



Washington State
Veterinary Medical Association
wsvma.org

Judicious Use of Antimicrobials

General Practice Principles

Diagnosis

- Antimicrobial use should be confined to appropriate clinical indications. Inappropriate uses such as uncomplicated viral infections should be avoided. Remember, for example, pyrexia and leukocytosis are not specific for bacterial infections.
- If antibiotics are not resolving the clinical signs, consider that you may have the wrong diagnosis or look for an underlying/predisposing disease.

Drug

- Use as narrow-spectrum of antimicrobial as possible.
- Use culture and antimicrobial susceptibility results to aid in the selection of antimicrobials.
- Consider the distribution and penetration of the drug and which bacteria are likely to be involved (e.g. anaerobic/aerobic, gram +/gram -) when selecting an antibiotic.

Dose

- Limit therapeutic antimicrobial treatment to ill or at-risk animals, treating the fewest animals indicated.
- Using topical preparations reduces selection pressure on resistant intestinal flora. Consider topical creams/shampoos rather than oral antimicrobials whenever possible.

Duration

- To minimize selective pressure, therapeutic exposure to antimicrobials should be minimized by treating only for as long as needed for the desired clinical response.
- Treat long enough and at a sufficient dose – i.e. avoid under dosing.

Surgical Indications

Antimicrobials are not a substitute for poor surgical asepsis. Prophylactic antimicrobials are only appropriate in a few medical cases/procedures. Examples of appropriate criteria for perioperative antibacterial use include:

- Prolonged surgical procedures (>1.5 hours)
- Introduction of an implant into the body
- Procedures where introduction of infection would be catastrophic (e.g. central nervous system surgery)
- Cases with an obvious identified break in asepsis
- Bowel surgery with a risk of leakage
- Dentistry with associated periodontal disease
- Contaminated wounds

Questions to Ask Before Prescribing Antimicrobials

- Does the condition necessitate antimicrobial treatment?
- Are there other options besides antimicrobial treatment (such as incision drainage)?
- Will the potential risk of inducing resistance outweigh the benefit of treatment?
- Is the proposed treatment likely to work against the pathogen involved?
- Are there any risks to public health from antimicrobial treatment?





Developed in partnership with:

Washington State Department of Health, Washington State University College of Veterinary Medicine and the Paul G. Allen School for Global Animal Health, Washington State Department of Agriculture, and University of Washington Center for One Health Research.

Sources: *The American Veterinary Medical Association and the Centers for Disease Control and Prevention Get Smart Programs.*

Large Animal and Agriculture Settings

FDA Guidance for Industry 209 and 213 will increase oversight of antibiotic use in animal agriculture and large animals. It is important to establish the veterinarian-client-patient relationship now to ease the transition and educate clients about what to expect and how they can take this opportunity to make practical changes that reduce the need for regular use of antibiotics.

- Provide consultation on design management, immunization, housing and nutrition programs to reduce and prevent disease, and the need for antibiotics. Talk to farm managers and personnel about the big picture of the antibiotic resistance issue, and the goal of One Health Antibiotic Stewardship.
- The goal of One Health Antibiotic Stewardship is to improve antibiotic use across the spectrum of human, animal, and environmental health, to keep antibiotics effective for the treatment of human and animal infections.

Tips for Communicating When Antibiotics Are Not Warranted...

- Identify and validate client concerns. Convey a sense of partnership and encourage active management of the illness.
- Recommend specific symptomatic therapy to help reduce discomfort. Emphasize the role that nutrition, hydration and sanitation play in the identified illness.
- Spend time answering questions and offer a contingency plan if symptoms worsen. Make sure the pet parent/client understands that if the condition is not improving reassessment is advisable. Ask them to call and check-in within a specified period of time.
- Provide education about antibiotic use and potential risks including antibiotic resistance. Use the CDC Get Smart site as a recommended tool for patients to learn more at <http://www.cdc.gov/getsmart/community/index.html>.
- Search: "Get Smart about antibiotics."

Antibiotic Resistance: Key Points for Communicating with the Public

- Antibiotic resistance is one of the world's most pressing public health threats.
- Antibiotic resistance is an issue that affects human health, animal health and environmental health. It is everyone's responsibility to use antibiotics wisely.
- Bacterial infections can be cured with antibiotics, viral infections cannot. Treating viral infections with antibiotics to prevent bacterial infection does not work.
- Antibiotic overuse increases the development of drug-resistant organisms.
- Based on latest evidence, unnecessary antibiotic use can promote resistant organisms in the pet, which can also be spread in the community.

The Client Role

Using antibiotics the wrong way contributes to the development of antibiotic resistance and can make infections more difficult to treat.

If you've just written a prescription for an antibiotic, tell your clients about the role they play in keeping these drugs effective:

- Give antibiotics exactly as prescribed.
- Finish the prescription even if the animal/pet appears to be feeling better.
- Do not skip doses.
- Do not share antibiotics.
- Do not save antibiotics.

Still Have Questions?

For more information, please contact the WSVMA at (425) 396-3191 or visit [wsvma.org](http://www.wsvma.org).