

EQUINE UPDATES

Transylvania County, NC

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Wildfire Smoke and Horses

The severe fires in our area exposed humans and animals to unhealthy air containing wildfire smoke and particulates. These particulates can build up in the respiratory system, causing a number of health problems including burning eyes, runny noses and illnesses such as bronchitis. They can also aggravate heart and lung diseases such as congestive heart failure, chronic obstructive pulmonary disease, emphysema and asthma.

How Smoke Affects Horses

The effects of smoke on horses are similar to effects on humans: irritation of the eyes and respiratory tract, aggravation of conditions like heaves (recurrent airway obstruction), and reduced lung function. High concentrations of particulates can cause persistent cough, increased nasal discharge, wheezing and increased physical effort in breathing. Particulates can also alter the immune system and reduce the ability of the lungs to remove foreign materials, such as pollen and bacteria, to which horses are normally exposed.

Protecting Horses from Air Pollution

- Limit exercise when smoke is visible. Don't have your horse do activities that increase the airflow in and out of the lungs. This can trigger bronchoconstriction (narrowing of the small airways in the lungs).
- Provide plenty of fresh water close to where your horse eats. Horses drink most of their water within 2 hours of eating hay, so having water close to the feeder increases water consumption. Water keeps the airways moist and facilitates clearance of inhaled particulate matter. This means the windpipe (trachea), large airways (bronchi), and small airways (bronchioles) can move the particulate material breathed in with the smoke. Dry airways make particulate matter stay in the lung and air passages.
- Limit dust exposure by feeding dust-free hay or soak hay before feeding. This reduces the particles in the dust such as mold, fungi, pollens and bacteria that may have difficulty being cleared from the lungs.
- Give your horse ample time to recover from smoke-induced airway insult. Airway damage resulting from wildfire smoke takes 4 to 6 weeks to heal. Therefore, plan on giving your horse 4 to 6 weeks off from the time when the air quality returns to normal. Attempting exercise may aggravate the condition, delay the healing process, and compromise your horse's performance for many weeks or months.
- If your horse has primary or secondary problems with smoke-induced respiratory injury, you should contact your veterinarian. He/She can prescribe specific treatments such as intravenous fluids, bronchodilator drugs, nebulization, or other measures to facilitate hydration of the airway passages. Your veterinarian may also recommend blood tests or other tests to determine whether a secondary bacterial infection has arisen and is contributing to the current respiratory problem.

This information was provided by Dr. John Madigan and Dr. David Wilson, School of Veterinary Medicine, University of California, Davis; and adapted by Addison Bradley, Livestock Extension Agent, Transylvania County.

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The Battle Against Rain Rot

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The typical wet weather during winter months creates the perfect conditions to increase the risk for your horse to contract the skin disease commonly known as “rain rot.” Rain rot or rain scald (also known as dermatophilosis) is commonly mistaken for a fungal disease, but is actually caused by a bacterial infection. The bacterium *Dermatophilus congolensis* which causes the dry crusty lesions, lives dormant within the horse’s skin until the skin is damaged. Rain soaked skin, or skin that is broken, irritated, or damaged by insect bites or trauma is more likely to develop the condition. Heavy winter coats allow excess moisture to stay in contact with the skin causing an anaerobic (lack of oxygen) condition facilitating bacterial growth.

Diagnosis is typically done by visual conformation. Horses with winter coats will develop raised matted tufts of hair along their neck, withers, back, croup, and hindquarters. If not cared for the lesions will continue to grow and combine, creating scabs with yellow-green or gray colored pus underneath them.

The most important step in treating rain rot is to remove the crusty scab like lesions and expose the damaged skin to oxygen. This is usually done by bathing the affected area of skin with some type of antimicrobial shampoo (Betadine, Chlorhexidine, etc.) and gently removing the lesions with a brush or curry comb. In more severe cases, additional layers of skin may be infected and will require systemic antibiotic treatment.

Rain rot is extremely contagious. Practicing good hygiene and biosecurity techniques are important to prevent the spread of this infection. Listed below are a few techniques that will help reduce the spread of Rain Rot:

- Groom daily with clean brushes
- Isolate infected horses
- Clean contaminated equipment before using on another animal
- Use an insect spray to reduce skin trauma
- Avoid sharing grooming kits
- Reduce environmental factors when possible (constant wet/humid conditions)

Mild cases of rain rot will usually heal on their own; however it is important to treat all cases to prevent the lesions from spreading and interfering with daily use. If you suspect your horse has a case of rain rot and antimicrobial treatment is ineffective contact your veterinarian.

