

## Antibiotics

Antibiotics are pharmaceutical products which kill or prevent the replication of bacteria. Veterinary surgeons use them in equine practice for the treatment of bacterial disease. Antibiotics are broadly classified into two categories – they are either bacteriostatic, whereby they inhibit bacteria from growing, allowing the animal's own immune system to deal with them, or bacteriocidal, where the antibiotic itself kills the bacteria. Bacteria can also be classified as either Gram positive or Gram negative depending on how they appear when stained and examined under a microscope. Different antibiotics are good at targeting different bacteria. Those with the widest range of activity are known as broad spectrum antibiotics.



## Antibiotic use in Equine Practice

Vets prescribe antibiotics for a wide range of bacterial conditions. These might include skin infections, wounds or coughs where bacteria are involved. There are however many conditions including all viral and some bacterial infections where antibiotic use is not appropriate.

Antibiotics come in various formulations, allowing us to administer them in a variety of ways. Some are injected into a horse's vein (intravenous (IV)) or muscle (intramuscular (IM)), or given by mouth (oral (PO)). The frequency of administration varies as well – but is generally either once or twice daily.

Your vet will choose which antibiotic and which route and frequency of administration is right for your horse and his condition.

Antibiotics should preferably only be used following culture and sensitivity testing, where a sample is cultured and tested for sensitivity against different antibiotics.

Antibiotics should be selected carefully using a system called the Cascade. This ensures that an authorised, UK licenced product is used at the correct dose. Where a suitable product does not exist, an alternative may be used, either licenced for use in another animal species or in humans.

## Prescribing Antibiotics

Antibiotics are classified as Prescription Only Medicines in the UK (POM-V). This means they can only be prescribed by your vet who must first carry out a clinical assessment of a patient that is under their care.

Antibiotics are often left with a client to complete a course of treatment, given either by intramuscular injection, or by mouth. Your vet should give instructions on the safe administration and storage of the product.

## SUMMARY

- There are numerous antibiotics suitable for use in horses for a wide range of bacterial conditions.
- Antibiotics must only be prescribed by a vet, who will advise on the correct dosage and route of administration.
- Antibiotic resistance has become a major threat to human and animal health. This means we must all use antibiotics responsibly.
- XLEquine members have each appointed antibiotic co-ordinators to oversee appropriate antibiotic use within our practices.

## Responsible use of Antibiotics

Antibiotic resistance is becoming a very serious issue that will ultimately affect both human and animal health.

Misuse and overuse of antibiotics will ultimately lead to them becoming much less effective or completely ineffective as the bacteria develop resistance to them.

In 2012, the British Equine Veterinary Association developed a comprehensive antimicrobial policy template. This strategy has been adopted by the XLEquine group. Broadly speaking, this entails all practices following best practice guidelines:

- Standardising dose rates and dosing intervals.
- Classifying certain antibiotics as **PROTECTED**. These are drugs which are of greatest value for use in people.
- Their use should be restricted to those cases where there is clear evidence that they are needed. These include two types of antibiotics: cephalosporins and fluoroquinolones.
- Other antibiotics, which are **RESTRICTED**, should not be used in veterinary practice.

At present the use of antibiotics in equine medicine is self-regulated by individual veterinary practices. XLEquine believes very strongly in the rational, responsible, safe and effective use of these drugs.

Each XLEquine practice has appointed an antibiotic co-ordinator to oversee correct use of these products within our group.



SWABS TAKEN FOR CULTURE AND SENSITIVITY WILL ASSIST WITH APPROPRIATE ANTIBIOTIC CHOICE

## Common Antibiotics

Antibiotics are sold by their trade names, but as vets we are primarily interested in their core ingredient, examples include:

**Penicillins** are the most well-known antibiotics. They are broad spectrum injectable drugs and are commonly used in infected wounds.

**Tetracyclines** are bacteriostatic, broad spectrum antibiotics and can be given by IV injection or by mouth.

**Potentiated Sulphonamides** are useful as first line, broad spectrum antibiotics and can either be injected or given by mouth.

**Gentamicin and Amikacin** are potent antibiotics with action against gram negative bacteria and are often used when treating infected joints.



XLEQUINE STRONGLY BELIEVES IN THE RATIONAL, RESPONSIBLE, SAFE AND EFFECTIVE USE OF ANTIBIOTICS



XLEquine is a novel and exciting initiative conceived from within the veterinary profession made up of independently owned, progressive veterinary practices located throughout the United Kingdom, members of XLEquine are committed to working together for the benefit of all their clients.  
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