

The Nematodes (Round worms)	Infective stage	Diagnostic stage	Characteristics of eggs	Notes
<b>Ascaris Lumbricoids</b>	embryonated egg	either the fertilized or the unfertilized egg.	-resistant to harsh conditions -thick mamillated brownish shell.	-Freshly passed eggs with stool are non-infective, they require 2-3 weeks to develop to be embryonated (contain larva). -Soil transmitted helminths - life cycle: Penetrate the intestinal mucosa → portal vein → circulation → lungs (where the larvae enlarge) → coughed then swallowed → intestines
<b>Enterobius Vermicularis</b> ( <b>Pinworm</b> - intestinal nematode)	The embryonated eggs	The eggs found at the perianal region	-football shaped -thin outer (clear) shell	-The eggs are <b>immediately</b> infective -Infectious larvae are often visible inside the egg -Eggs are recovered using the “Scotch Tape” technique -The main symptom associated with pinworm infections is perianal pruritus
<b>Trichuris Trichiura</b> ( <b>Whipworm</b> - intestinal nematode)	—	Eggs in feces	-Have distinct polar plugs	-eggs become infective after about 3 weeks of incubation in moist and shady soil (Soil transmitted helminths) -Adult whipworms inhabit the colon, where male and female worms mate.
<b>Ancylostoma Duodenale</b> & <b>Necator Americanus</b> ( <b>Human hookworms</b> - intestinal nematode)	filariform larvae	Eggs in feces	-oval in shape	-males have a taxonomically characteristic copulatory bursa (broadened posterior end), which is used to mate with females. -within day or two eggs hatch → the rhabditiform larva → filariform larva -penetrate host skin → migrate throughout the host similarly to Ascaris → end up in the small intestine where they mature into adult worms. -A few hundred worms in the intestine can cause hookworm disease, characterized by severe anemia and iron deficiency -adult worms attach to intestinal villi with their buccal teeth and feed on blood and tissue with the aid of anticoagulants. The initial skin infection by the larvae causes a condition known as “ground itch,” characterized by erythema and intense pruritus

<b>Strongyloides Stercoralis</b> <b>(Human threadworm - intestinal and tissue nematode)</b>	filariform larvae	Rhabditiform larvae	-eggs hatch inside the body	-Adult females inhabit the intestine and are parthenogenic; that is, they do not need to mate with male worms to reproduce - larvae hatch from the eggs and are passed into the feces. - These larvae can either develop into parasitic forms or develop into free-living male and female worms that mate and produce several generations of worm in the soil.
<b>Trichinella spiralis</b> <b>(intestinal and tissue nematode)</b>	larvae	larvae	- do not lay eggs	-the only one that can cause intracellular infection -In the small intestine, the larvae → adult worms, and, after mating with male worms, the female worms release live larvae → The larvae penetrate the intestine, circulate in the blood, and eventually encyst in muscle tissue. -Adult female may cause diarrhea, abdominal pain, and nausea. Intestinal symptoms are mild to none and often go unnoticed.