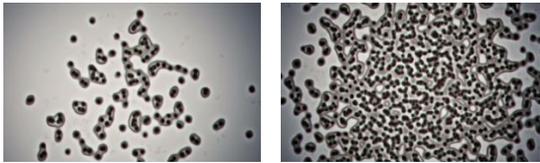
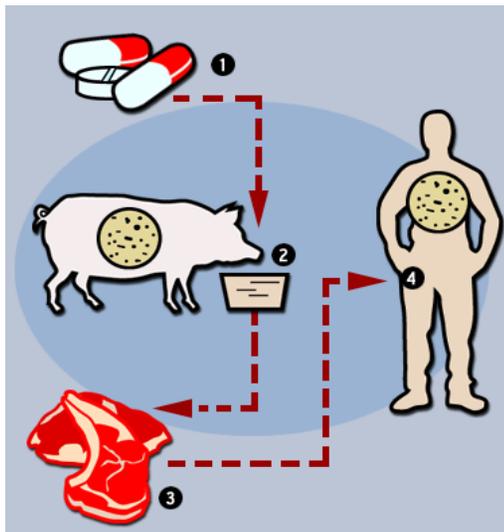


Bacteria are an incredible life form that can reproduce in just minutes. This allows resistant bacteria to reproduce rapidly in any body, human or animal. To understand antibiotic resistance, it is important to know that whenever an antibiotic is taken by a human or an animal, **all of the body's bacteria are exposed** to the drug. On a microscopic level, bacteria susceptible to the drug are killed or fail to reproduce. However, those that have mutated to a resistant form continue multiplying.



Bacteria can even exchange genetic material, meaning bacteria that **don't** cause disease can pass antibiotic resistance to those that **do** cause disease. Treating illness or infection of unknown origin with the **wrong** antibiotic can allow overgrowth of bacteria that are normally kept under control by a body's own immune system.



Antibiotic resistance is literally threatening modern medicine.

The emergence of highly resistant bacteria is a worldwide phenomenon that literally threatens modern medicine. Diseases that are easily treated with antibiotics today may become incurable in the future.

In addition, the viability of modern procedures like joint replacements and organ transplants is threatened by the risk of developing untreatable (and therefore potentially fatal) postoperative bacterial infections.

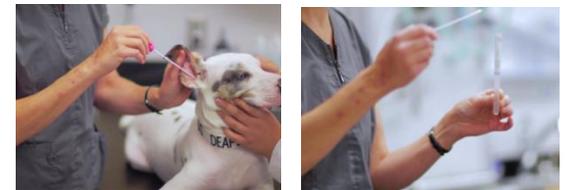


For the protection of human, animal and global health, all medical and agricultural professions must do their part to use antibiotics properly.

Physicians, their patients, veterinarians and livestock producers all have important roles to play in slowing the emergence of resistant bacteria. Both physicians and veterinarians are legally and ethically obligated to prescribe antibiotics only when indicated. This normally requires the patient be examined with enough diagnostic testing to establish a presumptive diagnosis, ensuring that an antibiotic is indicated and that the most appropriate drug is selected.



Human patients must take prescribed antibiotics as directed. Missing a dose or failing to take the entire prescription creates an environment that encourages resistant bacteria to grow.



Veterinarians must follow these steps when prescribing and dispensing antibiotics as well. In the case of livestock herds, it is not always necessary to test every animal for a drug to be prescribed. If a veterinarian sees signs of an illness in the herd, a determination of the need for an antibiotic can be made based on testing a few animals.



Antibiotics in Livestock Feeds

Giving livestock unprescribed antibiotics in any form is an enormous contributor to antibiotic resistance because it creates a very fertile opportunity for resistant bacteria to thrive. For this reason, the Government of Canada is in the process of adding all antibiotics to its national **Prescription Drug List (PDL)**.



When this update to the PDL is finalized, no animal feed with antibiotic additives will be available from a feed mill or mixer without a veterinarian's prescription. Any provider who sells water-soluble antibiotics, or feed with antibiotics, without a veterinarian's prescription will be doing so illegally.

When it comes to giving your livestock antibiotics, there is a WRONG way and a RIGHT way:

THE WRONG WAY is to administer unprescribed antibiotics or to treat without enough knowledge about the bacterium being fought.

THE RIGHT WAY to use antibiotics is by saving the drugs for when animals show signs of sickness caused by bacteria. A veterinarian will verify that the need for an antibiotic is indicated and prescribe the right drug and dosing schedule.



Changing the way we do things can be inconvenient, but making corrections to outdated practices is essential. Administering antibiotics properly is not just economic good sense or a matter of adhering to the law. It is literally a matter of life and death, for all of us.

ANTIBIOTIC RESISTANCE IS A REAL THREAT TO WORLD HEALTH



FAILURE TO ACT IS NOT AN OPTION.

For more information about good antimicrobial stewardship practices, go to SaskVets.ca or talk to your veterinarian.



ANTIBIOTIC RESISTANCE

AND WHAT IT MEANS FOR LIVESTOCK PRODUCTION

Human health, animal health and global health are all being impacted by bacteria mutating and becoming resistant to antibiotics. Physicians, patients, veterinarians and livestock producers all have important roles to play in addressing this health care crisis.

