

Just Say No to Junk Journalism

Junk claims lead to junk conclusions, and Ezra Klein's September 2009 column "Just Say No to Antibacterial Burgers" is full of both.

Junk Claim #1: Antibiotics are in food.

Antibiotics used to keep food animals healthy are strictly regulated by the Food and Drug Administration. The stringent approval process includes FDA setting withdrawal times based on trials to ensure antibiotic residues above strict limits don't end up in the meat from the animal. There's another checkpoint at the U.S. Department of Agriculture, where inspectors test meat products to make sure there are no violative antibiotic residues in the meat.

Junk Claim #2: Animals are raised in conditions that make them sick.

While there are many types of modern production systems, all of them are based on preventing animals from getting sick – making sure animals have the right amount of food, water, space and veterinary care to ensure they remain healthy. Antibiotics are just one tool producers and veterinarians use carefully to prevent and control disease, and to treat disease in the event an animal does get sick.

Junk Claim #3: Most antibiotics used in animals are for "non-therapeutic use."

This is based on a 10-year-old estimate from an interest group that employed faulty methodology. Even the interest group that produced it admits that nearly half of the total estimate includes compounds never used in human medicine – meaning they have no antibiotic resistance concerns associated with their use. As Dr. Mike Apley of Kansas State University has written, "The 70 percent statistic is agenda-driven junk science that is flat-out false." Klein also ignores the annual data provided by the makers of these products, which shows that in 2007, some 87 percent of all antibiotics used in animals were for purposes that the FDA, the World Organization for Animal Health and the American Veterinary Medical Association all consider therapeutic.

Junk Claim #4: The industry's objection to legislation to ban certain uses of antibiotics is that it will make meat "unaffordable for the average consumer."

Had he bothered to ask, Klein would have learned that the primary concern of farmers, veterinarians and food producers who oppose the legislation is that it would have the unintended consequences of harming animal health and raising risks to human health.

Research shows that raising healthy animals helps to reduce the risk of bacteria on food that can cause illness in people. Over the past five years, published, peer-reviewed studies have indicated that sick animals – even those that are subclinically ill – can raise the risk of pathogens on meat.^{1,2,3,4} Taking away antibiotics used to prevent and control these diseases could actually do more harm than good.

There's also no doubt it would harm animal health, as we've learned from the European ban on growth-promotion antibiotics. In Denmark, the use of antibiotics needed to treat the disease outbreaks has more than doubled since the ban, as a result of increased animal disease (See www.DANMAP.org). Nor has it

improved human health. In the Netherlands, the levels of staphylococcus (a bacteria that can make people sick) resistant to penicillin and tetracycline have increased in people since the ban.⁵ In the United States during that same period of time, the same resistance levels have declined in people. If the use of these antibiotics to keep animals healthy were driving these resistance levels, the trends would be the opposite.

Several published risk assessments have demonstrated that the risks to human health from the use of antibiotics in food animals is vanishingly small.^{6, 7, 8} To cite just one example, the Food and Drug Administration performed a risk assessment⁹ of one compound used in animals, and could find no evidence of transmission of resistant bacteria from animals to humans. Even when they assumed some transmission, they still calculated the risk of infection that may result in impaired therapy because of food animal use to be 0.7 –14 in 100 million chances in one year. For purposes of comparison, the risk of being struck by lightning is one in 550,000.

A healthy food supply starts with healthy animals. Antibiotics are one important tool used in the health management systems of food producers to ensure healthy animals. These products are stringently regulated by the FDA, with several additional layers of protection, including monitoring and surveillance programs and guidelines for proper use. Policy decisions about the use of these products should be based on careful risk assessment, or we run the risk of unintended consequences.

NOTES

¹Russell SM. The effect of airsacculitis on bird weights, uniformity, fecal contamination, processing errors and populations of *Campylobacter* spp. And *Escherichia coli*. Poul. Sci 2003; 82:1326-31.

²Cox Jr LA. Potential human health benefits of antibiotics used in food animals: a case study of virginiamycin. Environ Int 2005;31:549-63.

³Hurd HS, et al. Swine Health Impact on Carcass Contamination and Human Foodborne Risk. Public Health Reports, May-June 2008; 123: 343-351.

⁴Berrang ME, et al. Subtherapeutic Tylosin Phosphate in Broiler Feed Affects *Campylobacter* on Carcasses During Processing. Poul. Sci. 2007;86:1229-1233.

⁵http://www.cvi.wur.nl/NR/rdonlyres/B6AB3678-EC78-4D80-9190-D8D52587B969/83791/MARAN_2007_def2.pdf

⁶Hurd HS. Assessing Risks to Human health from Antibiotic Use in Food Animals. Microbe 2006;1:115-119.

⁷Hurd HS, S Doores, D Hayes, et al. The public health consequences of macrolide use in food animals: a deterministic risk assessment. J Food Protect 67:2369-2374.

⁸Cox LA, Popken DA. Quantifying human health risks from virginiamycin used in chickens. Risk Analysis, 2004; 24 (1):271-288.

⁹<http://www.fda.gov/downloads/AnimalVeterinary/NewsEvents/CVMUpdates/UCM054722.pdf>

ADDITIONAL REFERENCES

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