

# Veterinary Fact Sheet:

## Antibiotic Use and Antimicrobial Resistance (AMR) in Greyhounds

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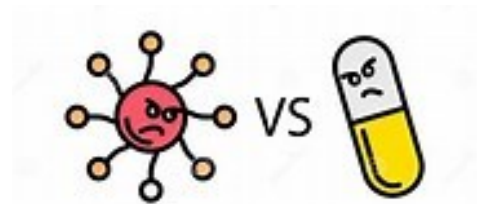
### What is antimicrobial resistance?

Antimicrobial resistance occurs when bacteria, viruses, fungi, and parasites no longer respond to the drugs (such as antibiotics, antivirals, antifungals, and antiparasitics) used to treat infections. This can make infections harder to treat, increase the risk of disease spread, and increase the chances of severe illness or death in both animals and humans.

Antibiotics are antimicrobial drugs used to treat bacterial infections. Since their usage began just over 100 years ago they have improved the health of humans and animals, allowing for longer and healthier lives. Before the introduction of antibiotics, infections from minor injuries or illnesses may have resulted in death. We are now faced with a situation where the bacteria treated by antibiotics are developing resistance. This means the bugs are able to avoid the effects of the antibiotics, the drugs becoming less effective at slowing or stopping growth of the microorganisms. Thus curing infections is not guaranteed despite the use of antibiotics. This is called antimicrobial resistance and threatens the health of humans and animals as we can't rely on drugs that we have taken for granted to fight infection for over a century. It is considered one of the greatest global health challenges of our time.

### How does antimicrobial resistance occur?

When antimicrobials are used excessively or inappropriately, the rate of antimicrobial resistance increases as microbes evolve defenses against drugs used to treat them.



Overuse or misuse of antibiotics in greyhounds contributes to the development of resistant bacteria which can lead to treatment failures, prolonged illness, and increased costs for owners and trainers. Resistant bacteria in greyhounds can spread to other dogs, humans, and the environment.

Frequent use of antibiotics, especially when not necessary, encourages bacteria to become resistant to the antibiotic. Stopping antibiotic treatment early, even if the greyhound appears recovered, allows surviving bacteria to become resistant to the antibiotic.

### How does AMR impact greyhound health?



- **Infections are harder to treat:** Resistant bacteria can make simple infections, such as skin wounds, kennel cough, and dental infections, much harder to manage
- **Longer recovery times:** If antibiotics are no longer effective, recovery from infections may take longer, which could result in lost training time and missed races
- **Increased costs:** Treatment of resistant infections may require more expensive or less effective drugs, additional veterinary visits, or hospitalisation

## Veterinary decision making when prescribing antibiotics

When vets are prescribing antibiotics they have to consider how to optimize clinical outcomes while minimizing unintended consequences of antimicrobial use, including the emergence of resistance.

Antibiotics are classified as Prescription Animal Remedies (PAR). This means they can only be prescribed by a veterinarian for a particular animal that the vet has examined, for a particular illness. All antibiotics dispensed for your greyhound will have a prescription label attached outlining the animal they are prescribed for, the type of antibiotic, the dose to be given and how long they should be given for. These details are based on the veterinarian:

- finding evidence of a bacterial disease that may not improve without antibiotics
- choosing an antibiotic based on their assessment of what bacteria is likely involved in the diagnosed infection
- considering the likely susceptibility to different antibiotics of the bacteria involved in the diagnosed infection
- considering the pharmacokinetics and pharmacodynamics of the antibiotic and its ability to penetrate the area of infection eg the same antibiotic may not be as effective treating a skin condition compared to a respiratory condition
- sometimes, especially in outbreaks, taking samples to send to the lab to confirm the bacteria and its susceptibility to antibiotics before prescribing them
- considering the importance rating scale for antibiotics and choosing an antibiotic of low importance wherever possible to reduce the risk of antimicrobial resistance in antibiotics of high importance to humans
- selecting the appropriate dose and duration of the chosen antibiotic to treat the infection based on knowledge of both the infection and the pharmacology of the chosen antibiotic

