

# Difference Between Flukes and Tapeworms

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## Key Difference - Flukes vs Tapeworms

Animals in the [kingdom](#) Animalia are further classified as [invertebrates and vertebrates](#). Platyhelminthes or simply referred to as a [worm](#) class is invertebrates which are [parasites](#) that inhabit inside a host organism. The three main classes of [helminths](#) are [nematodes](#), cestodes, and trematodes. Flukes belong to the class trematode, and they are leaf-shaped [flatworms](#). [Tapeworms](#) belong to the class cestode, and they are flat, long worms which reside on the [intestines](#). The **key difference** between the flukes and the tapeworms is the shape of the organism. **The flukes appear as leaf-shaped whereas the tapeworms are elongated in shape.**

## What are Flukes?

Flukes are leaf-shaped flatworms. They are 7- 8 cm in length and have a dorsoventrally flattened body. They are bilaterally symmetrical. Flukes are parasites and possess an oral sucker which helps them to suck the host fluids and a ventral sucker which helps them to cling to the host. Flukes have a complete digestive system with a muscular [pharynx](#) and an [esophagus](#). The excretory system is evolved to form flame cells which are hollow excretory cells with a ciliary action to eliminate waste. Flukes are generally [hermaphroditic](#), which means they have both male and female reproductive organs in a single system, but the blood flukes deviate from this character, and they are bisexual in nature.

During its life cycle, the fluke undergoes many larval stages. Since the fluke acts as a human parasite, the eggs of flukes are mostly found in human feces. When the eggs are released to aqueous environments, they hatch to produce ciliated larvae known as miracidia. The miracidia then develop into cercariae. The cercariae possess a tail which helps them to enter the host, and then once inside the host, it matures into an adult fluke.



**Figure 01: Trematode – Fluke**

Fluke parasites cause many diseases such as schistosomiasis and are involved as vectors which transmit the disease from one host to another. Liver fluke disease occurs through the ingestion of raw fish and results in the inflammation of bile ducts bringing about gastrointestinal disorders and cancers such as cholangiocarcinoma.

## **What are Tapeworms?**

Tapeworms belong to the class cestode and long, slender and elongated organisms which vary in length from 2 mm to 10 m. They consist of a segmented body, and the segments are referred as proglottids. The main segments of the tapeworms are termed as the scolex, neck, and strobila. The scolex is the head, and the strobila gives rise to new proglottids from the neck region. Their reproductive systems are not well developed but contain a prominent uterus, where the eggs are embedded.

The tapeworms do not possess an alimentary canal. As they reside on the small intestines, they are capable of taking nutrient components across the tegument. And they are absorbed. The excretory cell type is flame cell consisting of a ciliary network.

The tapeworms are hermaphroditic, and each proglottid contains female and male reproductive organs. The eggs are formed into a larval stage known as the plerocercoid larva, and they develop into a mature tapeworm inside the host system.

