TALKING TO CONSUMERS about animal antibiotics

Merck Animal Health is committed to improving the health and well-being of animals through innovative science-based solutions, products, treatments and services that help ensure a safe and affordable food supply. The responsible use of antibiotics to treat, control and prevent sickness in animals is an important part of animal welfare and food safety.

Antibiotics are used to treat, control and prevent illness in animals.

When used responsibly, antibiotics:

- Help manage, control and prevent disease in animals, and preserve efficacy.¹
- Reduce the spread of zoonotic disease in animals and humans.¹
- Contribute to a safe and sustainable food supply.¹





Prevention of disease through the use of vaccination is the first line of defense, and farmers, ranchers, and veterinarians look for ways to continuously improve animal care. Antibiotics are just one tool in the veterinarian's toolbox – and the only tool for combating certain bacterial infections.²

Each of us plays a role in combating antimicrobial resistance (AMR) – a threat to human and animal health. It requires a **One Health** approach – strategic actions to improve human, animal and environmental health through responsible use of antibiotics.^{3,4}

Antibiotics are thoroughly tested and regulated and are used responsibly by farmers and veterinarians.⁵



Antibiotics are **safe**⁶



Antibiotics are used **responsibly**⁵



Antibiotics are sometimes **necessary** for animals⁷



- Animal Health Institute. Antibiotic Resistance and the Role of the Animal Health Industry. https://ahi.org/animal-antibiotics/. Accessed March 8, 2021.
- World Organisation for Animal Health. OIE List of Antimicrobial Agents of Veterinary Importance. May 2018. https://www.oie.int/app/uploads/2021/03/a-oie-list-antimicrobials-may2018.pdf. Accessed May 20, 2021
 Hoelzer, K., Bielke, L., Blake, D.P. et al. Vaccines as alternatives to antibiotics for food producing animals. Part 1: challenges and needs. Vet Res 49, 64 (2018). https://veterinaryresearch.biomedcentral.com/articles/10.1186/s13567-018-0560-8. Accessed March 8, 2021
- I. White, A., Hughes, J.M. Critical Importance of a One Health Approach to Antimicrobial Resistance. EcoHealth 16, 404-409 (2019). https://doi.org/10.1007/s10393-019-01415-5. Accessed Marchi. AVMA Judicious Therapeutic Use of Antimicrobials https://doi.org/10.1007/s10393-019-01415-5. Accessed Marchi. AVMA Judicious Therapeutic Use of Antimicrobials https://www.avma.org/respuries-tools/avma-nolices/fulficious-therapeutic-use-antimicrobials https://www.avma.org/respuries-tools/avma-nolices/fulficious-therapeutic-use-antimicrobials https://doi.org/10.1007/s10393-019-01415-5.
- FDA. About FDA. Center for Veterinary Medicine (CVM). 2020. https://www.fda.gov/about-fda/fda-organization/center-veterinary-medicine. Accessed December 6, 2020.
 Centers for Discuss Control and Promotion. Gen. Sourch. Exet. Exets. Disc. 2010. https://www.fda.gov/about-fda/fda-organization/center-veterinary-medicine. Accessed December 6, 2020.
- 8. Centers for Disease Control and Prevention. CDC: 1 in 3 antibiotic prescriptions unnecessary. 2016. https://www.cdc.gov/media/releases/2016/p0503-unnecessary-prescriptions.html. Accessed December 6, 2020.

 9. European Medicines Agency. Antimicrobial resistance in human medicine. https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/antimicrobial-resistance/antimicrobial-resistance-human-medicine.
- 10. United States Department of Agriculture, Food Safety and Inspection Service. Residue Sampling Plans. United States National Residue Program for Meat, Poultry, and Egg Products: 2017 Residue Sampling Plans. https://www.fsis.usdago/yistes/default/files/media_file/2020-07/2017-Blue-Book, pdf. Accessed December 6, 2020.
- 12.U.S. Food & Drug Administration. Adequate Drug Treatment Records Help Ensure Food Safety. February 2018. https://www.fda.gov/animal-veterinary/animal-health-literacy/adequate-drug-treatment records-help-ensure-food-safety#-rets-trest-The%20vihtdrawal%20period%20is%20thes/820thes/820the/820theranex. Accessed March 92, 2021.
- Animal Health
 The Science of Healthier Animals®

TALKING TO CONSUMERS about animal antibiotics

We understand consumers have questions about antibiotic use in animals, and we want to help answer them.

