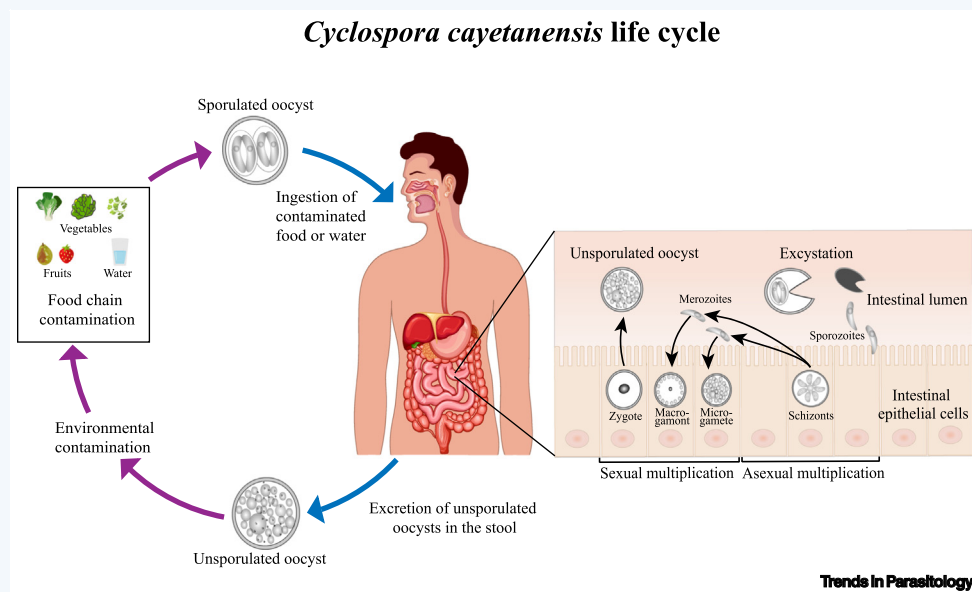


# Cyclospora cayetanensis

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*Cyclospora cayetanensis* is a coccidian parasite that causes gastrointestinal symptoms only in humans. International travel and food importation from cyclosporiasis-endemic regions are linked to cyclosporiasis outbreaks, making it not only a burden on individual health but also a global public threat. Human cyclosporiasis has been identified in at least 54 countries, with the disease being most common in low-income developing countries. It is transmitted via the fecal-oral route and has both asexual and sexual development stages. Asexual multiplication results in schizonts and merozoites. In the sexual stage, the male parasite (microgamete) fertilizes the female (macrogamont), leading to the development of a zygote. The unsporulated oocysts are excreted in the host feces. Detection in transmission vehicles, such as produce, water, or soil, is useful for tracing the source of cyclosporiasis. Knowledge of pathogenicity and immune responses are urgently needed to expand the treatment options.

**KEY FACTS:**

Humans are the only known host of *C. cayetanensis*. Many outbreaks are related to transregional travel and worldwide food supply, making it a global public health concern.

The oocysts need to mature (sporulate) in the environment before becoming infectious. Infections have a marked seasonal distribution, with the majority occurring during the rainy season or summer.

Molecular genotyping based on sequence polymorphisms will be helpful in differentiating case clusters to assist in trace-back investigation.

Effective culture techniques and animal models are not yet available, so there is poor understanding of the biology and pathogenesis of *C. cayetanensis*.

**DISEASE FACTS:**

Cyclosporiasis is most prevalent among children in endemic areas. Symptoms include persistent diarrhea and wasting, although infections in immunocompetent individuals may be asymptomatic.

Infection causes villous atrophy, crypt hyperplasia, and lymphocytic infiltration of the host small intestine, leading to malabsorption and sometimes with biliary involvement.

Although no vaccine is available, early detection and treatment may result in a favorable clinical outcome.

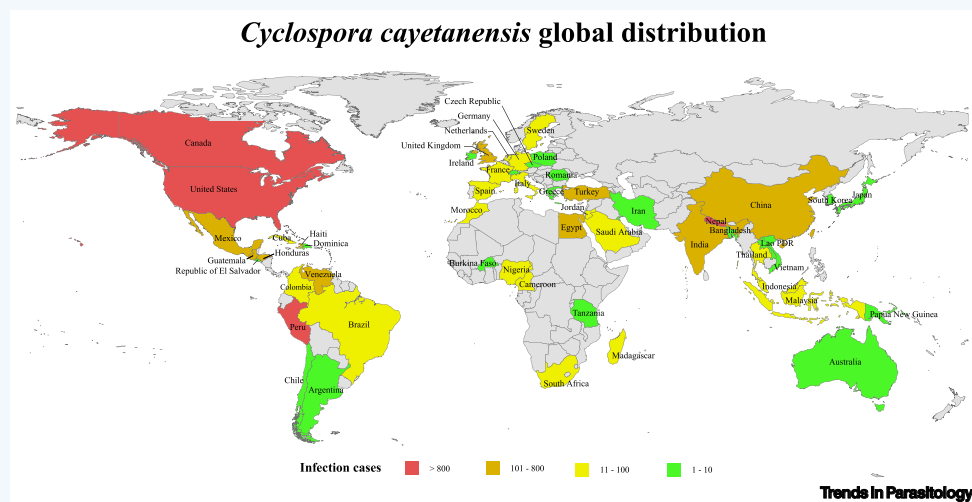
Treatment with cotrimoxazole is usually successful. Ciprofloxacin is an alternative option for patients with sulfonamide intolerance.

**TAXONOMY AND CLASSIFICATION:**

- PHYLUM:** Apicomplexa
- CLASS:** Conoidasida
- ORDER:** Eucoccidiorida
- FAMILY:** Eimeriidae
- GENUS:** *Cyclospora*
- SPECIES:** *C. cayetanensis*

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## Cyclospora cayetanensis global distribution



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## Declaration of interests

The authors declare no competing interests.

## Resources

[www.cdc.gov/parasites/cyclosporiasis](http://www.cdc.gov/parasites/cyclosporiasis)

[www.fda.gov/food/foodborne-pathogens/cyclospora](http://www.fda.gov/food/foodborne-pathogens/cyclospora)

[www.mayoclinic.org/diseases-conditions/cyclospora/symptoms-causes/syc-20353068](http://www.mayoclinic.org/diseases-conditions/cyclospora/symptoms-causes/syc-20353068)

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