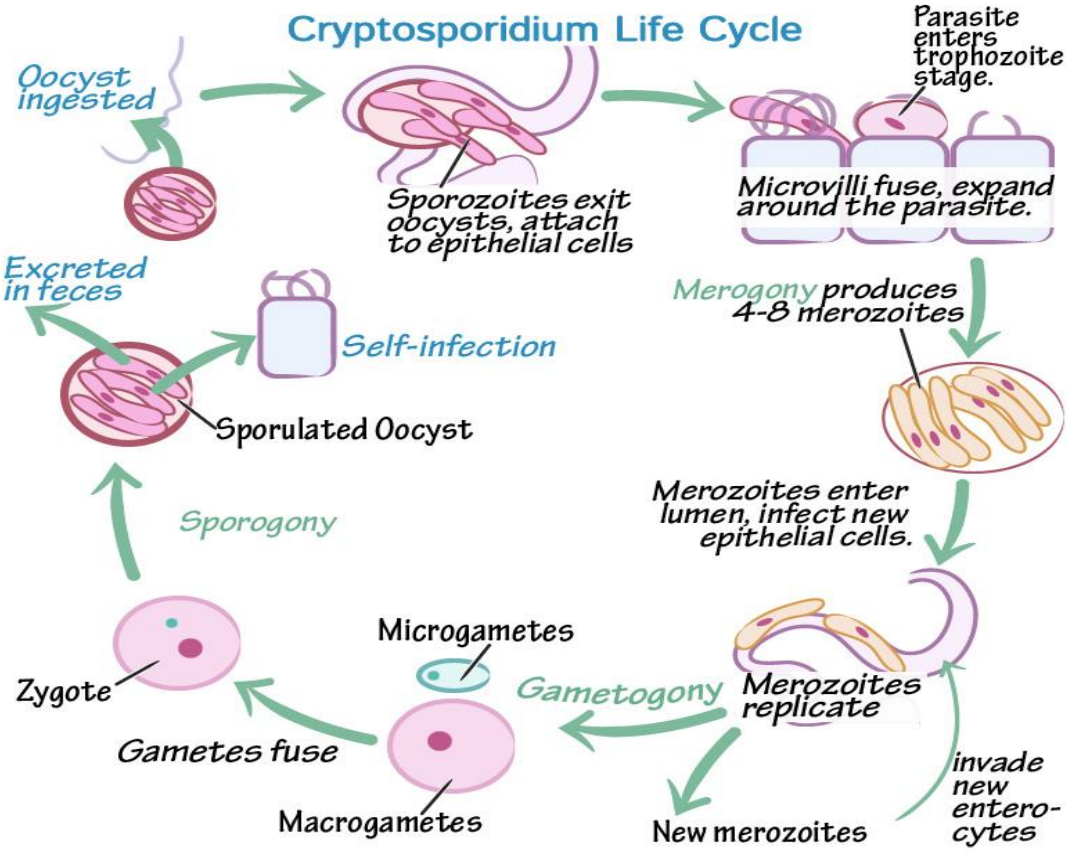
Cryptosporidiosis[

Epidemiology

protozoan *Cryptosporidium* can infect humans and have a wide range of host animals. Zoonotic species and genotypes of *Cryptosporidium* are those transmitted from animal hosts to humans, and non-zoonotic species and genotypes are host-adapted without evidence of transmission from animals to humans. *Cryptosporidium parvum* and *C. hominis* are the leading causes of human cryptosporidiosis.