CONSUMER: What about the living conditions of animals. Do crowded conditions contribute to animals' need for antibiotics?

That's a very important question, and continuous improvement in animal well-being is something we strive for every day. Like people, animals sometimes get sick regardless of living conditions; it's part of nature. It's also important to understand the natural behavior of farm animals includes seeking close contact with each other and sharing their water and feeding systems. This can sometimes lead to a rapid spread of sickness, which is why we sometimes treat animals with antibiotics as a preventative measure. Rest assured that farmers and ranchers strive to use antibiotics responsibly to treat, prevent and/or control disease to ensure the health and well-being of their animals.

CONSUMER: What about antibiotic resistance and "superbugs?" I read that the use of antibiotics in agriculture contributes to this problem. Is there any truth to that?

I can assure you, combating antibiotic resistance is a top priority for me, and I share your concern. Any use of antibiotics, whether in animals or people, contributes to antibiotic resistance and the rise of "superbugs." Nature finds a way and bacteria continue to find new ways to fight medicine. At the same time, science is always finding new ways to have the technological advantage over nature. Fortunately, farmers and ranchers are also doing a lot to make sure antibiotics are used responsibly in animal agriculture to preserve their usefulness for everyone.

CONSUMER: That is good to know. What is being done to combat antibiotic resistance?

I'm glad you're interested in this topic, because I'm passionate about it, too. Antimicrobial resistance (AMR) is a threat to human and animal health, the global economy, and national and global security. Combating AMR requires a One Health approach – strategic actions to improve human, animal and environmental health through judicious use of antibiotics. In order to combat resistance, antibiotics must be used responsibly – both in human and animal health. A study by the Center for Disease Control (CDC) concluded that 30% of antibiotics used in people were deemed unnecessary.

CONSUMER: What is being done in animal agriculture to protect the efficacy of antibiotics?

I'm glad you asked because farmers and veterinarians use antibiotics responsibly. Vaccination is considered the first line of defense against disease. The Food and Drug Administration (FDA) implemented the Veterinary Feed Directive (VFD), which takes an important step to change the way medically important antibiotics are used in animal medicine. Under the VFD, medically important antibiotics cannot be used for growth promotion in animals. Additionally, medically important antibiotics necessary to treat a sick animal must be administered under direct supervision of a veterinarian. You might be surprised to find out that most antibiotics are used mostly in animals or in humans, not in both. Farmers, ranchers, veterinarians and others involved in animal agriculture focus on prevention of disease as first line of defense and look for ways to continuously improve animal care.

CONSUMER: That makes more sense now. What about antibiotic residue? What safety measures are in place to prevent antibiotic residues in the food I feed my family?

This question is also important to me, because I feed my family the same food you feed yours. You should know that antibiotics are thoroughly researched and regulated by the FDA. When an antibiotic is administered to an animal, there is a "withdrawal period" set by the FDA to make sure the antibiotic has cleared the animal's system before it enters the food supply. 12 Additionally, the U.S. Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) routinely tests samples of our food to ensure all of our food is antibiotic-free. 13

CONSUMER: I see a lot of antibiotic-free foods. I wonder if they are better?

I share your concerns for all of the claims that are on food packages today. When it comes to foods with antibiotic-free claims, it helps to know that all food is antibiotic-free. Some animals are raised without ever receiving antibiotics (known as No Antibiotics Ever). Food with a No Antibiotics Ever claim does not mean it is superior or safer in any way.

CONSUMER: This has been very helpful. Thanks for your time.

My pleasure. We understand transparency in food production is important, and I enjoy these conversations and the open dialogue. Our tagline is "The Science of Healthier Animals," and we prioritize preventative approaches to help keep animals healthy and minimize the need for treatment. We are also always looking for ways to improve.

