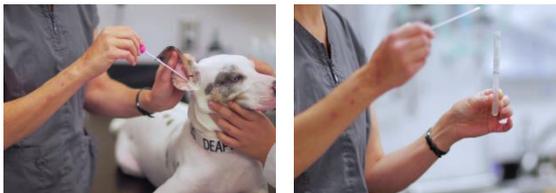




Physicians, veterinarians and their patients all have a role to play in slowing the emergence of resistant bacteria.



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.



Patients and their care givers have an equally important role. Antibiotics need to be taken as directed. Missing a dose or failing to take the entire prescription creates an environment that encourages resistant bacteria to thrive.

# ANTIBIOTIC RESISTANCE IS A REAL THREAT TO WORLD HEALTH



## FAILURE TO ACT IS NOT AN OPTION

For more information about good antimicrobial stewardship practices, visit [www.svma.sk.ca](http://www.svma.sk.ca) or talk to your veterinarian.

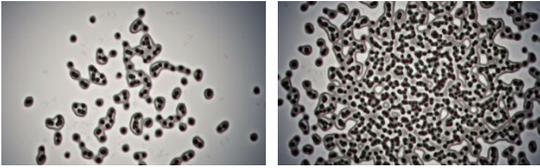


# ANTIBIOTIC RESISTANCE IS THREATENING MODERN MEDICINE

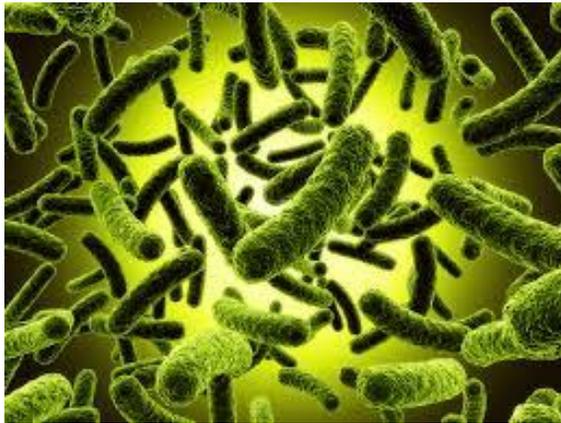
Human health, animal health and global health are all being impacted by bacteria mutating and becoming resistant to antibiotics. Physicians, veterinarians and their respective patients or care givers have an important role to play in addressing this health care crisis.



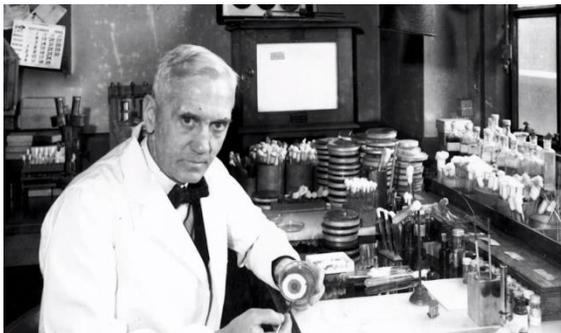
## Bacteria are an incredible life form that can reproduce in just minutes.



These organisms are capable of rapidly mutating to become “drug resistant superbugs”.



The use of antibiotics in human or veterinary medicine is a relatively recent phenomenon. The first antibiotic **penicillin** was discovered by Alexander Fleming in 1928.



Over the decades that followed, several other antibiotics were developed. At the same time, bacteria were already mutating to become drug resistant. It's been a race pitting human ingenuity against one of the oldest, simplest and most adaptive forms of life.

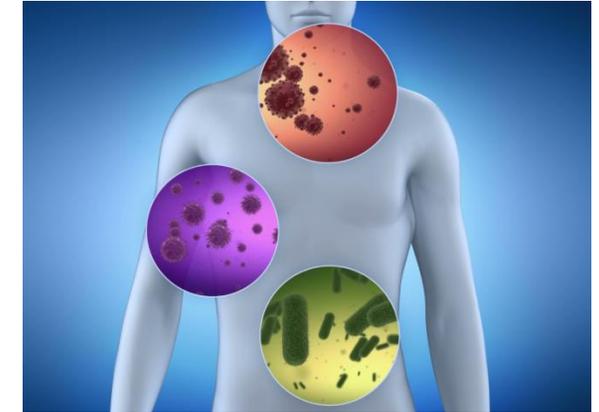


## Unfortunately for human, animal and global health, the bacteria are winning.

The emergence of highly resistant superbugs is a worldwide phenomenon that literally threatens modern medicine. The viability of modern procedures like joint replacements and organ transplants is threatened by the potential risk of developing untreatable (and therefore fatal) postoperative bacterial infections.



To understand antibiotic resistance, it is important to appreciate that whenever an antibiotic is taken, the patient's entire bacterial biome is exposed to the drug.



When an antibiotic is introduced into a body, **all of the body's bacteria are exposed** to the drug. Harmless and often beneficial bacteria that live on the skin, gut, respiratory tract and other areas are also being impacted.

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.