**Antibiotics should only be given to a dog following veterinary advice for that greyhound and that illness—NOT previously prescribed antibiotics.**

**It is essential to follow the instructions given by the veterinarian and printed on the prescription label.**

### When should antibiotics be used in greyhounds?

Antibiotics should be used in greyhounds when a **bacterial infection** has been **diagnosed by a veterinarian** and an appropriate course of antibiotics has been **prescribed for the particular dog and that episode of illness**. They should not be shared with other dogs in the kennels without the express direction of the veterinarian.

- Frequent use of antibiotics, especially when not necessary, encourages bacteria to become resistant to the antibiotic.
- Stopping antibiotic treatment early, even if the greyhound appears recovered, allows surviving bacteria to become resistant to the antibiotic.

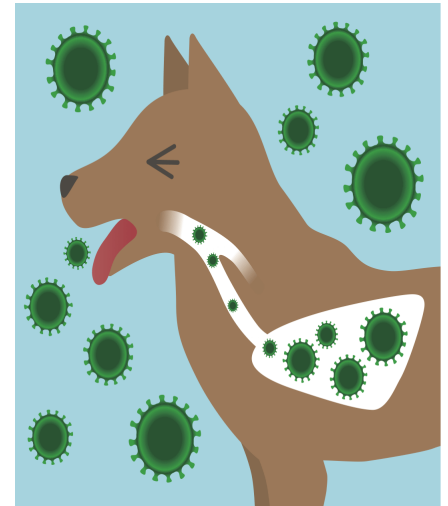


## Kennel Cough and Gastroenteritis

Both kennel cough and gastroenteritis may be caused by bacterial infections, however they may also be viral or have another cause. Therefore antibiotics should NOT be an immediate response if these illnesses are suspected.

### What should you do if you suspect kennel cough or gastroenteritis?

- Isolate affected greyhounds showing clinical signs
- Quarantine “in contact” dogs away from healthy dogs
- Scratch affected greyhounds from race meetings until fully recovered and reduce non-essential travel
- Maintain high levels of hygiene through frequent cleaning of kennels, transport, equipment and feed/water bowls with an effective disinfectant
- In many cases of kennel cough and diarrhoea, the illness is self-limiting and does not require antibiotics
- Consult your veterinarian if the illness is not resolving over a couple of days or the dog is showing signs of fever, lethargy or other signs of concern such as dehydration or bloody faeces



**Antibiotics can interfere with diagnostic tests, making a definitive diagnosis in the case of an outbreak difficult if antibiotics have been given before seeking veterinary diagnosis and treatment.**

### Top Tips for Preventing Antimicrobial Resistance



- **Use antibiotics responsibly:** Only give antibiotics when prescribed for a specific condition and for a specific dog. Avoid using antibiotics to “prevent” infections or improve performance.
- **Complete the full course:** Always follow the instructions given by your vet and written on the prescription label for antibiotics and complete the prescribed course even if the dog appears fully recovered.
- **Hygiene:** Regularly clean kennels, transport, equipment and feed/water bowls to reduce the risk of infections that may require antibiotics.
- **Vaccinations:** Ensure all greyhounds are up to date on their vaccinations to prevent illnesses such as parvovirus and kennel cough, and reduce the need for antibiotics.
- **Good nutrition and husbandry:** Feed a balanced diet appropriate for the needs of greyhounds and ensure general care, such as parasite control, is maintained to ensure strong immune systems in your dogs, minimising the risk of infections.
- **Isolate sick dogs:** Separate greyhounds with signs of infection to prevent spread of illness to other dogs in your kennels.
- **Consult your vet:** ALWAYS consult your vet before giving any antibiotics to your greyhounds, even if you suspect a bacterial disease. Your vet can diagnose the illness and provide a treatment plan that may or may not include antibiotics.

