

# Blackhead

## *Histomonas meleagridis*



Fig 1 Lesions on turkey livers diagnosed with Blackhead (*Histomonas meleagridis*)

Blackhead is a protozoan disease that mainly affects turkeys but can also affect chickens, pheasants and game birds.

### **Cause**

Caused by the protozoan organism *Histomonas meleagridis*, which has a very complex life cycle in birds and outside the host. It multiplies and damages the caecal wall in the bird, later migrating to the liver and causing liver necrosis.

Infection can occur from direct contact with infected birds or through ingestion of infected caecal (round) worm eggs (*Heterakis gallinae*) or infected earthworms.

Infected caecal worms can survive in the soil for up to 3 years, enabling transfer from one flock to the next. Earthworms can also play an important role in the spread of this disease by eating the caecal worm larvae. Once properties are infected, they can be difficult to clean up. Rain brings earthworms to the surface and, if eaten, they can cause a blackhead outbreak in birds.

Caecal worm eggs can also be transferred mechanically on workers' shoes or boots and by other animals.

## **Symptoms**

Signs of blackhead can include:

- drowsiness and weakness in birds
- ruffled feathers
- lowered head, drooping wings and tail
- depression
- poor growth or weight loss
- soiled vent feathers
- sulphur-yellow diarrhoea
- cyanosis of the head i.e. it may appear blue-black in colour.

Typically, the cecum and liver of an infected bird will become inflamed and develop ulcers. Young birds become sick quickly and usually die within a few days after signs appear. The disease develops more slowly in older birds and they often become emaciated and may eventually die.

Turkeys are highly susceptible to blackhead disease. Once a turkey flock has been infected, 70 to 100% of the birds may die.

## **Risk period**

In Queensland, blackhead is more common in summer.

Turkeys are most susceptible up to the age of about 18–20 weeks of age, with most deaths from blackhead occurring in birds 3-18 weeks of age. Chickens tend to be more resistant to blackhead and, as a precaution, should not be run with turkeys.

## **Control**

There are no effective treatments for blackhead. Successful control of blackhead depends on removing worm eggs from the cycle and providing areas that are not heavily contaminated. Providing sunny, well drained rearing facilities, particularly for turkey ranges, can reduce the survival of caecal worm (*Heterakis*) eggs.

The unique structure and metabolism of *Histomonas* makes these organisms immune to treatment with anticoccidials and antibiotics, but antibiotics are usually considered beneficial to treat secondary bacterial infections.

## **Management factors include:**

- keeping turkeys and chickens apart to ensure drainage does not occur from chickens to turkeys
- controlling caecal worm through suitable treatments currently available
- brooding poults away from ranged turkeys and chickens to prevent ground contamination
- keeping turkeys away from earthworms
- ensuring that poult feeders and waterers are not contaminated with droppings, and are moved to clean areas regularly
- use of migration barriers to prevent commingling of infected birds with uninfected birds.

## **References**

<https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/livestock/animal-welfare/pests-diseases-disorders/blackhead>

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