

SILVER USE FOR EQUINE RESPIRATORY DISEASE

"A major limiting factor in equine performance is low grade respiratory tract infections. Chelated Silver inhalation eliminates infections in the respiratory tract by generating reactive oxygen species and these **reactive** species are active against all types of microorganisms, including bacteria, fungi and viruses. These therapeutic benefits have the potential to translate into improved athletic performance while still meeting the criteria for therapeutic medication."

[Dr. Thomas Tobin. Veterinarian, Pharmacologist, Toxicologist, author of "Drugs and the Performance horse"]

The therapeutic benefits of silver have been known for thousands of years. When Hippocrates wrote about its healing and anti-infective properties, the Phoenicians began storing their water and wine in silver containers. Silver compounds were used to prevent infections during World War I, before the modern antibiotics were created, and silver compounds were widely used right up to the introduction of the antibiotics prior to and during World War II.

Along with lameness, respiratory disease is one of the most common causes of chronic illness in horses, with an estimated 25% of veterinary calls relating to respiratory problems. Respiratory disease primarily and directly affects athletic performance, and therefore represents a significant problem for both sporting horses and race horses.

Respiratory problems which are frequent issues for horses are very often associated with microbial infections. Field and clinical testing has shown that the use of Chelated Silver as a head wash or by when administered by nebulization can be highly effective for upper or lower respiratory infections, effectively "clearing up" and in many cases essentially completely eliminating the infection in as little as 3-5 days. A large percentage of lower respiratory or lung infections are secondary to and an outcome of improperly diagnosed upper respiratory infections. Clinical experience has shown that the duration of common respiratory ailments such as bronchitis, viruses, colds, and various upper or lower respiratory infections may be shortened and or eliminated following Chelated Silver respiratory therapy.

Chelated silver therapy is currently being used successfully as a treatment in cases of Pharyngitis, Lymphoid hyperplasia, Chronic Obstructive Pulmonary Disease (COPD), Exercise-Induced Pulmonary Hemorrhage (EIPH or "bleeding"), and for a number of other respiratory conditions. Delivering a high volume of very small Chelated Silver particles into the back of the throat, the guttural pouches, the trachea and the large airways of the lungs of performance horses has proven to be a very beneficial therapeutic approach.

Chemically, Chelated Silver is an exceptionally stable compound, effectively non-reactive and a non-significant threat to the environment. Research and clinical experience have shown that Chelated Silver achieves better tissue penetration and is a more useful compound than free silver. With reference to its mechanism of action, the reactive oxygen species produced by silver simply interrupt the bacterial cell's ability to form the chemical bonds essential to its survival. These bonds are necessary for the cell's physical structure and functioning so when a bacterium/microorganism comes into contact with the reactive oxygen species produced by Chelated Silver it literally falls apart.

- **Microorganisms do not develop resistance, as happens with antibiotics, eliminating the problem of reduced effectiveness of Silver Solution with multiple treatments over time. Chelated silver solutions have not been demonstrated to interact or interfere with other medicines being administered.**
- **Chelated Silver has been reported by veterinarians and horse professionals to be highly effective as both a remedy and prevention for numerous infections due to various bacteria, viruses and fungi.***
- **Chelated Silver can be used for direct application to the upper airway as a spray or with a nebulizer or the Transpirator®**.**

CHELATED SILVER VS COLLOIDAL SILVER

The word “chelated” refers to a substance being held by the chelating structure which binds the chelated molecule tightly in the claw like chelating molecular structure. The word chelate comes from the Greek “chele”, a claw, and the bound silver atoms are carried wherever the chelator goes. The bound pair — the chelator plus the metal/silver atom — is called the “chelate”. Chelators are used to carry useful atoms into the body, or into the cells themselves, in larger amounts than the body would normally allow. The chelated molecules are treated chemically as desirable molecules by the recognition systems in cell walls, and are therefore given entry into the cells.

On the other hand, colloids are materials made up of solid particles of such small size that when dispersed in water they remain in suspension rather than sinking. “Colloidal mineral” supplements consist of mineral salts or other mineral compounds converted into colloidal form, either by intense grinding or by rapid crystallization. Most colloidal substances are tend to be poorly bio-available, since the colloidal particles, small as they are, are nevertheless far too large to be absorbed whole into cells or microorganisms, and nearly all of the active ingredients of a colloid are trapped in the interior of the particles, where they cannot come into direct and useful contact with the transport channels in the cells.

RECOGNIZING RESPIRATORY PROBLEMS:

Clinical indicators of respiratory problems can range from being very subtle to extremely severe. Coughing, for example, indicates a significant respiratory irritation that may be caused by an environmental allergen such as dust, a mild cold, or a viral contagion that is inflaming the lungs. Other indicators of pulmonary illness can include:

- **Yellow or thick nasal discharge (a light clear fluid nasal discharge is most likely normal)**
- **Shortness of breath**
- **Low energy level**
- **Labored breathing**
- **Wheezing, raspy or congested breathing**
- **Heaving chest**
- **Flared nostrils**
- **Swollen lymph nodes under the jaw**
- **Elevated body temperature**
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“Silver our mightiest germ fighter” Science Digest, March 1978