C. meleagridis, C. felis, C. canis, C. ubiquitum, C. cuniculus, C. viatorum, , and *C. muris* can also infect humans.

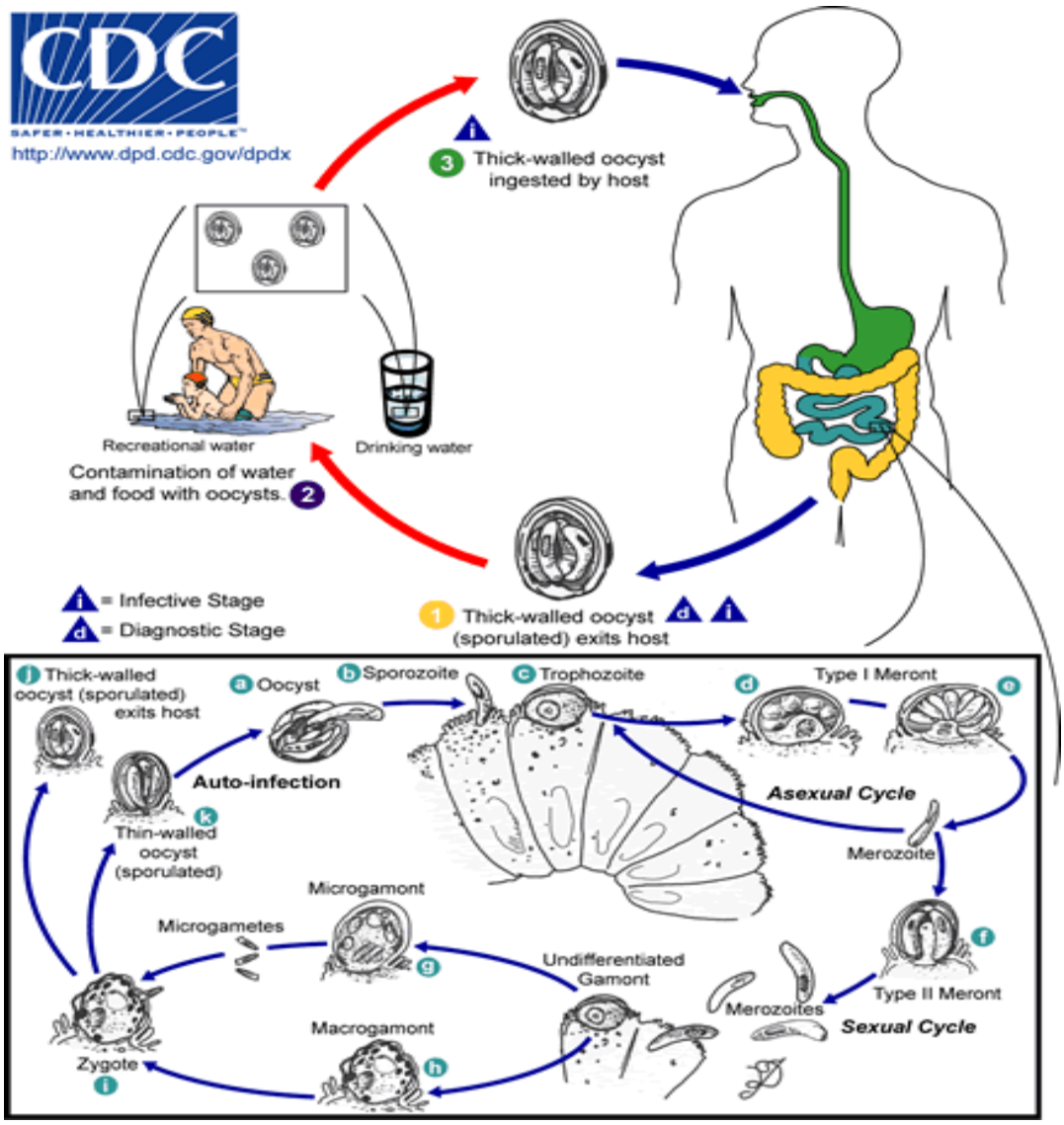


Life Cycle:

1-Sporulated oocysts, containing 4 sporozoites, are excreted by the infected host through feces (and possibly other routes such as respiratory secretions). Transmission of *Cryptosporidium* spp. occurs mainly through ingestion of fecally contaminated water (e.g., drinking or recreational water) or food or following direct contact with infected animals or people

2 . Following ingestion (and possibly inhalation) by a suitable host

3 , excystation a occurs. The sporozoites are released and parasitize the epithelial cells (b , c) of the gastrointestinal tract (and possibly the respiratory tract). In these cells, usually within the brush border, the parasites undergo asexual multiplication (schizogony or merogony) (d , e , f) and then sexual multiplication (gametogony) producing microgamonts (male) g and macrogamonts (female) h . Upon fertilization of the macrogamonts by the microgametes (i) that rupture from the microgamont, oocysts develop and sporulate in the infected host. Zygotes give rise to two different types of oocysts (thick-walled and thin-walled). Thick-walled oocysts are excreted from the host into the environment j , whereas thin-walled oocysts are involved in the internal autoinfective cycle and are not recovered from stools k . Oocysts are infectious upon excretion, thus enabling direct and immediate fecal-oral transmission. Extracellular stages have been reported, but their relevance in the overall life cycle is unclear.



Clinical Presentation

-Infection with *Cryptosporidium* spp. results in a wide range of signs and symptoms. The incubation period is an average of 7 days (range: 2–10 days).

-Diarrheal illness may be accompanied by fever or fatigue). While the small intestine is primarily affected, extraintestinal cryptosporidiosis (e.g., in the pulmonary or biliary tract, rarely in the pancreas) has been reported.

-Immunocompetent patients may present with diarrheal illness that is self-limiting, typically resolving within 2–3 weeks. Immunocompromised patients may have more severe complications, such as life-threatening malabsorption and wasting.

Treatment

-Most people who have healthy immune systems will recover without treatment.

-Diarrhea can be managed by drinking plenty of fluids to prevent dehydration.

-People who are in poor health or who have weakened immune systems are at higher risk for more severe and prolonged illness.

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