

Of the 32 recognized species of Taenia, only Taeniasolium and Taeniasaginata are medically important.

Taeniasaginata , which is also known as the “beef tapeworm”, though it also infects humans.

Taeniasolium , which is known as the “pork tapeworm”. Like Taeniasaginata humans serve as its primary host.

Both have mature, immature and gravid segments.

Both have scolex provided with four cup-shaped suckers , but T. saginata has an unarmed scolex while T. solium has an armed scolex.

Name	Taenia solium	Taenia saginata
Definition:-	Pork tape worm	Beef tape worm
Distribution: Source of infection	World wide Access of pigs to human feces and to consumption of raw & undercooked pork.	World wide Depends on the access of cattle to human feces.
	More endemic in Asia, South Africa and East Europe.	
Definitive host	Human	Human
Habitat	Adult: Small intestine of man (upper intestinal tract) for as long as 25 years.	Adult: Small intestine of man
	Larva: As cysticercus in pigs muscles or in human tissues.	Larva: As cysticercus in beef muscles.

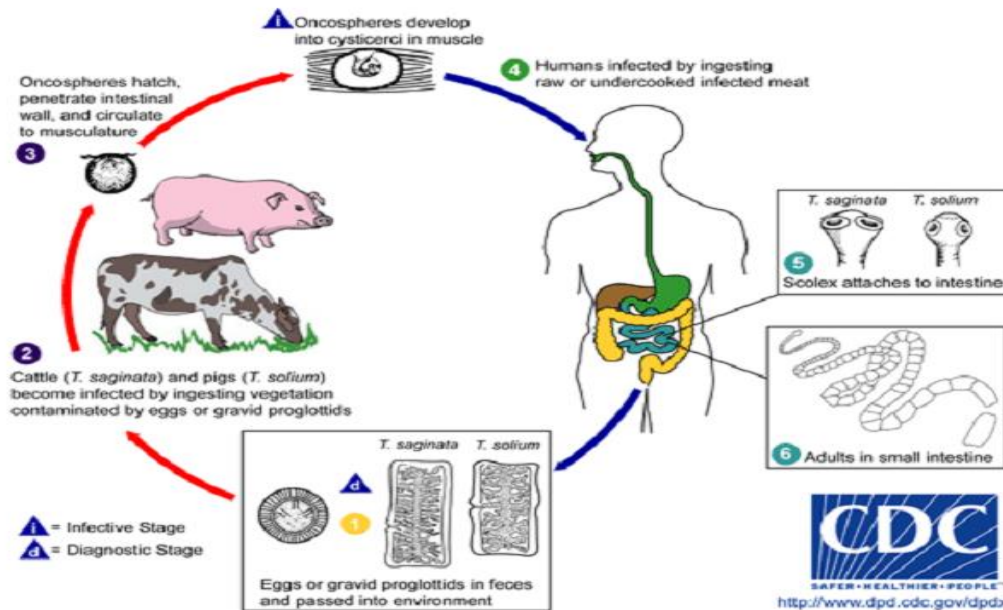
	Taenia solium	Taenia saginata
Diagnostic stage:	In case of Taeniasis : *Eggs and active gravid segments in stool.	
	Eggs 1- Spherical 2- Hexacanth embryo 3- Radially striated embryophore	Gravid Segments *Appears - in stool - perianal regions - underclothing *Disintegrate to liberate egg.
1- General stool ex. 2- Eggs are gravid. 3- Serological Diagnosis.		
	Taenia solium	Taenia saginata
	In case of Cysticercosis: *By radiography of the calcified larvae. In skeletal muscles Visualization in eye orbit. *CT “computed tomography” & MRI “magnetic resonance Imaging for neurocysticercosis.	
Mode of infection:	Taeniasis: Eating raw or undercooked pork with T. solium larvae. Cysticercosis: Ingestion of T. solium egg either in contaminated food or by autoinfection (fecal oral transmission).	Eating raw or undercooked beef with T.saginata larvae.

Aspect	Taenia saginata	Taenia solium
Intermediate host	Cow, Cattle, Sheep, & various herbivores (Beef tape worm)	Pigs (Pork tape worm)
Adult size	Longer (4 – 8 meters)	Smaller (2 – 4 meters)
Number of segment	1000 – 2000	700 – 1000
Mature segment	2 lobes ovary	3 lobes ovary
Gravid proglotid	With 15 – 30 uterine branches	With 7 – 13 uterine branches
Scolex	Devoid rostellum and hooks	With rostellum and 2 rows of hooks
Larvae	Cysticercus bovis in cattle only	Cysticercus cellulose in pig as well as in man
Disease caused in man	Taeniasis	Taeniasis and cysticercosis