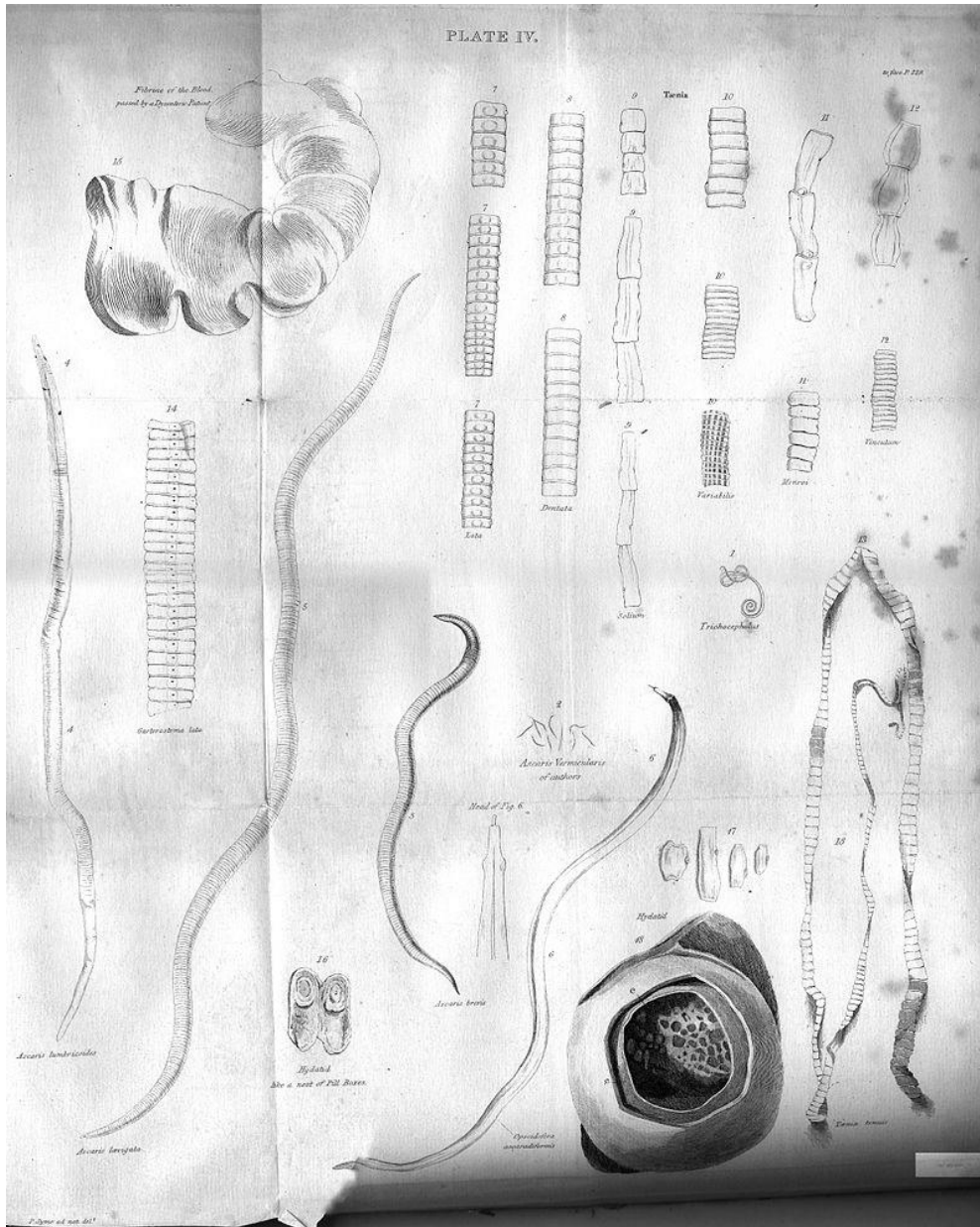


Figure 02: Tapeworms

The tapeworm infection is also a common infection of the gastrointestinal system. Many different tapeworm species are involved in the onset of the infection which includes *Taenia saginata*, *Taenia solium*, and *Diphyllobothrium latum*. They are mostly present in partially cooked or undercooked meat and fish. The symptoms of the tapeworm infection include nausea, [fatigue](#), weight loss and nutrient deficiencies.

## What are the Similarities Between Flukes and Tapeworms?

- Both belong to the group of Platyhelminthes.
- Both are invertebrates.

- Both are parasites.
- Both depict different stages in their life cycles and are formed from eggs.
- Both use flame cells for excretion.

## What is the Difference Between Flukes and Tapeworms?

Flukes vs Tapeworms	
Flukes belong to the class trematode, and they are leaf-shaped.	Tapeworms belong to the class cestode, and they are flat, long worms which reside on the intestines.
Shape	
Flukes are leaf-shaped.	Tapeworms are elongated.
Size	
Size of the fluke ranges from 7 – 8 cm.	Size of the tapeworm can vary from few millimeters to meters.
Type of Class	
Damages to ovaries are a high complication in the IVF method in laboratory conditions.	Tapeworms belong to the class Cestode.
Suckers	
Suckers are present (both oral and ventral suckers) in tapeworms.	Suckers are absent in tapeworms.
Segmented Body	
No clear segmentations can be seen in flukes.	Segmentations are present in tapeworms and are known as proglottids. The body is mainly divided as scolex, neck, and strobila
Reproductive Systems	
Most of the flukes are hermaphroditic except blood flukes.	All tapeworms are hermaphroditic.

## Summary - Flukes vs Tapeworms

Both flukes and tapeworms are human parasites which cause digestive system related complications upon infection. They are administered to the body via consumption of contaminated food and raw meat. Flukes and tapeworms differ in their shape where the flukes have a leaf-shaped structure, and tapeworms exist as elongated flat structures. Flukes have suckers which help them in their nutrition and help them to hang on to the host. But tapeworms lack suckers. Tapeworms have a well-segmented body, and both species use flame cells in their excretion. This can be described as the difference between flukes and tapeworms.

### Reference:

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2. "Tapeworms in Humans." WebMD, WebMD. [Available here](#)
3. "Platyhelminthes." The Columbia Encyclopedia, 6th ed, Encyclopedia.com. [Available here](#)

### Image Courtesy:

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