

Internal Parasites

Parascaris equorum (equine roundworm)

- Of the *Ascarid* family
- One of the most devastating internal parasites of the horse
- Ingestion of infective egg starts process
 - » Large numbers found in mare mammary glands
- Adult horses develop an immunity
- Can be deadly for young horses
- Migrate from GI tract through the liver and lungs, then coughed up and swallowed
- Adult parasites live in the small intestine
 - » Creates a risk of impaction
- Can cause: cough, poor hair coat, pot belly, poor weight gain, nasal discharge

Gasterophilus spp. (bots)

- Flying insects that lay their eggs on the leg hairs of horses
- Horses then ingest the eggs, 1st & 2nd stage larvae stay in the oral cavity for about 1 month
- Larvae migrate from the oral cavity to the stomach and attach around the margo plicatus
- Larvae in stomach do not cause significant damage but can lead to gastric ulcers
- Bot fly eggs should be removed from horse hair to control infection

Cyathostomins (small strongyles)

- Most common and abundant parasite of the horse
- One of the most devastating and debilitating internal parasites of the horse
- 3rd larval stage is infective and migrates through GI tract until adulthood
- Larvae have the ability to encyst in the GI tract wall and avoid the horse's immune response.
- Adults will lay eggs in the large colon and cecum.
- Can cause: colic, diarrhea, and ill thrift

Strongylus spp. (large strongyles)

- One of the most devastating and debilitating internal parasites of the horse
- Ingestion of infective larvae
- "Blood worm" as adults are voracious blood suckers
- Migration pattern depends on species:
 - » *S. vulgaris* – cranial mesenteric artery
 - » *S. edentatus* – liver & retroperitoneal tissues
 - » *S. equinus* – liver & pancreas
- Can cause: severe colic, anemia, fever, diarrhea, weight loss, or death

Oxyuris equi (equine pinworm)

- Generally cause tail rubbing and the “rat tail” appearance
- Female will lay eggs around perianal skin, drying of parasite secretion causes itching (pruritus ani)
- Horses contract this parasite by ingestion of infective eggs
- This parasite migrates to the large intestine

Anoplocephala spp. (lappeted tapeworm)

- One of the most devastating internal parasites of the horse
- Requires intermediate arthropod host
 - » Contracted by ingestion of intermediate host
- Affects the motility of the GI tract in the area by the ileocecal valve
- *A. perfoliate* – cecum and clusters near ileocecal valve
- *A. magna* – small intestine
- Can cause: spasmodic colic, ileal impactions, intussusception

Strongyloides westeri (threadworm of horses)

- Mostly affects young foals up to 5 months of age
- Transmission: Transmammary – gotten through the dam's milk
- Causes diarrhea
- Foals will become immune to the parasite by 6 months of age

Habronema muscae (stomach worm)

- Nematode found in the stomach of horses
- Live in the glandular portion of the stomach along the margo plicatus
- Transmission occurs by bite from stable or house flies
- Do not cause significant internal damage but do cause skin conditions

Ectoparasites

Gasterophilus spp. (bot flies)

- See Internal Parasites section

Hematopinus asini

- Sucking louse
- Member of the order Anoplura
- Larger than the biting louse
- Vary in shade from gray to red depending on amount of blood ingested from host
- Species specific – cannot survive on a host of another species
- Heads are narrower than the widest part of the thorax
- Piercing mouthparts

Damalinia equi

- Biting/chewing louse
- Member of the order Mallophaga
- Species specific – cannot survive on a host of another species
- Yellow in color
- Large, round head that is wider than the body
- Transmitted via direct contact with infested horse

Chrysops (deer fly) *Tabanus* (horse fly) spp.

- Of the group Diptera
- Blood-feeders
- Painful bites
- Preferred feeding sites: underside of abdomen around navel, legs, neck, withers
- Can act as mechanical transmitters of some diseases as they are blood-feeders

Stomoxys calcitrans (stable fly)

- Avid blood-feeders
- Feed along legs, ears, and ventral abdomen
- Painful bite
- Mechanical vectors of Equine Infectious Anemia
- Intermediate host for *Habronema muscae*

Chorioptes equi

- Foot and tail mites of large animals
- Typically found on skin surface on distal hind limbs (pastern region) but can spread to flank and shoulder areas
- These mites don't spread rapidly or extensively
- Their bite punctures the skin causing serum seepage that then develops a thin crust on the skin
- Infested horses will stomp, bite, or kick although the pruritis is not severe