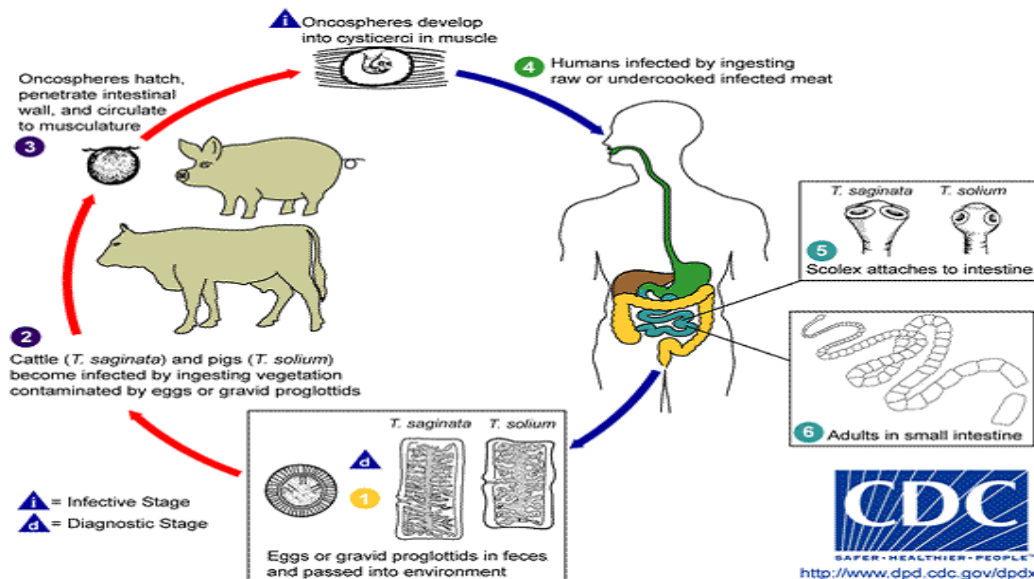
Egg, The eggs of Taenia saginata and T. solium are indistinguishable morphologically. The eggs are spherical, diameter 31 to 43 μm , with a thick radially striated brown embryophore inside each is oncosphere with 6 hooklets.



Life cycle of T.saginata



Life cycle of T.solium



Taeniasis : Presence of the adult worm in small intestine of human, symptoms are not significant and thought to be psychic due to active proglottides in stool, these symptoms may be abdominal discomfort and intestinal irritation.

Cysticercosis: It is laral stage of T.

Larvae development occurs in 2 month to give a fluid filled bladder with armed scolex [a cysticercus].

T. solium eggs =====> ingested by human

=====> hatch in the intestine, penetrate mucosa & enter blood circulation=====>

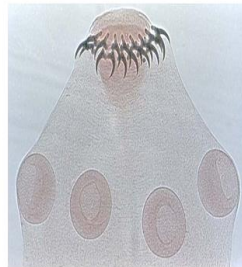
Usually no immune response as the larvae are alive but when they die , the larvae are classified after an inflammatory response and symptoms being to appear.

- In muscles : Fever , Swelling , atrophy & fibrosis.
- In brain : Symptoms resembling brain tumors, epilepsy, ataxic gait or mental confusion (Neurocysticercosis).
- In the orbit:
In anterior or posterior chamber affect eye position , decrease visual acuity, retinal edema and hemorrhage .
- Subcutaneous:
Palpated tumors.

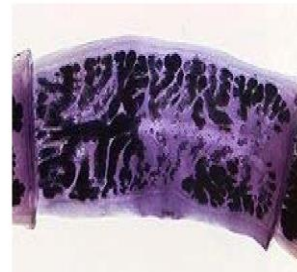
	Taenia solium	Taenia saginata
Treatment:	Taeniasis: Praziquentel (Distocide®, Biltricide®) Niclosamide (Niclosan®, Yomessan®) Albendazole (Alzental®, Vennizole®) * combined with saline purge to avoid increased release of eggs from gravid segments to avoid cysticercosis.	Praziquentel (Distocide®, Biltricide®) Niclosamide (Niclosan®, Yomessan®) Albendazole (Alzental®, Vennizole®)

	Taenia solium	Taenia saginata
Treatment:	In case of Cysticercosis: Surgical removal.	
Prevention:	<ul style="list-style-type: none"> • Proper disposal of human sewage. • Proper hygiene. • Proper cooking of pork. 	<ul style="list-style-type: none"> • Proper disposal of human sewage. • Proper cooking of beef. • Preservation of beef meat by freezing at -10°C for 5 days.

Scolex of T.solium



Gravid proglottides of T.solium



Scolex of T.saginata

