

BOVILIS[®] Clostridial Vaccines



What is a Clostridial Disease?

- Clostridia are a class of bacteria that form spores and are commonly found in soils and in the digestive tracts of animals.
- Cattle can be exposed to these spores through eating contaminated feed, on the pasture and through open wounds.
- There are three major types of clostridial diseases: hepatic (liver) group, intestinal group, and muscle group.

Hepatic Group

- Includes *C. novyi* (Black Disease), and *C. haemolyticum* (Red Water)
- Black disease causes liver necrosis, blood vessel damage, and produces a toxin that causes rapid death, usually within 48 hours.
- Red Water destroys red blood cells leading to tissue death in the liver, red urine and death.

Intestinal Group

- Includes: *C. perfringens* Types B, C & D (Enterotoxemia)
- This group produces toxins that are absorbed into the cattle's intestines.
- Stress can activate the disease and nursing calves who overeat can also trigger the disease when milk spills over from their stomach.

Muscle Group

- Includes: *C. chauvoei* (Blackleg), *C. septicum* (Malignant Edema), and *C. sordellii* (Sord)
- These organisms produce toxins arising from bacterial growth in necrotic/bruised tissue.
- Blackleg is nearly 100% fatal and typically starts after a deep bruise or injury and can result in muscle and/or heart lesions and death.

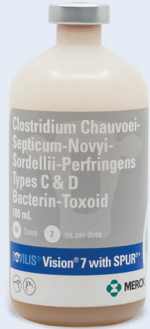
Clostridial Vaccines	Blackleg	Malignant Edema	Sordellii	Black Disease	Enterotoxemia	Red Water	Tetanus	Somni
BOVILIS [®] VISION [®] 7*	●	●	●	●	●			●*
BOVILIS [®] VISION [®] 8*	●	●	●	●	●	●		●*
BOVILIS [®] CAVALRY [®] 9	●	●	●	●	●	●	●	
BOVILIS [®] COVEXIN [®] 8	●	●		●	●	●	●	
BOVILIS [®] VISION [®] CD-T					●		●	

*(with optional Somni available in VISION[®] 7 SOMNUS or VISION[®] 8 SOMNUS)

BOVILIS[®] Clostridial Vaccines



MINUTE

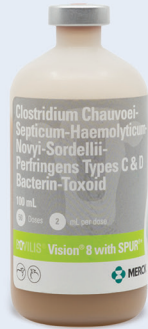


BOVILIS[®] 2 mL DOSE SQ VISION[®] 7 WITH SPUR[®]

Shown effective against:

- *Clostridium chauvoei* (Blackleg)
- *C. sordellii*
- *C. septicum* (Malignant Edema)
- *C. perfringens* Types C & D (Enterotoxemia)
- *C. novyi* (Black Disease)

10 dose	UIN: 069130 UPC: 662858219586
50 dose	UIN: 069131 UPC: 662858229585
250 dose	UIN: 069132 UPC: 662858239584

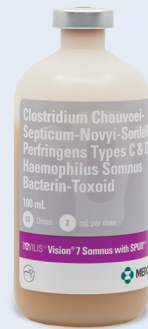


BOVILIS[®] 2 mL DOSE SQ VISION[®] 8 WITH SPUR[®]

Shown effective against:

- *Clostridium chauvoei* (Blackleg)
- *C. perfringens* Types C & D (Enterotoxemia)
- *C. septicum* (Malignant Edema)
- *C. haemolyticum* (Red Water)
- *C. novyi* (Black Disease)
- *C. sordellii*

10 dose	UIN: 069136 UPC: 662858095920
50 dose	UIN: 069137 UPC: 662858433296

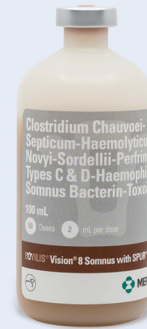


BOVILIS[®] 2 mL DOSE SQ VISION[®] 7 SOMNUS WITH SPUR[®]

Shown effective against:

- *Clostridium chauvoei* (Blackleg)
- *C. perfringens* Types C & D (Enterotoxemia)
- *C. septicum* (Malignant Edema)
- *Haemophilus somnus*
- *C. novyi* (Black Disease)
- *C. sordellii*

10 dose	UIN: 069105 UPC: 662858096026
50 dose	UIN: 069106 UPC: 662858023893
250 dose	UIN: 069107 UPC: 662858023992



BOVILIS[®] 2 mL DOSE SQ VISION[®] 8 SOMNUS WITH SPUR[®]

Shown effective against:

- *Clostridium chauvoei* (Blackleg)
- *C. perfringens* Types C & D (Enterotoxemia)
- *C. septicum* (Malignant Edema)
- *C. haemolyticum* (Red Water)
- *C. novyi* (Black Disease)
- *C. sordellii*
- *Haemophilus somnus*

10 dose	UIN: 069117 UPC: 662858096125
50 dose	UIN: 069118 UPC: 662858040197



BOVILIS[®] 5 mL DOSE SQ COVEXIN[®] 8

Shown effective against:

- *Clostridium chauvoei* (Blackleg)
- *C. haemolyticum*
- *C. septicum* (Malignant Edema)
- *C. tetani* (Tetanus)
- *C. novyi* (Black Disease)
- *C. perfringens* Types C & D (Enterotoxemia)

10 dose	UIN: 067697 UPC: 662858676976
50 dose	UIN: 067696 UPC: 662858676969

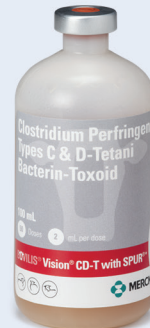


BOVILIS[®] 2 mL DOSE SQ CAVALRY[®] 9

Shown effective against:

- *Clostridium chauvoei* (Blackleg)
- *C. perfringens* Types C & D (Enterotoxemia)
- *C. septicum* (Malignant Edema)
- *C. haemolyticum* (Red Water)
- *C. novyi* (Black Disease)
- *C. sordellii*
- *C. tetani* (Tetanus)

10 dose	UIN: 067691 UPC: 662858676914
50 dose	UIN: 058246 UPC: 662858582468
125 dose	UIN: 067694 UPC: 662858676945



BOVILIS[®] 2 mL DOSE SQ VISION[®] CD-T WITH SPUR[®]

Shown effective against:

- *Clostridium tetani* (Tetanus)
- *C. perfringens* Types C & D (Enterotoxemia)

50 dose	UIN: 069096 UPC: 662858012798
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Test Your Knowledge

1. What are the major types of clostridial diseases?

- A Hepatic Group
- B Intestinal Group
- C Muscle Group
- D All of the Above

2. True or False: Clostridial organisms are normal inhabitants of cattle.

- A True
- B False

3. The intestinal group produces toxins that are absorbed into what part of the cattle's body?

- A Blood Vessels
- B Eyes
- C Intestines
- D Liver

Answer Key: 1: All of the Above, 2: True, 3: Intestines