

# Got Pneumonia?

An autogenous (custom) vaccine can be the answer



Pneumonia, also known as shipping fever or bovine respiratory disease (BRD), is the second most common cause of calf death. Calves have very small lungs compared to their body size so any pneumonia episode will cause a certain degree of permanent lung damage, making it difficult for the calf to thrive. **Calves most commonly get pneumonia after a period of stress (such as weaning, dehorning, castrating, or moving).** When stressed, a calf's immune response decreases, allowing viruses or bacteria to grow in the lungs and cause disease. Pneumonia is a very expensive disease due to decreased weight gain and increased treatment costs. Preventing pneumonia is the best option for superior calves.



## What Causes Pneumonia? Pneumonia is caused by viruses, bacteria or a combination of both.

**Viruses:** Most are rarely fatal by themselves, but they damage the lining of the lungs and cause decreased immune function which will allow bacteria to populate the lungs. Viruses usually affect the upper part of the lungs.

- **Bovine herpes virus** (also known as **infectious bovine rhinotracheitis** virus, or IBR)
- **Bovine viral diarrhea (BVD)** type 1 and 2
- **Bovine parainfluenza type 3 (PI3)**
- **Bovine respiratory syncytial virus (BRSV)**

**Bacteria:** Most are normal residents of the nose that descend into the lungs when a calf's immune system is jeopardized. Bacteria usually affect the bottom part of the lungs.

- ***Bibersteinia trehalosi***
  - Severe, rapid and deadly pneumonia
  - Lungs are often hemorrhagic
  - Animals often do not appear sick and may not go off feed
  - Travels from the bloodstream to the lungs
  - Resistant to florfenicol (Nuflor and Resflor Gold)
- ***Histophilus somni*** (used to be called *Haemophilus somnus*)
  - Also causes brain and joint infections
  - Lungs are often red and thick with large pus pockets
- ***Mycoplasma bovis***
  - Also causes joint and middle ear infections
  - Respond poorly to standard antibiotic treatment resulting in chronic pneumonia
  - Lungs often have multiple small pus-filled bumps
- ***Mannheimia haemolytica*** (used to be called *Pasteurella haemolytica*)
- ***Pasteurella multocida***

## Identifying Pneumonia

- Fever over 103.5° F
- Coughing
- Runny nose
- Neck outstretched with front legs held away from the chest
- Droopy ears
- Increased respiratory rate and/or noise
- Difficulty breathing
- Sudden death
- Open-mouthed breathing

## What herd management techniques help prevent pneumonia?

- Keep calves free of environmental extremes
- Decrease stress
- Have proper barn ventilation

## What are my vaccination options?

- There are several commercial options available that vaccinate for respiratory disease
- Modified live, killed and intra-nasal vaccines are commercially available

**An autogenous (custom) vaccine can be the answer!**



**Contact your Armor Veterinarian today to aid in your pneumonia treatment decisions.**

Armor Veterinary Services

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## Introducing Custom-Made Vaccines...

### Autogenous Bacterin

Isolates for *Bibersteinia*, *Mycoplasma Bovis* and *Histophilus somni*



Protects against 3 bacterial strains of pneumonia: *Mycoplasma bovis*, *Bibersteinia trehalosi* and *Histophilus somni*. There are no commercially available vaccines against *Mycoplasma* and *Bibersteinia*, and the inclusion of *Histophilus* provides even broader coverage. When combined with a *Mannheimia* and *Pasteurella* vaccine, the respiratory vaccine offers the maximum protection possible against bacterial pneumonia.

### What is a custom-made vaccine?

Custom-made vaccines are developed from the virus or bacteria causing disease in a livestock operation.

The resulting product is specific to the pathogenic (disease-causing) strain(s) in that herd.

### What is the benefit of a custom-made vaccine?

In some cases, commercially available “one-size-fits-all” combination vaccines may not contain the desired strain variation for an individual herd situation.

Newport Laboratories works with veterinarians and producers to formulate a combination product that is not commercially available.

### How is a custom-made vaccine created?

1. Samples are submitted from necropsy, nasal swabs or tracheal swabs.
2. Samples are sent on ice to the diagnostic lab as soon as possible.
3. Bacterial culture is performed to identify involved organisms.
4. Custom vaccine is created using the organisms found.
  - Vaccines are produced in 6 to 8 weeks.
  - Vaccines have an 18-month shelf life.

Contact your **Armor Veterinarian** or **herd vet** today to review your calf vaccination protocol and help determine where a custom-made vaccine could be a fit.



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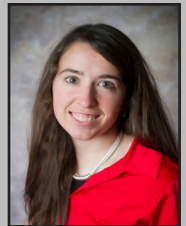
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