



# Infectious Bursal Disease

**Alternate Names:** Gumboro disease, avian infectious bursitis, IBD.

**Species Affected:** Young chickens. Infection is asymptomatic in turkeys and ducks, meaning that they appear healthy.

**What causes Infectious Bursal Disease?** Infectious bursal disease virus (IBDV), which destroys the Bursa of Fabricius, an organ of the immune system located on the cloaca (rectum) of the chicken. There are several strains of IBVD, disease caused by very virulent strains is more severe than disease caused by classical strains.

**How is IBD transmitted?** The virus is highly contagious and shed through chicken droppings. Chickens get infected when they eat or drink manure-contaminated feed, litter, or water. Contaminated footwear, clothing, bedding, tools, and equipment can transmit IBDV. In a contaminated chicken barn, common insect pests known as darkling beetles (a.k.a. “lesser mealworms”, “litter beetles”) act as reservoirs of IBDV and as a constant source of the virus, flock after flock.

**What are the clinical signs of IBD?** Dehydration, watery diarrhea, ruffled feathers, soiled rear-ends, incoordination and depression. Signs vary by age (3 to 6-week-old chickens are the most vulnerable), breed (e.g. Leghorns), strain of the virus, and protection (antibodies) received from the breeder hen.

**What are the consequences of IBD?** Infection with virulent IBDV can kill an entire flock of chickens. Birds affected by less virulent strains of IBDV have low weight gains. Because the IBDV damages the immune system, sick birds are at risk of secondary infections.

**How is IBD detected?** Based on clinical signs, flock history, observation of damage to the cloaca (on dead birds), and laboratory testing. PCR (Polymerase Chain Reaction, a molecular test to detect viral RNA) and serology (a blood test to detect antibodies) can be used to confirm IBD.

**How can IBD be prevented?** Good biosecurity helps prevent the introduction of IBDV into chicken flocks. Examples of biosecurity include keeping poultry in designated areas restricted to visitors, using clean footwear before entering poultry areas, using clean tools and equipment for poultry chores, preventing contamination of feed and water sources with droppings from infected chickens, and following a pest control program against darkling beetles.

There are vaccines available in Canada to help control IBD. Vaccination of breeder flocks provides protection to young chicks (1 to 14 days). As maternal antibodies wane, vaccination of young chicks can reduce the extent of clinical disease and mortality.

**How can IBD be treated?** There is no specific treatment for IBD. Good husbandry practices including adequate nutrition, clean environment and water, and appropriate temperature help chickens recover from IBD and avoid secondary infections.

**Is IBD zoonotic (transmitted from animals to humans)?** No

#### References:

- Blakey, J. (2023, February). *Infectious Bursal Disease in Poultry*. Merck Veterinary Manual. <https://www.merckvetmanual.com/poultry/infectious-bursal-disease/infectious-bursal-disease-in-poultry>