

1-Definition

Diphyllobothriasis is a zoonotic infection caused by *Diphyllobothrium latum* (fish tapeworm) from the family Diphylobothriidae. It is contracted by consuming raw or undercooked freshwater fish. This parasite is found in mammals that feed on fish or are piscivorous, such as dogs, cats, foxes, bears, otters, and humans.

- It is a large tapeworm that can be found in humans. It can reach up to 9 meters in length. It is a large tapeworm that can be found in humans, and it can reach up to 9 meters in length. This infestation is generally asymptomatic.

2-Systematics

Phylum Helminths
Subphylum Platyhelminthes
Class Cestoda

I-Order of Pseudophyllidea

Family Diphylobothriidae

Adult *Diphyllobothrium* (the segments are about one centimeter wide) a few millimeters long.

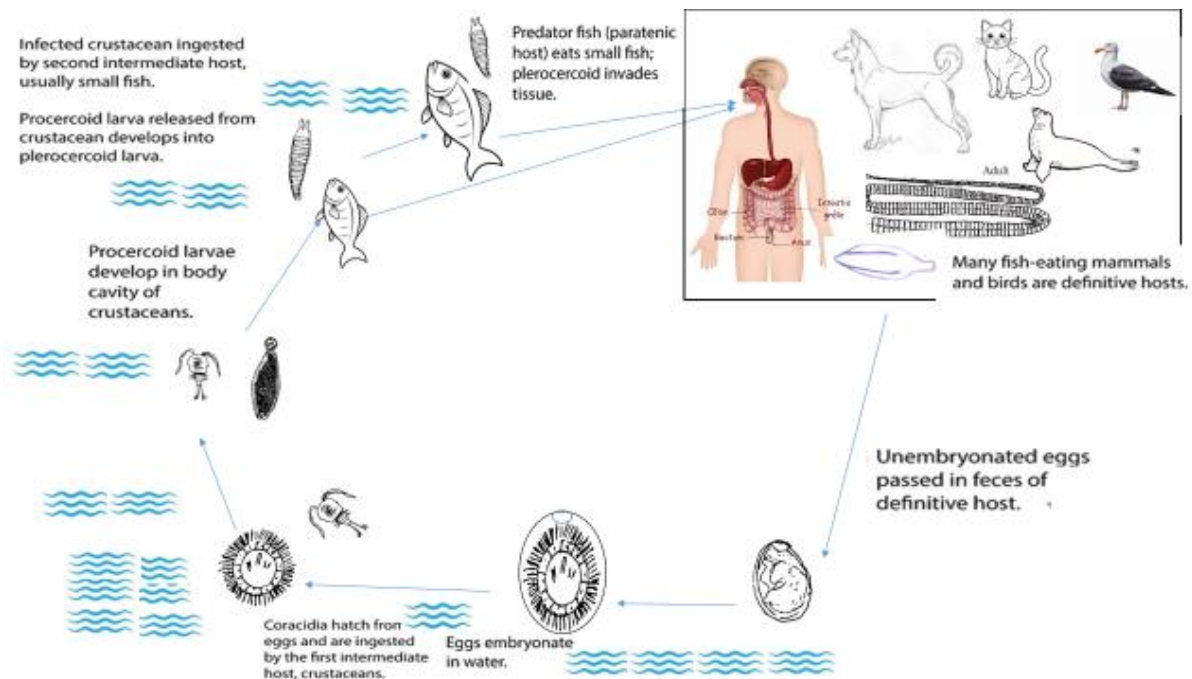
-Species: *Diphyllobothrium latum* (broad fish tapeworm or lake tapeworm)

3-Study of the parasite -it measures from 1.5 to 10m in length and 10 to 15mm in width -The bothria are elongated in shape and number two (one dorsal and one ventral)

-Rectangular grayish ovigerous segment with a dark central spot (central uterus in rosette)

-2 Intermediate hosts: lower crustacean and freshwater fish, and therefore two larvae, the second larva, called plerocercoid, is the infective larva.

4-life cycle: it has indirect transmission with two intermediate hosts



The biological cycle of the parasite includes a definitive host represented by all piscivorous living beings such as humans, dogs, cats, and two intermediate hosts: a crustacean and one or more freshwater fish. The definitive hosts release eggs (45 x 65 µm) mixed with fecal matter into freshwater, where they mature over 8 to 12 days to hatch and release a ciliated embryo called a coracidium, which will be ingested by a microscopic crustacean or copepod, where it transforms into a first-stage larva called a proceroid within the general cavity. When a fish ingests this planktonic crustacean, the larva transforms into a second stage called plerocercoid, which is the infective larva. It encysts in the musculature or the viscera of the fish. The definitive piscivorous hosts then become infected by ingesting the raw or undercooked flesh of these freshwater fish. The plerocercoid larva, once it is in the intestine of the definitive host, elongates several centimeters per day and the first eggs are released with the feces, approximately 30 days after infestation.

5-Clinical Study

5-1-In Animals

In general, adult *Diphyllobothrium* do not cause obvious problems in animals.

5-2-In humans, we observe

-Anemia, intestinal obstruction, hunger-related pain, colic, weight loss, vomiting, diarrhea, headaches, and seizures.

- In some rare cases, complications can occur, particularly intestinal obstruction (blockage of the intestines) and gallbladder impairment.

6-Diagnosis

Coproscoy in search of eggs, released by the gravid proglottids

The eggs are oval, brown or yellow in color, and equipped with a lid.

7-Treatment Praziquantel

8-Prophylaxis

-Cook the fish thoroughly to an internal temperature of ≥ 63 °C or freeze it for several days at -10 °C or lower to destroy the plerocercoids.

-Preventing dogs and cats from defecating in or near freshwater will also help interrupt the parasite's life cycle.

-Avoid feeding dogs and cats raw or undercooked fish