



Veterinarians care for animals and people

How to use antibiotics responsibly: Advice for the owners of horses and other equidae

Antibiotic resistance, or the ability of some bacteria to survive antibiotics, is a threat to both human and animal health. There is evidence to suggest that antibiotic resistance in bacteria found in horses can result in transfer of resistance to bacteria in humans, thus reducing the ability of doctors to treat bacterial infections in people. A failure to use antibiotics responsibly is the main cause of resistance in man and animals and we all have a duty to select and prescribe antibiotics appropriately so that these vital medicines remain effective.

▶ **Antibiotics are not always the answer**

Antibiotics are lifesaving medicines and it is essential that their efficacy is preserved now and in the future. They must be prescribed by a veterinarian after examination and diagnosis. Ask your vet for a complete examination and be confident in the veterinarian's expertise and decision on the appropriate treatment if antimicrobials are not prescribed. Fever is not always synonymous with infection and antibiotic treatment is not always needed.

▶ **Keep your horse healthy and respect sanitary rules**

Antibiotics cannot replace hygiene and good husbandry. Clean stables, good ventilation, care before and after exercise are fundamental in preserving your horse's health. Cleaning, lavages, bandages or local treatments are better than systemic antibiotics for healing wounds. Vaccines are effective in preventing some infectious diseases and reducing their severity. Discuss their possible use with your vet and ask for them to be used where and when appropriate. Prevention of disease is important, cost less than treatment and helps preserve the efficacy of medicines.

▶ **Do not self-medicate your horse**

Antibiotics are lifesaving drugs and must be prescribed by your veterinarian. Antibiotics do not prevent all infectious disease and treatments are individual. Antibiotic prophylaxis, the practice of administering antibiotics to healthy animals to prevent disease, is an example of irresponsible use and must not be used. Drugs may not act in the same way in different species and dosages or administration routes may vary. Using antimicrobials off label may be dangerous and calling for the latest and newest antimicrobials may not be necessary when older and more conventional products will work just fine as well.

▶ **Respect veterinary prescription**

Follow thoroughly the instructions given by your veterinarian with regard to recommended dosing and duration of treatment. This will limit the risk for further complications, help ensure recovery and assist in reducing evolution of bacterial resistance. Respecting of the dose regimen is crucial for your horse's complete recovery and future sustainability of antimicrobials.

▶ **Together with your veterinarian monitor the progress of recovery and efficacy of treatment**

Monitoring your horse's health during treatment can help in adjusting drug choice and dosages, especially when waiting for sample results. Don't change treatment without veterinary advice. Evaluation of how well treatment has worked is essential as a follow up.

▶ **Protect yourself though responsible use of antibiotics in your horse**

Resistant bacteria, like MRSA, MRSP, ESBL, VRE, VISA and VRSA, can be transferred between horses and humans and may cause severe disease in both. Protect yourself when you are treating your horse by using gloves and/or mask when appropriate and washing your hands often.

In addition, the horse, unless declared as excluded from the food chain in the passport, must be considered as destined for human consumption. Always respect your veterinarian's instructions on antibiotic withdrawal times in order to ensure public health.

GLOSSARY

Antibiotics: drugs that kill disease-causing agents such as bacteria. They are not effective against viruses.

MRSA: methicillin-resistant *Staphylococcus aureus*, highly-resistant bacteria that are typically found in human hospitals but can cause infection in animals.

MRSP: methicillin-resistant *Staphylococcus pseudintermedius*, a highly-resistant form of bacteria that typically cause infections in animals but on rare occasions have caused human infection.

ESBL: extended spectrum beta lactamase, enzyme produced by intestinal bacteria which inactivates antibiotics these bacteria are highly resistant.

VRE: Vancomycin-resistant *Enterococcus*, or vancomycin-resistant enterococci are bacterial strains of the genus *Enterococcus* that are resistant to the antibiotic vancomycin.

VRSA: Vancomycin-resistant *Staphylococcus aureus* refers to strains of *Staphylococcus aureus* that have become resistant to the glycopeptide antibiotic vancomycin. Three classes of vancomycin-resistant *S. aureus* have emerged that differ in vancomycin susceptibilities: vancomycin-intermediate *S. aureus* (VISA), heterogeneous vancomycin-intermediate *S. aureus* (hVISA), and high-level vancomycin-resistant *S. aureus* (VRSA).

