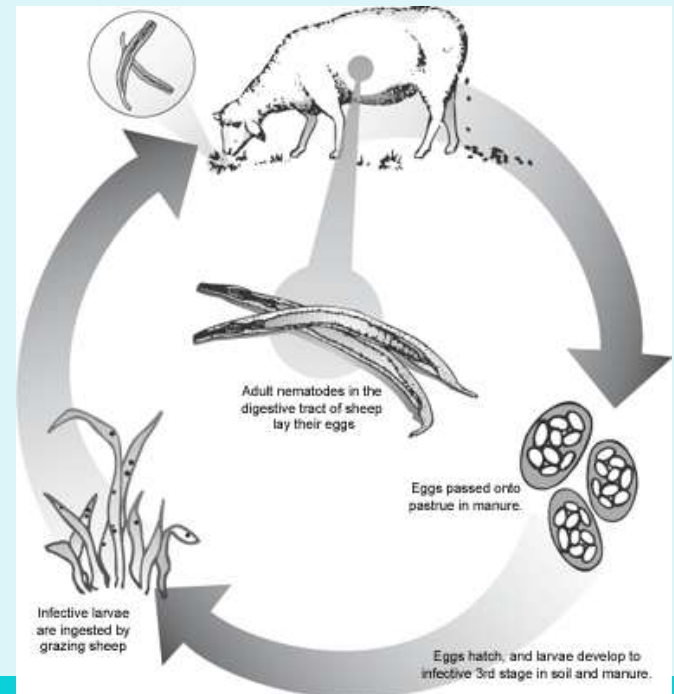


# Coccidiosis



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# Introduction



- Usually an acute invasion and destruction of intestinal mucosa by protozoa of the genera *Eimeria* and *Isospora*
  - *Eimeria* affect sheep
- It is a parasitic disease in the intestinal tract
- The parasite, coccidian, attaches to the epithelia lining in the intestines
- Serious disease in sheep, cattle, goats, pigs, poultry and rabbits
  - In dogs, cats and horses it is less diagnosed but it can cause illness
- Host-specific

# Infection

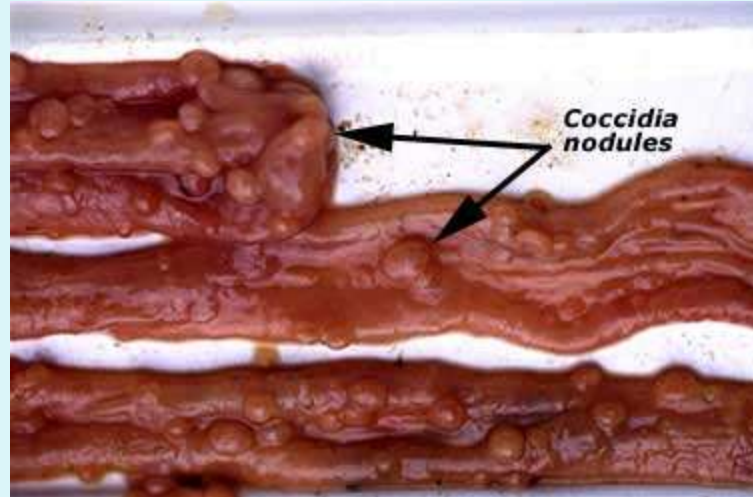


- Most common in lambs 3-6 weeks old that are infected right after birth
- Infection is more common in wet months
- Parasite is transmitted orally and infection can occur from residual contamination of the environment or from parasites being shed by ewes
- Life cycle:
  - Lamb ingests oocysts, and the parasite invades the gut
  - The parasite divides asexually into a hundred or more daughter cells (In 10-14 weeks the daughter cells can multiply over a millionfold)
  - The daughter cells eventually break out of the gut and invade a new area and repeat the process
    - ✦ In this stage part of the gut wall have parasites attached that have developed into female and male sex cells
  - The female sex cells are fertilized and secrete oocysts into the gut wall
  - The oocysts are then shed in feces which completes the life cycle

# Symptoms



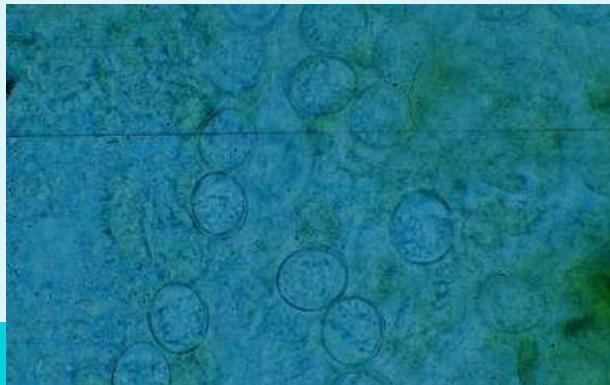
- Diarrhea
- Fever
- Dehydration
- Loss of appetite
- Wool breaking
- Weight loss
- Emaciation
- Sometimes death
- The ileum, cecum, and upper colon are usually most infected and can become thickened and inflamed
  - Sometimes there is a mucosal hemorrhage
- Thick white patches containing large numbers of oocysts may develop in the small intestine



# Diagnosis



- Oocysts can be identified in feces by salt or sugar flotation methods
  - Multiple samples may have to be taken
  - Oocysts count of over 20,000 may be a sign of infection (10,000 count have occurred in healthy lambs)
- The number of oocysts found in the sample can vary depending on a number of factors.
  - This include: number of infected oocysts ingested, stage of infection, age and immune status of the animal, prior exposure, consistency of sample, and method of examination



# Treatment



- Life cycles of the protozoa are self-limiting and their life ends spontaneously, unless re-infection occurs
- Timely medication may slow or inhibit the life cycle of the oocysts, which can shorten the length of the infection, alleviate symptoms and can lessen the likelihood of re-infection and death
- Anti-coccidial (coccidiacidal) drugs like Amprolium and Sulfur (Corid), Chlorotetracycline, Decoquinate and Sulphadimidine can be administered
- Infected animals should be moved and treated separately to prevent infection of other animals and make sure they are being treated effectively

# Prevention



- Oocysts can survive up to one year
- Good feeding practices and good management (i.e. sanitation)
- Make sure neonatals receive colostrum
- Young susceptible animals should be kept in clean and dry areas
- Stress should be minimized
- Feeding and watering devices should be kept clean and clear from fecal contamination
- Animals can be fed a ration containing coccidiostats which slow down the shedding of coccidia into the environment
  - Monensin (Rumensin)
  - Iasalocid (Bovatec)
  - Decoquinate (Deccox)
- Oocysts can be killed by heat, direct sunlight and drying

# Bibliography



- <http://www.merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/21200.htm>
- <http://www.merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/21203.htm>
- <http://ag.ansc.purdue.edu/sheep/ansc442/Semprojects/2007/coccidiosis/main.htm>
- <http://www.sheep101.info/201/parasite.html>